

Monday-midnight-guess I've made the grade.
cause I spent an hour on the campus today
for first time in ten days - Gosh it was hard
sliddin. and I'm not out of the woods yet.

But I can still clench
my fist, so there
some life left in
the old man yet



• R.W. P.
'42 -



Library Shows Collection of Items on Music

Portraits and Manuscripts
Gathered by Muller on
Display Until June 7

"The Musical Portrait," a collection of more than 250 items consisting of portraits of musicians, manuscripts by composers and early American sheet music, was placed on exhibition yesterday in the main exhibit room of the New York Public Library, at Fifth Avenue and Forty-second Street. The display, on view until June 7, will be shown from 9 a. m. to 6 p. m. on week days and from 1 p. m. to 6 p. m. on Sundays.

The exhibition is the first showing of a part of a collection of 8,000 pieces gathered by Joseph Muller, who was in charge of the musical Americana department at the Public Library for four years until his death a year ago yesterday. The items now on display were recently given to the library by an anonymous donor.

Mr. Muller formed the collection during the thirty years he was at sea as ship's cargo and purser before he joined the library staff. Although trained as both musician and painter, Mr. Muller could not resist the lure of the sea, it was said, and made many trips around the world. During these voyages he began collecting portraits of violinists and composers, gradually enlarging his field to include musical drawings, manuscripts, lithographed musical title pages and musical Americana. When he was unable to purchase originals, he drew copies of the items he desired.

Among the manuscripts are Handel's "Water Music," sketches of the manuscript of "The Flying Dutchman" by Wagner, and one of the first scores of "The President's March" written by Philip Phile during George Washington's administration to replace the "The March of Revolutionary Days." Other manuscript scores and letters are by Beethoven, Chopin, Liszt and Schubert.

An unusual item is an invitation to Beethoven's funeral on March 29, 1827. Among the original drawings are contemporary portraits of Bach, Beethoven, Chopin, Liszt, Paganini, Weber and Paderewski. The original caricature drawings include one by Enrico Caruso of himself in the role of Mario Cavaradossi in the opera "La Tosca," while Arturo Toscanini is portrayed in a pen and ink drawing with a halo of musical notes above his head.

A musical picture by Delafosse in 1764, an engraving of Leopold Mozart and his two children, was said to be one of the oldest pieces in the collection. A crayon sketch of Carl Maria von Weber drawn by himself in his workshop in Munich in 1799 was also among the old items. The most recent sheet music on display includes numerous war melodies.

I went and saw this. Not many things there. One, however, was a piece of paper on which Jos Danl Boehm had tried to sketch B's profile in ink, in about 1822-25, and he put five profile sketches on his paper. Each differs somewhat but you know the value of a paper showing five tries at a profile: together they pretty well show what it was.

And damn if it isn't your own!

Oh well, not exactly, of course, but it made me feel that maybe you are Beethoven.

Now I once sent you a photo of a man - a monk I think he was - whom I said resembled you and you weren't flattered. Since then I

the service on June 6, 1900.

Mr. Herbert was the first commander of C. K. Hall Post 41, Grand Army of the Republic, of Asbury Park, N. J. The post is no longer in existence. Two years ago he attended a reunion of veterans in Gettysburg, Pa., which marked the seventy-fifth anniversary of the Battle of Gettysburg.

Mr. Herbert was a member of the Avon Council in 1907. Previously he had served the Borough of Bradley Beach as assessor. Surviving are a daughter, a son, Frank Herbert, of Neptune Township; twenty-one grandchildren and thirty-one great-grandchildren.

Andrew Wallace Dead; Retired Baker Was 79

Native Scotsman, He Headed Clan MacKenzie Here

Special to the Herald Tribune

JERSEY CITY, May 7.—Andrew Wallace, retired New York City baker, who was a former chief of the New York Caledonian Club and the Clan MacKenzie, Order of Scottish Clans, died at his home, 3 Durlin Court, today after a year's illness. He was seventy-nine years old.

Mr. Wallace was born in Dundee, Scotland, and emigrated to New York City when he was nineteen, working as a baker for thirteen years before he opened his own bakery at Eighth Avenue and Eighteenth Street. His Scottish foodstuffs were popular with Scotch-Americans.

Surviving are his wife, Mrs. Mary Murdoch Wallace; a son, Andrew Wallace, and three daughters, Mrs. Mary MacGregor and the Misses Elizabeth and Isabelle Wallace.

Harry L. Herzog

Junior Assistant Corporation Counsel
of New York Dies at 67

Special to the Herald Tribune

RED BANK, N. J., May 7.—Harry L. Herzog, a junior Assistant Corporation Counsel of New York City since 1928, died today at the home of his brother, Maurice Herzog, at 162 River Road, Red Bank. He was sixty-seven years old.

Mr. Herzog formerly lived at 116 West Seventy-second Street, New York City, but for the last three years had been in poor health and had lived with his brother. Mr. Herzog was born in New York City and was graduated from City College and New York University Law School. He was in private practice in New York until he joined the Corporation Counsel's staff. He was a charter member of the New York County Lawyers' Association. A sister, Miss Edith Herzog, also survives.

WILLARD O. REINHART

Special to the Herald Tribune

ELIZABETH, N. J., May 7.—Willard O. Reinhart, of 637 Jefferson Avenue, an agent for the New York Life Insurance Company, died last night of a heart attack. He conducted a flower shop in Elizabeth for several years. He was a Mason.

I have observed that nobody ever is when some person points out his likeness to someone else.

However, can't you possibly stand it when I say you are Beethovenesque?

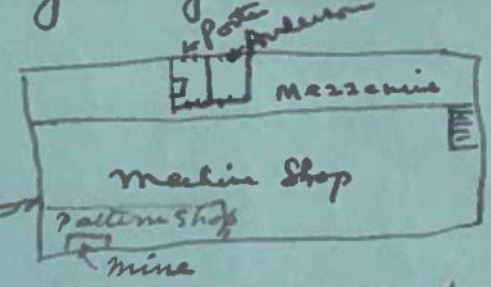
Sure - a great compliment, even if he was a disagreeable old trouble maker.
He appears to have been a solid chunk of a fellow, more than you are - shorter, thicker. Still I am suspicious that you are Beethoven.

I must say, Ludwig, your disposition

improved! *Of all creators - B stands head and shoulders above them all - (P)*

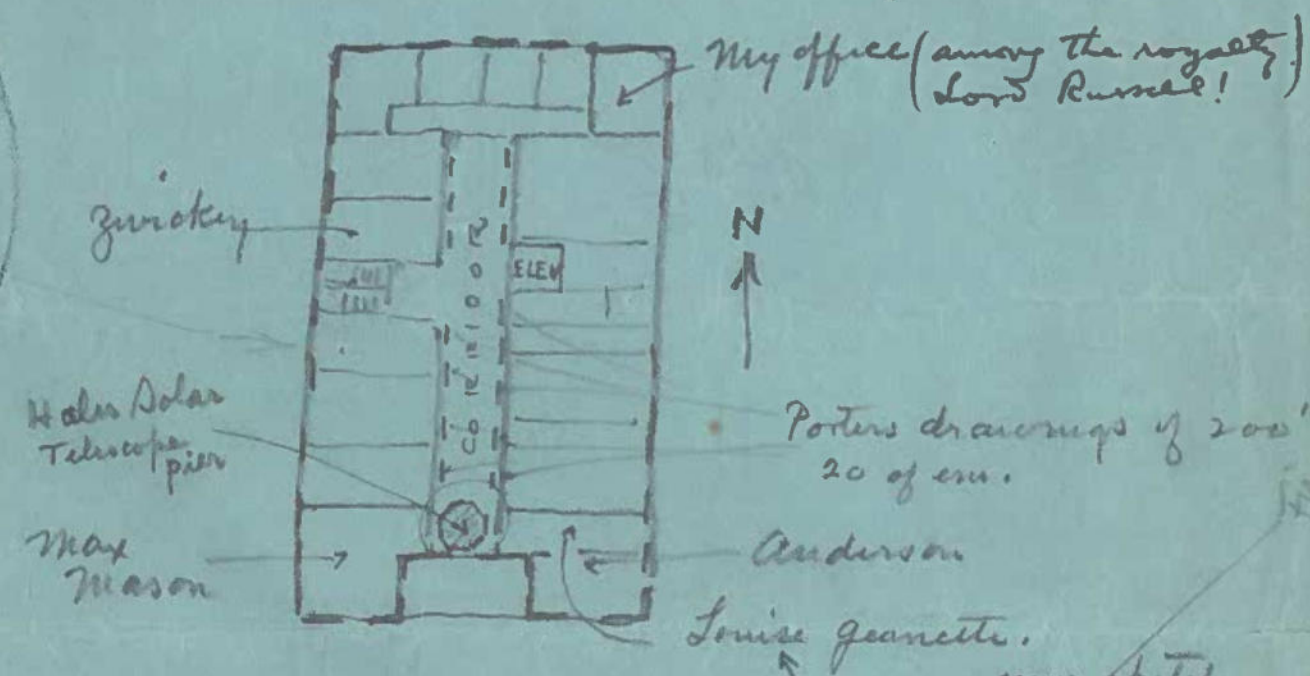
You have an office, and now Hartshorn says you have a private workshop. Where is it at? Either the pattern shop - or my cellar. He's has I frame you in my imagination: all wrong. See your desk?

Of course this is all entirely accurate! (I get it by television)



This is long obsolete - 15 years old - before we built the Astrophysics Laboratory where I now am. The present set up is - second floor -

He was was here.



We haven't had quarters in the machine shops for 13-14 years.



CALIFORNIA ST
Looking north west

Will this at least fixer you in a frame. Do you hafta knock Louise unconscious to get to Dr. Anderson?! Maybe over her dead body.

Will now furnish the floor plan of your office?
(Yes you ask, "Do you want an inventory of my pockets?")

Poor fellow - I have \$49.92. Do you need a dime
to buy a cuppa coffee?

What? No \$25 checks
you've carried around all
summer uncasted and
forgotten?

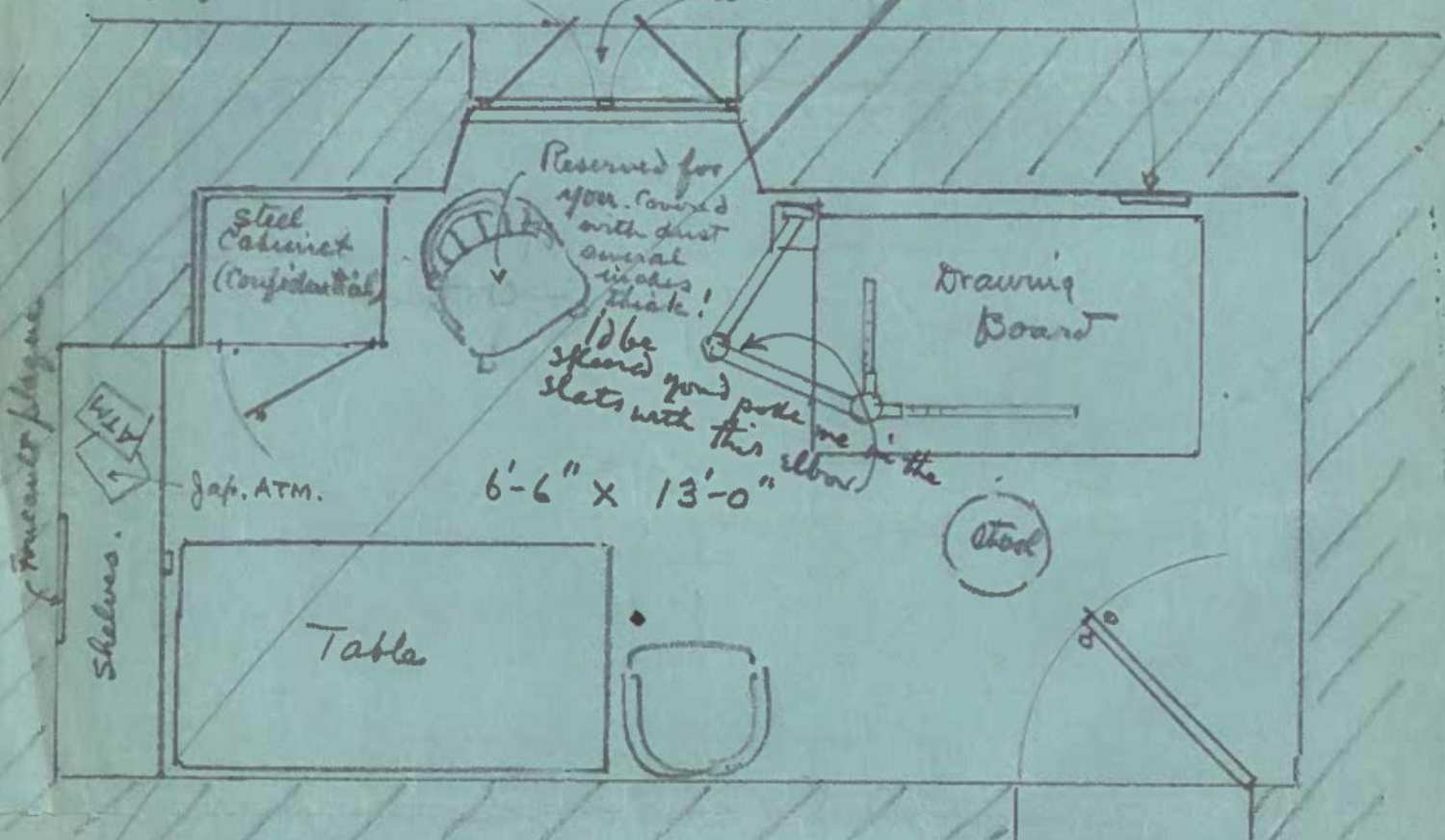
Well here ye are - drawn carefully to scale

21 Dollars and 33 cents in pocket book

Also pass to get by guards
Auto Club Card - Driver's license.
Mt Wilson card to obs.

Photo
of Hale.

6 Keys for - Oh go to hell. I'll meet you there
Casement windows



Scale.

0 1 2 3 4 5 6 7 8 FT.

Anything omitted, father compressor?
Now isn't this nice! 6'2" x 13'... Just the size of my Cabin at Glenside 7 1/2 x 10 1/2.
And very cozy. But so different from the mental picture we had. You've
a very efficient utilization of space.

(They (Dad & Louise) have just given me hell for carrying a couple checks
around in my purse for several weeks - one over \$500 - other 4-\$500.
No \$25 checks too small for us nowadays. (P)

Pasadena Post

[MORNING ISSUE OF THE PASADENA STAR-NEWS]

PASADENA, CALIFORNIA, THURSDAY, MARCH 25, 1937

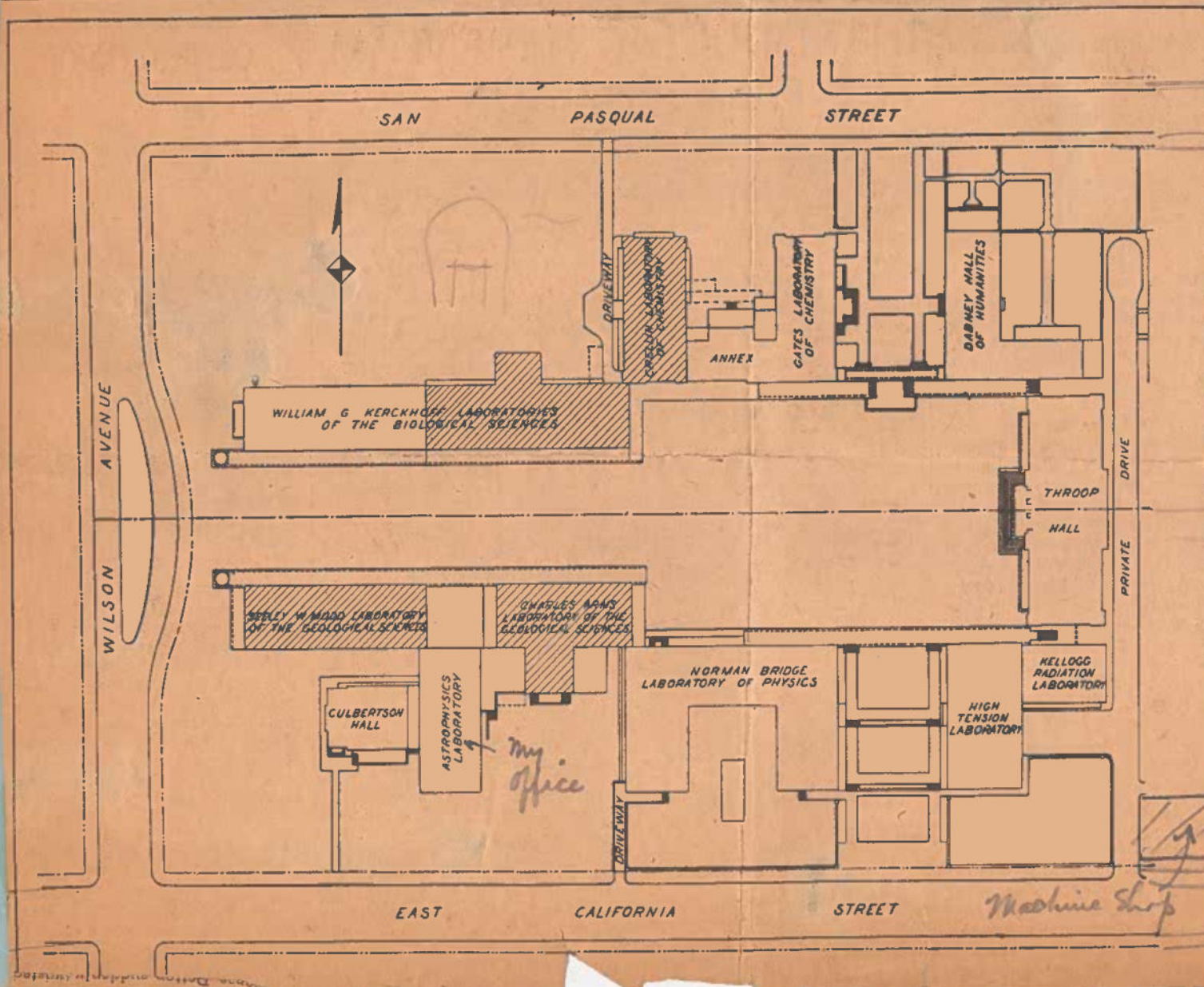
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SPORTS AND FINANCIAL
WIRE NEWS SERVICE

CLASSIFIED ADS

The Post ushers in the day's activities. "Tell It Well and Your Classified Ad Will Sell."

WHERE FOUR NEW BUILDINGS WILL STAND ON CALTECH'S WEST CAMPUS



PASADENA'S PIN-MARBLE GAMES RUN 'FOR SPORT'

Distributors Sensing
Confusion, Move
Machines Back

Company To Pay Fine,
Agent Declares

While Pasadena police and legal authorities were trying to learn yesterday just when playing a "pin-ball" game ceases to be amusement and becomes illegal gambling, marble-game distributors busily moved their machines back into Pasadena!

The machines had been removed from the city 10 days ago, after Attorney General U. S. Webb had ruled they were gambling games. Mr. Webb, however, apparently reversed himself later, concluding that if the machines do not "pay off," they can legally be played for amusement.

Sieze Opportunity

Distributors, apparently willing to take chances for every available coin, were not lax in sensing the last-minute confusion, echoes of which were heard at Tuesday's Board of City Directors' meeting which repealed city licenses "just as a gesture of good faith." Revoking of license will become effective in 30 days.

For Amusement Only

All of the pin-ball machines which re-appeared here yesterday bore signs reading: "For amusement pur-

UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

OFFICE OF THE DEAN AND DIRECTOR
DAVIS, CALIFORNIA

May 10, 1949

Mr. A. I. Ingalls
7 Holly Street
Cranford, New Jersey

Dear Ingalls:

As usual when you wait to write a real long letter none gets written, and I have been intending writing you ever since I learned on my way home from the airport that Russell had passed away while I was still in New Zealand. I have been down to Pasadena three times since then and on my way East the end of this week am stopping for a final half day with Alice to do anything I can to lighten her load. She may have started East by the time I return.

Of course, I still can't get adjusted to the fact that I won't meet Russell with his roughish twinkle next time I go South. He has been such a living presence all these years that one doesn't get adjusted to a world without such a friendly spirit. However, on the credit side there are so many years of companionship to look back on that one can be thankful for the unusual privilege.

I enjoyed your writeup so much. After all you are the one who could put into print the feelings of the thousands of amateurs and professionals the world over whose lives have been brightened by a contact direct or indirect with him. He liked to consider me the son he never had, or one he had lost many years ago, and having only a bare remembrance of my own father, it was a very happy thing to have his companionship as a proxy Dad, the years have been so much richer for it.

Things are gradually getting squared away in Pasadena. Your motor spindle has been shipped to you. It's a good thing you put in a word for that because I would have taken it to set up an optical shop here on this campus of the University and center some of our budding optical specialists around such a shop. I wish I had taken some pictures of it. I may bother you along that line sometime later. It seems about the best machine for that work yet devised.

There were so many parts of things in Russell's shop that he alone would know about. He had so many of them and he was always trying out something.

He had planned to come up and dedicate my telescope shack this spring, when I got the 8-inch finally mounted on its Springfield setting. Of course, the shack has been up some years now and housed the 4-inch Clark but I had a pier poured right at the start for the reflector. Carl Wells of Roseville and Doc Smith of Sacramento were coming over to join us. As Russell said, "We will christen it with champagne, but waste none on the outside of the shack."

I am leaving for Washington at the end of the week and expect to spend at least one day in New York on my way to Ithaca. It will probably be Monday, May 23, and I will try to drop in to at least say "hello" on the wing.

Mr. A. I. Ingalls

I think the action of the British Astronomical Association is one of the nicest things that has taken place. It is a peculiarly fitting memorial to Russell and for all times amateurs as they look at the moon can pick out that spot as their particularly heavenly shrine to their patron saint. I can yet imagine Russell sitting up on the edge of his particular crater, swinging his legs, and smoking his pipe and laughing at us down here and remarking, "Ah, don't you wish you fellows had the seeing that I have up here." I constantly have the feeling of him laughing over my shoulder.

Best wishes and I hope I can find you in when I get back.

Cordially yours,

Knowles A. Ryerson
Knowles A. Ryerson

KAR:jaw

Ha! Made this guy happy. Three years or so ago, Hanna yelped to me. Can't get help. I thought of Bill Waldeyer, who had dabbled a little in telescope making, the highbrow San Francisco taxi driver. Sent Bill a postcard, he took it to Hanna, and was on the payroll PDQ. Had charge of a gang of gals repairing binoculars. I've similarly fixed up others who have made out better than I. Gives one a pleasant feeling, anyway. *Helped me too, didn't yer?*
Dear Doc Ingalls: MAR 22 1946
nga

Thanks for the letter by the young Halsey, which was forwarded me from the ex-binocular shop. It seems to show why he believed the way to handle the Japs was to kick them in the teeth.

Well, there are still a couple of girls at the shop, doing odds and ends and I believe Doc Hanna has some part time guys still doing work there at night - aluminizing and mirror work and etc. Very probably I could have worked in on this myself - Doc Hanna made some such references once or twice. Well, in the first place I wasn't at all sure I wanted to get in on this kind of stuff. After all, fooling around by one's self on such stuff is one thing, and doing it professionally something else. Truthfully, I am not too sure of my latent talents in that line - I would have a hell of a time, for example, keeping different grades of carbo and the rouge and so forth in order - I'd mix them all up and make a mess. So perhaps I wasn't too enthusiastic. In addition, Doc Hanna is extremely vague and indefinite sometimes. He comes and stands around with something on his mind, and finally takes off without saying it. A guy has got to come out and tell me what's what in plain Inglis (or plain Ingalls would do nicely). Now, the work in the binocular shop was something to sink me teeth into. I just love to play around with optical stuff already manufactured. I loved it. I came across just about everything than can happen to a binocular, and it got so that ~~xxxx~~ the girls used to line up with their troubles, and one by one I'd take their binoc and with a flick of my wrist return it to them fixed. Eyepieces working smooth, zero'd, hinge o.k., etc. One thing that used to stump them all, even old timers, was when ~~an~~ one eyepiece focused further out than the other. Usually ~~they~~ they'd end up by shimming the objective the wrong way and make it worse. I figured out a number of ways to adjust this, the simplest being to get an assortment of objective cells with different thickness of rim.

Well I am sorry it over with. That is the only work I ever did in my life that I was sorry to quit, and the only place I ever worked in my life that I'm homesick for. There was various assortments of grief from time to time (with a combination of optics and pretty girls you'd expect some grief) but it was the most satisfying time of my life. Lasted ~~xxxx~~ for me just 13 months and five days.

I got out of it with a various assortment of binoc parts, such as eyepiece cells, which I have put to use back of telescopes, focusing by screwing in and out instead of sliding. I got a three inch ~~mm~~ Bausch and Lomb ships telescope objective, air-spaced, and two 7 by 50 binoculars (one was given me on the legit, the other was a pair of barrels with bullet holes in them, which I gradually built up into a binoc from surveyed parts) So now and then I take one apart then put it together again in memory of old times.

Since the shop closed down I have been banging off stories. I am a "self employed veteran" and entitled to collect the difference between ~~x~~ what I make and \$100 for each month I am employed full time at writing. Of course, most months they will ~~xxxxx~~ owe me the full \$100. This lasts about a year, and it being the only time I ever had an opportunity to sit down and write full time and still not worry about the rent, I am taking advantage of it. Of course, at the end of that time I'll have to go get a job again. I shudder to think of it. Doc Hanna's Binocular Shop spoiled me for ever working anyplace else. Even if I did work harder there than I ever worked anyplace else. If the place had been unionized, I would have been fined regular for not taking time off for afternoon tea.

I used to cuss hell out of the Navy for shoving rush jobs in faster than we could handle them - but we always got them out in time. Those Navy guys never could figure how you could get efficiency out of a bunch of ~~xx~~ civilians with nobody around giving them orders, and even filling out their own time cards. Of corse, in anything but throwing stuff at an enemy, neither the navy nor army have the least conception of efficiency.

Well, lets hear what you are doing, Doc. Andx me address is now

Bill Waldey
Bill Waldeyer
238-17 th Avenue
San Francisco 21
Calif.

wish it was still G.G.Park.

Dear Doc Waldeyer:

Pertaining to
Mumukshu's piper
to send expert
to Baffinland

A few other things
other than Porters
are in
"Exploration" envelope
attic

Answering your last letter - I have a fine
reputation up my sleeve (have for years) when the S. C. A.
is ready to send one out - Its to Baffin Land to look
for the lost colony sent out by Queen Bess in 1576

Very few know a fleet of 15 ships set sail that
year with colonists and little is known of their fate
I started to clear it up in 1897 but had to return
without only just seeing the island they wintered on
(Kodlunarn = White Mans Island) I had a crowd
of college men with me and intended following
this up after they left on the Peary ship in Sept.

(Over)

Well. young feller, Ive got back from two days in Washington with the National Academy. Fine time.

Saw a lot of R W Wood and someday he will get the urge and come up to Stellafane. He wants us to tell our people to make cheap spherical 18" mirrors so they can see nebulae.

Wood is a great boy. He was playing with Ives, and his television outfit, which was there all the time.

I made some more good contacts .

Awfully busy while here now--two days of it--then to Phila for the meeting of the Am Philosophical Society--they intend to debunk my old friend Ben Franklin--he didnt fly the kite at all , they say.

Hardly any astronomers there. Stebbins, St John.

Oh I met old Mr Swasey--He is a great old boy. likable and hearty. I prefer him to Warner, for that matter. He warmed up very nicely.

I'm not a member. I did belong to the Arctic club (charter member) and believe this club was absorbed with another into the Explorers Club. He a live wire. If you go there look up Kersting (asst Secretary) there all the time. - and old shipmate on the Miranda

By the way you might be interested in reading of the expedition on which I first visited the Arctic - with Dr Cook. The official narrative is "The Last Cruise of the Miranda" by Henry Collins Walsh. I think I had a chapter in it. Out of print but you'll find it in the library.

If you could arrange a working agreement with them some good things might come your way - Why don't you join - They have some plain but comfortable headquarters. Perhaps though you'd better first take a flier out of Baffin Land this summer. ☉ to qualify. Fiala belongs - Peary turned it down.

1000 7-10-11. The Explorer's Club 47 W 76 St

The Scientific American is anxious to publish articles
scientific articles which also contain an element of adventure.
Exploration - specifically, archaeological exploration - combine
these two qualities legitimately. Are there not some
members of the Explorer's Club who intend to make
expeditions and who might wish to have the accounts
of their discoveries published in the Scientific American?
¶ Since I took over the editorship of this journal
myself, I have been striving successfully to improve
its tone. Within this time articles by P. W. Millikan,
Dr David Starr Jordan, Thomas Gann, Dr H. S. Gentry,
Dr George Grant Mac Gurdy and many men of the same
type have written for the Scientific American. ~~We~~
~~have~~ ^{Recently we} sent to our readers a questionnaire and the
returns indicate a surprising degree of interest in
Archaeology - due, we think, to the legitimate
romance, ~~and~~ mystery and suspense involved in the
search in out-of-the-way corners of the world for
unknown evidences of the past. It occurs to me that
the best way to tie up with this sort of thing ^{on the whole} would
be through the Explorer's Club. Can you not offer
me ^{some} ~~any~~ helpful suggestions? (over)

Dr E. T. Mac Dargel, a member of your Club
and a corresponding editor of the Scientific
American, gave me this suggestion.

Give us some idea on it - just rough or
How much of an outfit?

How many men?

What sort of a vessel?

How long a trip?

How do the probabilities of finding the evidence stand?

Is there any "second fiddle" to fall back on
in case the original purpose fails?

I thought you swore you'd never go near
the arctic again!

Where is this White Mans Island at?

Is there Romance, mystery, human interest
in this project?

Would it serve, or could we honestly claim it
serves, any real scientific purpose?

What would become of your job at Springfield?

Baffin Land -

- (A) For a summer's work. (B) Half a dozen. (C) A Newfoundland Realer preferably chartered for the summer July-September inclusive - There's no use going earlier than July for the pack ice closes the coast. 2nd best are auxiliary Schooners - No danger or navigating complications if kept within these months. (D) See above - (E) Look up in library a book by Hall (forget the name) about 1860 who spent the winter there, He's the only one I know of who ever tried to clear up the mystery - (F) Yes. At the Head of Froberishers Bay there is a mountain full of fossils. That has not been visited by a geologist. I have my name tacked on to some of them - - - - Porter's. Look up my article "Froberisher Bay Revisited" in Ann. Geog. Journal for 1898. G. Mc M - never went after this story. Oh, yes there are the two huge interior lakes never visited by white men (Call up Dr Franz Boas - he'll tell you about them from Eskimo report -

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

Leave more blank spaces on your
stuff so we can keep our discussions
together.

Your mounting is completed with
exception of tube. I had a fine chance
this week to do the machining myself
oh yes, Marshall has got to graduate
the two circles. The cost of castings is
higher than I anticipated - 55 lbs @ 74¢

= 74
370
\$37.0
\$40.70

The other expense will be the tube
and larger prism. I assume
you'd rather we make the tube
and put the instrument in balance, and
ship you a complete mounting.
It's a good job all duraluminum and bronze
and brass. Will make tube to accommodate
an 8" focal length mirror (10").

(over)

Oh its one of the few chances left up there - but I'm afraid I'm out of the running. (G) Its not arctic you know, only sub arctic. There theres Meta Incognita with a diminutive ice cap and glaciers - below the circle (south side of Frobishers Bay I set out stakes on a glacier there in 1897.

(H) A small islet on the n.e. side of Frobisher Bay.

(I) Fifteen ships in 1576 starting out in search of gold Frobisher brought back the year before. Get Frobishers account also Jastmans in Proceedings of the Hakluyt Society, if you want romance.

(J) Judge for yourself.

(K) I'm not going - I dont think.

(over)

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

I wrote the Grey bar people to send
me their car phone on trial but
never heard from them. I have lost
the darn address again.

On my map the two lakes inside Baffinland
are each as big as Lake Erie -

Lake Nettilling and Lake Amadjuak

(See Nat Geog Map enclosure)

I think I shall hafta explore those lakes so as to
cross the Arctic

CALIFORNIA Circle

Boas got to the east end of Amadjuak (= big lake)
Gosh Baffinland is as long as from N Y to
Iowa! You betcher.

Maybe after that trip I'd be cured of wanting
to
univade Labrador. M) okesters in Baffinland but yes

CALIF

BAKERSTFIELD

To
900
yes

Tinikjuarbiusim = Hobster Bay

on map in my atlas.

No wonder it is so rough, with that name

Meta Incognita - what's "Meta" mean?

(supposed it meant "Unknown Land")

it would kill me to go past Labrador and
not see Cape Chidley and the Post at Repulse, anyway

~~Post~~

I have put your Baffinland trip up
to the Boss. He was greatly
interested. Has a friend who has
been all over Hudsons Bay, whom
he will talk it over with. He told
me we would need a geologist, an
ethnologist, a radio operator (probably,
- mystery, gold, gold, romance, in the
papers every day! Oh Boy!) and an
astronomer. I don't know whether that
is all talk or not - he sees how well
the trip fulfills the requirements, and
says, "we could buy a Glonester fisherman"
(over)
I won't say too much - just let it
simmer. It would be no hanging
proposition, anyway. He will get to
talking with this friend and I think

that will have much to do with
deciding it.

Say - that gold they took to England
- wasn't that the famous three
shipload that turned out to be iron
pyrites? It sounds familiar, somehow.

Look up Frobisher's voyages in
~~Wacklynst~~ Societies records.

But I've heard Prof. Gill talk of real
gold he saw in Baffinland. I think
Gill was with you - or he was
with Peary. (Gill was born in 63
Who Who) Don't think I know him

Thanks for the dope. I shall read up -
also keep the answers and map on
file for later efforts.

Not so sure about that (P)

I About \$10,000 I should say.
around 1900 you could charter
a newfoundland sealer (whaler)
for the summer (charter-coal
crew) for \$5000. Nowadays
it would of course be more.

II You can assure Mr. Mun-
that a trip of this sort with
the right kind of a vessel
has no more uncertainty or
hazard than a trip to
Switzerland.

Someone has evidently been in
to those lakes (darn em) since
I was there. Compare my map
with one I'm sending you.

MacMillan wintered at A
but I think did no exploring.

Then the Canadian tried raising
~~coco~~ remainder north shore Hudson's
St. under Stefansson's management
recently - a failure I believe.
Ask him - at Harvard Club, N.Y.

(Later)

I read your article. Good. Interesting.

Just submitted to the Boss ~~the~~
resume of article (attached). He's
evidently interested. Wonders \$10,000
would finance it.

(over) I

I knew the mention of "abundance of
game" would hook him. It did!
I got my biggest caribou at
the head of the bay.

Later I will look up book by C.F. Hall
Do so - it was before he induced
the Govt to send him for the Pole.

Evidently this is what would happen: -
Mum would go - I would stay
here to keep the pot boiling!

Isn't life wonderful! (over) II

by me and labelled as presented by
the N.Y. World would be good ad-
vertising for them with the public.
And here was where Dr Frank Bras
came in - He exerted him self in
my behalf, the amount - some
\$2000 was appropriated - but
for some reason it fell through -
just what I don't remember.

Then I got to going on the polar
expeditions for blood and so
B.L. was shelved and I am afraid
now for good - as far as I am concerned.

A - Of course you know your business, but I would
stick to scientific work - there's plenty of romance
in it

what I read in Forbes's
log.

Have you any ideas regarding that gold?
Only what I have told you. Probably based on
Probably it was some alluvial deposit. Your
trip may have given you some suggestion ??
I did not pan any gravel that year because

I suppose you'd get the laugh. "Scientific American
sets sail for Romantic Quest of Arctic Gold"
"Mystery of the lost Goldfields of Baffinland".
"Fool's Gold or Real Gold? Great publicity
stuff, but doubtful value. Still, Barnum said,
"I don't care what they say about me, so long as
they keep talking about me". And he was your
first and best publicity expert. See over (A)

I left this work and Kodlunarn until my party
returned to the States on Peary ship, for I wanted to
be alone with the natives. You see I took these
college men along in order to pay ^{for} my own passage
north and my years equipment. So when
we returned to Cape Haven and I found I
must return home, the chance had gone - for
that year anyway - and I never went back.
The New York World almost sent me (outfitted me)
in 1898 - It was at a time when the paper was
being badly knocked and they thought an arctic
trip would be a good thing (to be collected

Been to Library:

"The Three Voyages of Frobisher". Hakluyt Soc. Vol 38
1867 (KBD)

No time to read it - glanced it through

Arctic Researches and Life Among the Esquimaux
by C F Hall 1866 (KBS)

Spent a half hour on this one. Page headings
tell places where they found the evidences. Very
interesting book. Not had time to read it all. Its long.

Encyclopaedia Britannica on Frobisher: Evidently
the "or" was n.g., but they don't quite say it
that positively. I will read more, later.

Henry Collins Walsh

H C Walsh Last Cruise of the Minerva
not listed under H C Walsh Is that name
exactly correct?

Can't find in chronologically arranged list of
book cards under "Arctic Exploration". What
was the year? (1894-5).

(over)

What, in addition to what C.F. Hall found
do you expect will be found there, of Frolishen?

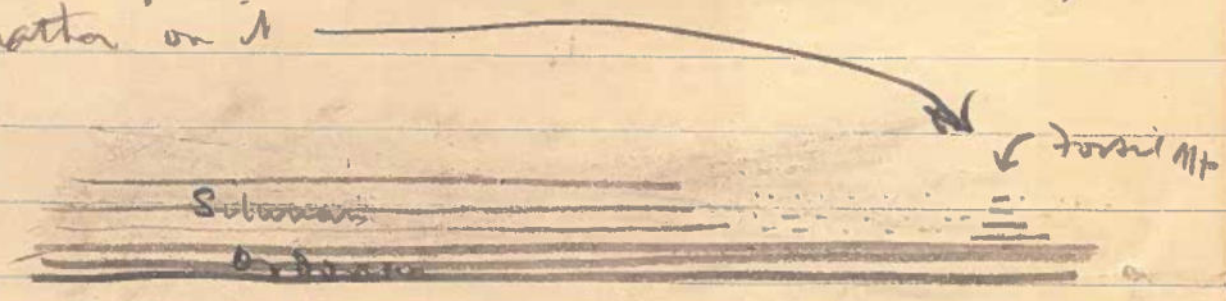
Why, it would seem to me if 15 ship loads
of colonists went out to B.L. to winter and
half of them arrived - that there would be some
evidence likely to be found that would give a
clue to their fate; - whether they had a scrap
with the Eskimo or were decimated by disease
and scurvy. And a geologist ought in a
summer or year to decide if free gold exists
in the Conners of Warwicks Sound.

I think Hall found where they had repaired
their ships (ships railway?) but that was all.
If you read his book you will see he only stopped
at Kodlunam a day or so - as we did in 1897
in making the circuit of Frolishen's Bay.

There's another fellow out to go to Baffin Land
this year with MacWilliam but, damn it,
he told me "in confidence" - said if he
went he would have to come up here and
get the dope on the country from me.
So that's all I can say.

All you will need in adjusting your
mounting is Polaris itself. Its azimuth
from true north is given for every few
minutes in the Alman Ephemeris, provided
you have a watch running on sidereal time
and the Garden telescope Instructions tell
you how to get that (P)

Notice Baffinland on this map. Frobisher Bay shore is put down as Ordovician. Yet the fossils were Silurian. They were on top of a hill - I show this represents an island in the Ordovician, or rather on it



I'd like to get a summer in the Cretaceous of the Arctic. might find more proto-mammalian fossils. Our ancestral tree has a gap of the whole Cretaceous, or did until the AM. Museum found one lot in Mongolia. More are needed. On this map there's some Cretaceous in western Greenland - at Narsarsuaq Peninsula, north of Disko Bay (ever been there?) Yes - we mined coal there one year coming home.)

Up at the north end of Baffinland there's a tip of Tertiary rocks. Let's go up and get 'em! Find a *Pithecanthropus Porteri* in 'em.

By golly I went four days into the interior of Narsarsuaq peninsula after caribou 1896. Tarr was with us that year



A BLUE GOOSE QUEST is the purpose of the expedition of this schooner, the Ariel, to the Arctic this summer. Left to right are William H. Hand jr., builder, and Oliver L. Austin jr., Harvard student, who will hunt the bird maverick.

Herbert Photos

TH
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Rwp

How would a craft of this type make out on a trip to Baffland? She's one of the post-war yachts, with lines copied from the Gloucester fisherman, in an effort to get away from the regular oversailed understrength sailing yacht racing style.

No end of these yachts have been built since the war, chiefly by Hand and by John Alden, and now there are lots of em on the market, second and third hand, in lengths from 40 up to 80 or 90 feet.

But would they do to ram in head on in drift ice? How much drift ice is there, anyway? Peary and others added forward, a sheathing of planks to shut ice with her that wouldn't be necessary would it at such low latitude?

The tides are high and there are strong currents around Resolution Island. If a schooner is used she should have a powerful auxiliary power.

Macmillan has been using a craft of this Gloucester yacht type. In fact the boat is the Gloucester fisherman was originally a yacht service.

\$5000 for a sealer is high. Wouldn't it be cheaper to get hold of one of these pseudo-fishmen and hire a sealing captain?

Yes, cheaper.

What month do they do their sealing? — ^{March} i.e., would this come in ordinarily idle season?

Yes.

Is there a harbor or must the ship drop its crew leave and return in Sept?

No, there's a good harbor at Cape Hare, where for a time there was an American Whaling station.

A vessel could winter safely there.

It is at the north eastern entrance of F. B.

6
You say C. F. Hall is the only one who "tried to clear up the mystery". — What mystery?
Why - what became of all those hundreds of English colonists?

As nearly as I can make out, Dr. Robt. C. Hall partly got safely back to England after all those expeditions, except that of a sailor who lost on the second expedition, and he failed to get them back on the 3rd expedition. Hall states that an aged Eskimo woman told him a tradition that her ancestors were visited by 1 ship; the next year by 3; the third year by "many" (15), and that 5 of the members of the second expedition were killed by her ancestors. Are these the "mystery"?
No -

Hall found coal, brick, iron, chips and a hole 50 ft long, which Dr. Robt. C. Hall evidently dug what remains mystery, in there?

Of course I have not given this matter a thought for 30 years - but as my memory serves me there is a doubt as to what became of those colonists - it may have been the third expedition.

I am not now sure that it was Labrador who
brought a shipload of pyrites to England for sale.
Nothing I've recently read says that, but it
certainly was accredited to some early English
venture, to the North and I shall now assume
it was there. I have heard 4 years ago somewhere.

But I do believe there fell in contact Labrador. If
I could only see a trip started to Buffalo, I
might start me on a subsequent series to
Labrador, for thing I had dreamed of always but
never regarded as more than a mere idea or
pipe dream. An attached sheet I will mail you
you the pipe dream, though, marked out after
much thought, (I was out of work, in 1922)

Came across this. Porter. Please return.

I still think my best contribution has been my
first illustrated articles in the first edition.

48 April

SCIENTIFIC AMERICAN

24 WEST 40TH STREET

NINETY THIRD YEAR

NEW YORK

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MUNN, ANDERSON & LIDDY
COUNSEL

Andante

Piano

R.P. July '39

Handwritten musical score for piano, consisting of four systems of staves. The first system is marked "Andante" and "Piano". The second system includes a "cresc." marking. The third system includes a "p" marking. The fourth system ends with a double bar line and a "4 2" time signature.

Poster and I were on my porch at Cranford, at work on some changes in Amateur Telescope Making (4th edition, second printing - Aug 1939), and in the afternoon I lay down for a little catnap, but remained aware that he was writing something. When I awoke, this lay on my chest - something he had composed as I snoozed. - A.G.I.

Wed 48 Mar 31

Brought this batch to office on my usual Wednesday trip to town.

Asked Flanagan the managing editor if Dave Woodbury followed up, as Dave told me he planned, in regard to asking for assignment for story on the 200 mch. To my surprise Flanagan said Dave did not!

I said the American Astronomical Society was to meet in Pasadena in June and there might be a big party at Palomar on that occasion (so I surmise.) Right @

He said "Let's look into the matter of your going out there, tentatively. Find out the cost of fare and hotel for a couple of weeks." He, when on Life last year, had spent \$600 for a trip out there.

I know one thing: I would not try to camp at the Porters. What is best hotel - I mean not literally

the best hotel. I guess I mean
the worst.

I haven't seen Frances yet on
this. Afraid she'd feel bad. She
couldn't get away.

But it is only tentative
anyway. Probably won't jail.

You might yourself be East
in June! Tropical.

Hooray! So there's a fair
chance of our seeing you out here -
And you'll make your headquarters
at the pension de Porter. We'll take
some of our meals at the Atteneuron.
This will cut down cost of trip
considerably for your Mr. Flammarion.
We'll go every where - Cal Tsch - Mt
Wilson - Palomar - Death Valley -
end up with a binge.
Dedication 200" June 30 - Ann. Ast. Soc
meets here some days later
(over)

the best hotel. I guess I mean
the worst.

I haven't seen Frances yet on
this. Afraid she'd feel bad. She
couldn't get away.

But it is only tentative
anyway. Probably won't jail.

You might yourself be East
in June! Tropical.

Hooray! So there's a fair
chance of our seeing you out here -
And you'll make your headquarters
at the pension de Porter. We'll take
some of our meals at the Atteneum.
This will cut down cost of trip
considerably for you Mr. Florence.
We'll go every where - Cal Tech - Mt
Wilson - Palomar - Death Valley -
end up with a binge.
Dedication 200" June 30 - Am. Ast. Soc
meets here some days later
(over)

How are you now?

All right - fine — for a 76 year older -
And Alice? (P)

Better (P)

How's the planetarium progressing? o.k.

Coming east? Don't know. Hanna didn't say (P)

By? Train? Walk? Swim?

out Yes ^{maybe at 1} m.p.h. ^{no} rain (P)

No - you can see by Alice's and my
retorts just how the Porters feel about you
and Frances possibly coming to Calif,
and where you're going to put up.

That's final

Wm & Mrs Van Pottah.

Sent in my bill last week to K. what's his name

Think his your art editor, or treasurer - or something

(P)

Snow all gone now. What a winter it was!

Get your money yet from Sci Am? They'll pay.
No more Daws-Beck penny. (No waste, either)

SCIENTIFIC AMERICAN

24 West 40th Street
New York City 18

1948 April 8

Dear Russell:

They told me yesterday at the office that they had discussed my going to California quite a lot, to get a story on the 200-inch.

A My idea was to go at the time the American Astronomical Society meets in Pasadena, which I hear is June 3 but since I no longer am a member of the Society I don't get the announcements of meetings and this may be wrong. I believe I could easily re-join. Have inquired.

B I figure, the only possibility of maybe getting a step beyond the visitors' coop would be if the astronomers were there. I reason that Dr Bowen probably would rather let the A.A.S. members get a close-up than all the political, industrial, and moneybags guys on earth. And I figure I might at that time get under the tent.

C In some ways I would rather be alone.

D However, it boiled down to this, in discussion among bosses at Sci Am: Just what story material could I get that hasn't been published?

If none, or not enough, I wouldn't want to let them in for several hundred dollars' expenses. They aren't at all like old Sci Am, small and stingy, yet now that we are starting out to re-build the old thing we must make our funds suffice to pull us out of the red before we sink. So I don't try to hog all I can get.

E Trouble is, I can't think just what sort of story I could get that would be better than newspaper stuff that will be everywhere about that time.

I'd have 3000 words or so, plus my department 2000 for the more technical stuff (sort of appendix) .

Dope on the tests? Newspapers wouldn't spoil that. Readers wouldn't understand. The -- ahem! Log of the Figuring job? Whisper it gently, as I've been crying sobbily for that for years and years. But those things would be too technical for a main article. Put em in my telescope department and would need less technical yet new stuff for article . And I can't think what it could be. Can you?

F I might be out there several days if I came. Hotel. Not on you and tired Alice. Sci Am can afford hotel.

G Now then, I'll just bet a hat you will be elsewhere this very time? In such case I'd skip the meeting and make it another time. Only one reason for choice of meeting time and that (above) maybe no good.

B

Established 1845

H Boss suggested article on Present State of the 200 in. You should see proof sheets of first number to be out May 10. Big lunar star photos for article by Whipple of Harvard College Obs.

Dear Bert

A - The A.A.A. meets much later in June than the dedication the 3rd.

B - Oh No. I think between Dora and myself we could let you crawl all over the damned thing.

C - I guess you're being here alone would net you more data than if there was a crowd around.

D - Well - get Bowen, Hubble, Humanson and Anderson to tell you what discoveries they expect to get out of the 'roo'. That would be for your main article. As for Telescopes - 'save me "The Amateur Astronomer"

There are all the curves plotted for knife edge tests at the C.C. - To me, the story they tell is fascinating. And not so complicated but most of the mirror makers would get the idea, and get a great kick out of em.

E - See D

F - That's all been settled between Alice, Frances, and myself. - You stay here.

G - Can't tell yet, until Hanna sets the time. He's due here from Frisco this week. In one of his early letters he referred to my going East with him. Anyway - for gods sake, don't come out here when I'm out of town.

Also this data from the top astronomers would be official. Something not covered by the papers which are only interested in sensationalism.

H - A good suggestion.

(P)

Care of Porter
Pasadena.
April 24'48.

Dear Al:

I arrived here a couple of days ago and have been enjoying the Porters greatly, as always. Russell is like a rocket. He is about as lively as I am--or was before Southern California got into me. He was up this morning and off to the shop at 7 to work on his planetarium idea, and he kept at it till 1:30 without a break, except a couple of trips up town at imminent peril to his life in his car. It would do some of our New York taxi drivers good to come out here and get trained up in close shaves and what the aviators would call 50G stops.

Speaking of coming out here, there seems to be a rumor around the house that you may come. I highly recommend it. You have been on the way a long time and nothing would do you more good. It certainly is a relaxing experience, once you get here. I'm typing this in the garden, typewriter on a grocery box; one garment on me; the sun boiling hot. So you better decide to come. I've been every year for a long time. This year it was kind of hard as I am not in the money and the cost, even with the low rent at the Porter Hotel, is considerable. But you would have an expense account.

I hear that Sci. Am. is thinking of wanting an article on the telescope, and that you would be coming out here to get it. That, primarily, is what I am here for, too, and I've done most of the interviews and have virtually all the dope. Russ is going to drive me down to the mountain tomorrow.

If it should turn out that you didn't come, and they still need somebody to do the story for them, why not suggest me? I suppose I've done as many stories on this outfit as anybody. I haven't met your Mr. Flannagan yet, but it was a thought of mine to suggest to him such an article. However, I don't want to tread on your toes, especially if your doing it would bring you out here on a very much needed trip.

So, in case you aren't or can't come, will you turn over this letter, or the suggestion, to Flannagan for me, so that I can produce the story as soon as I get back about May 6, if he wants it from me. In case you do it but can't come, I'll be glad to hand over any material I have to you. Which is a hell of a generous offer as you no doubt realize. If you need any pix, I'm in a good spot to pick them out here on the campus. But you'd have to wire me to get me in time. I leave here May 2 by plane for Los Alamos.

Let me close by urging you again to come out. Both Porters are crazy to have you come and you can sleep in my bed (the beds in the back room belong to the Woodburys--a hold-over from 1941.) Let's have word from you either here or at 7 Towers East, Bronxville after May 6th.

Very best regards...

Dave

7 Holly St
Cranford NJ
1948 April 27

Dear Dave:

Your letter sent to Sci Am office where I go three hours a week finally found me out where I am the rest of the week.

You'd be as surprised as Hell if I took you up on your offer to hand over your material to me!

However, on the showing, all I could get by coming west would be a story on the tests, for the TNs. The subject Russell proposed, the uses to which the 200" will be put, is old stuff, as it has been in many periodicals and newspapers and after June 3 Three-ring Circus and Wild West, with Combined Sideshows, it will again have been punched and pounded to a frazzle by the same newspapers.

And I can't just jaunt out there because the van Porters kindly want me to make them a social visit; I would come back without enough bacon to justify myself with Sci Am. Fraudulent, essentially.

You say you have virtually all the dope. On what???? You say not.

However, I don't myself know just what Sci Am would want. I haven't yet seen Sci Am. I've seen some rough proofs in the dummy but not sat down and read the dummy, and the first numbers won't be off the press for some days yet. (Out May 11) I don't yet know its style.

One thing Dennis Flanagan said when I told him, month ago, you wanted to do a story was, he would not give you an assignment. You hadn't seen the new Sci Am, for one thing. He said you didn't call back that day after you phoned me. This when I asked him.

It may be that the type of story you write would please them more than the type I write. I am not the one to judge. I am not in on the picture but off on one side running a department, and from home.

It may be that they would like the light and fluffy touch of the Giant, with an occasional particle of solid data camouflaged in it. I do dare doubt they would want the This Week kind of thing but you wrote that well to your reader audience. My stuff is meaty and stodgy.

Anyway, I go to town in the morning and shall show Flanagan your letter and take him the Giant to sample. The rest is up to him.

I'd rather go west (never been west of KC) some time when I had better assurance of a meaty (not just a narrative) story and more time to jaunt around and see a few things. Of course, that time probably never will come.

Sincerely
Graham Ingalls

Dave Woodbury is here, with us, now. Looking for
material, I s'pose, for articles. He's been to Berkeley:
planning an additional chapter to new edition of "Glenn
Giant of Palomar".
Anything more definite, ^{yet} about your coming out here?

P

Pasadena--Apr 29

Dear Al: Very hasty reply, as typewrtr has to go back where I hired it at once

I have your letter and will be glad to talk the thing over with you & Dennis Morgan. Not sure though of May 12, as I am supposed to be in Wasington then for the Army. I work for them now you know. I will give Dennis a ring when I get home and he can let you know. May have to go over a week. Than s for interceding with him for me. I don't know that it is as important as all that. If he is so reluctant, for reasons that cant be explained, why should I get into it at all. Usually on this kind of work people come to me asking for articles. I don't particularly want to beg to get them. I only thought that since I am out here and have done all the interviews I might be the logical one to do it. But maybe your editor would rather have Harry Truman do it. That would be OK with me. One more nail in his coffin!

Russell has read my notes and thinks you would understand them so if you want them you are welcome--after I have finished with them for my book. I can hardly appreciate your calling t e Glass Giant "light and fluffy". I had thought I had written a pretty solid account of the telescope. But that just goes to show. Incidentally, the thing that appeared in This Week was not the article I sold them. They cut 1/3 off it, and took the liberty of rewording and

in some cases acutally altering the sense. This is what you editors think has to be done nowadays. It is why writers like me are getting less & less interested in working for the magazines, that do that and more and more willing to work for the ones that dont. I hope Sci Am is one that doesnt.

It is a funny thing that when a mag. gets somebody to make a drawing or painting as an illustration, or even a photo, no one would dream of putting some small shot on the staff to work retouching or repainting the work. But a guy's copy is only a signal for everybody to fall to and make any change they feel like. Hi ho. I guess I will stick to books, where it is definitely written into the contract that no word shall be changed without the written consent of the author.

Porters are eagerly looking for you out here. Better come, however much it hurts. It is no great distinction to have gone no further west than K.C.

I will shake hands with you again some day you old so-and-so. Thanks for fighting my battles for me.

Yrs..



"I feel more or less responsible for
these poor misguided fellows but
you're to blame as much as I."

RESP to me

Apr 44

50c

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50c

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SCIENTIFIC AMERICAN

"Dean of Magazines"

24 W. 40th STREET

NEW YORK

P. S.—To complete our record, please return this card with your remittance.

Friday 9 Pm.

Dear I -

B calls me up to come over to his house for some music. As Alice was licking the tar out of me playing Hop Ching, I says, "OK, be right over."

So here we are - women and gone to bed. Meine turned the thing on fff and having a hell of a time (just now slow movement 7th Symphony) - thrown away our aids to hearing. Thus B remarked as she went to bed "well, if the police come around just call me". #

B just showed me your letter. You two have certainly got it bad. Most as bad as Arctic Fever which took ten voyages for me to get a belly full.

Alvin showed me a proof you want him where you had remarked Purice, Farsome and you hadn't heard from me for 3 months. Was I dead?

No sir. I just wrote the Statesman to expect to see me Aug 10th Goin up?

Police came one night a bout 2.5 AM. to hear Beethoven Ninth - satisfied - went away -
----- Right now on the 3d morn. of the seventh --- have a concerto or two after that. Then go to bed happy.

Signed -

Pete & Barkeley

One of the sweetest and simplest things B
ever wrote starts something like this - Perhaps some girl
friend can locate it for you -



and another -



These are way off in key and tempo but there's perhaps
enough for a clue.

...I wonder also how you would like the gals in 1930, as I gather from various things I read, that you were rather handy with the gals, in your day. I think you and Lord Byron of our day would understand each other well!!! Hi!

"Well, tomorrow is Thanksgiving. Just a day to sit around home and read. Am now reading Byrd's "Alone," his account of that long lonesome vigil in a hut 150 miles away from his party. Very readable. Try to snatch the book for you but may not be able to get away with it. A review book.

No winter here yet, a mild balmy autumn instead.

Well, van Beethoven II (no longer Leonardo) I am getting a great deal of satisfaction out of your compositions. Your music rollicks along with a kind of joie de vivre that I like very much. You don't even seem to be afraid to

*This Methodist minister is a sprightly
campaigner against racial prejudice*

New York's Pied Piper

Condensed from This Week Magazine
Elsie McCormick



A FAMILIAR sight around New York is a pink-cheeked white-haired man known to many citizens as "Gabriel" or "The Pied Piper." He is generally seen leading a miscellaneous group of 30 or 40 persons and keeping them together by an occasional toot on a Swedish hunting horn.

This sprightly old gentleman is a Methodist minister, Clarence V. Howell, who for 25 years has been waging a unique war against racial, national and religious prejudice.

Early in the 1920's he went along on a commercial sight-seeing tour through New York's Chinatown. At Mott Street the conductor plunged into a Fu Manchu routine. "Young white girls are lured up there and taught to smoke opium," the conductor said, pointing to a dark stairway. "Two high school kids they enticed into the place last year were murdered and cut in pieces." The tourists gaped. Chinese who had stopped to listen became angry.

Disturbed by the ill will the tour created, Mr. Howell returned to

Chinatown the next day. He learned that the "opium den" was the home of a respectable merchant, and that an alleged murderers' hangout was really the meeting place of a Chinese Masonic Lodge. He met Chinatown leaders who were furiously indignant about the constant libeling of their community—which, in fact, had a lower crime rate than any other downtown area.

With the coöperation of these new Chinese friends, he arranged his own Chinatown tour. It included seeing something of its art, visiting its temples, clubrooms and theaters, and meeting people on a friendly, informal basis. The tour I took ended with a visit to the Chinese Musical Association, where amateurs ranging from college professors to laundrymen played "Moonlight Over the Lake" on two-stringed fiddles, drums and butterfly harps. The visitors were allowed to try the strange instruments. The good time had by all was more effective in pro-

owner from bankruptcy, but the composer received only a flat—a very flat—sum.

As the brief star of Mozart's life rushed toward perpetual darkness, it seemed to gather speed and to glow more dazzlingly. His last nine symphonies, some of which never got a hearing in his lifetime, are worthy to stand with Beethoven's nine. Too often people dismiss Mozart as dainty, knowing only the minuets and little sonatas taught to children; but you cannot hear his music to the end without discovering his depth.

In the 35th year of his life, though he was very ill in Vienna, he composed the famous fairy opera, *The Magic Flute*, filled with wonderful melodies. A fly-by-night producer brought it out in a ramshackle theater. News of it got about and all Vienna flocked to hear it. The producer made so much money he built a new theater. But Mozart was too ill to see the performances; he would lie eyeing his watch saying, "Now the curtain is going up." "Now they are walking unhurt through the flames, to the sound of the magic flute."

A few months before, Mozart had been visited by a stranger, a grim fellow who was empowered by his employer, he said, to commission Mozart to write a Requiem Mass for male and female voices, in honor of his employer's deceased wife. The messenger would not give his master's name. It is now known that

the employer, Count Walsegg, was fond of commissioning musical works secretly and then having them performed as his own.

Many interruptions prevented Mozart from delivering the piece. At intervals the messenger reappeared to hurry the composer. As Mozart became delirious he imagined that this emissary came from the Other World and that the *Requiem* was for his own death. Feverishly he strove to finish it. With terrifying power the *Requiem* sounds the very depths of grief and shuddering repentance, explores the farthest horizons of our human longing for immortality, and ends in a clear, serene chord of faith. On his deathbed, his few best friends about him, his lips shaped the notes of the Judgment Day trumpet that rings through the *Requiem*.

A few friends gathered in the gloom of a coming storm to hear a brief Mass said over Mozart's casket. As they set out toward the cemetery lightning flashed and lashing rain and wind bent them double. They turned back, and the hearse went on alone. Into an open pit, among the decaying remains of vagrants and prostitutes, was flung the slight form that had housed the most singing spirit which ever dwelt on earth.

Mozart triumphed over injustice, sickness, debt and death itself. To all that was ignoble, or appalling, he returned an answer that tingles still with the rapture of living.



five of her seven children were swept into an early grave.

Mozart had troubles enough to have set any other musician to writing dirges. But into his music he never brought the sorrow, grime and humiliations of his life. The worse things got, the more he poured his courage into his art. And it is never grim courage, but blithe as bird song.

In order to pay the butcher and even stave off the sheriff (who called frequently and took away pieces of furniture), Mozart got up concert after concert. For each one he composed a fresh work. Frequently it was finished only at the last moment; some of his greatest works were written in a matter of days.

Sometimes in the notoriously dank Vienna winters it was difficult for Mozart to keep warm enough to practice. A man called to find Wolfi and Stanzi dancing about. This story has been told as if they were waltzing gaily and regarded it as a joke. Actually they were almost paralyzed by cold and were throwing themselves about hysterically. The friend rushed out and got them fuel.

But the friend to whom the world owes most was a businessman named Puchberg, who repeatedly let Mozart have small sums when the distracted composer was driven to the wall. Reading Mozart's letters imploring his friend's aid, we burn with indignation to think that this radiant genius was reduced to begging.

In Prague, at least, Mozart was understood in his lifetime and adored. When he was invited there

to conduct his gay opera *The Marriage of Figaro*, which had been coldly received in Vienna, he found that nothing but *Figaro* was whistled in the streets. While there he wrote the beautiful Prague symphony, and presently he returned to prepare an opera especially for that music-loving town.

It was one of the good times for Wolfgang and Constanze when they journeyed over the mountains to the mellow Bohemian capital where Mozart worked on *Don Giovanni*, often called "the perfect opera." Da Ponte, the poet who did the libretto, was a merry scamp who lodged across the narrow street from the Mozarts. From time to time one man would shout across to the other with a request to come and hear new pages. Or, to the delight of all Prague, they would swing down the street together, singing, to the tavern for a bottle of wine.

Admirers entertained the Mozarts everywhere, so much so that time ran short. On the day before the opening the overture was still not written. The lights in the house were already up when the score was flung on the desks of the orchestra. The musicians played its rousing measures at sight.

Never had comedy been expressed in music with such delicious effect. But the *Don* is also a tragedy, and showed Mozart for a writer of demoniac power and dramatic instinct. Applause and encores stretched three hours of music into six. The box-office receipts saved the theater

delight on his face, until the theme was worked out in his head and he could scribble it on a scrap of paper. At 14 his newest opera was produced in Milan, under his own direction, by the largest orchestra in Europe. At 15 he was the author of 14 symphonies and six short operas.

In the years from 15 to 21 he invaded the most technically difficult fields of composition, where to step at all is to invite comparison with past masters. He showed that he was the master of them all. Every year his gifts, like a new star rushing toward the earth, grew brighter. In all justice he should have been given the highest musical post that his emperor, Joseph II of Austria, could bestow.

Instead he was neglected and snubbed by the Emperor, whose mean-spirited hirelings were fearful and jealous of the prodigiousness of Mozart's gift. Rival musicians prevented his works from being played, or when they were produced the performers were often bribed to ruin the music. There was no copyright to protect a composer; once a piece of music was known it could be freely performed, or even appropriated into another man's work.

The only security for a composer was to be taken into the employ of some court or person of wealth. Mozart did get such an appointment—at about \$67 a year! His employer, the Archbishop of Salzburg, had Mozart eat with the servants, and supposed that by grossly insulting him he could keep him properly

humble. Resigning, Mozart settled in Vienna as a free-lance artist.

When the celebrated musician Christoph von Gluck died, Wolfgang was given his post—"chamber composer" to the court—but at scarcely more than half von Gluck's pension. Yet he was humbly glad to get even this, for he had married young and impulsively, and the babies came promptly.

His wife was Constanze Weber, one of four pretty girls in a family where everyone was musical. Constanze was a giggly 13 when he first saw her, or rather looked past her at her older sister Aloysia, a 15-year-old with a gorgeous figure and singing voice. Aloysia promised to wait for him while he went off to Paris seeking his fortune. When he returned, unsuccessful, hers was already made in the opera. Long after, asked why she turned down Mozart, she confessed, "I thought he was such a *little* man."

Constanze picked up the pieces of his broken heart, and, to the unforgiving rage of Papa Mozart, they were married. "Stanzi" was a tuneless little blonde, an ideal companion for picnics in the Vienna woods. As a wife she lacked all domestic capabilities. Mozart could see the pathos of her fun-loving disposition caught in the wheels of poverty and childbearing. So her "Wolff" extravagantly spent money on little luxuries to coax back the smile of childish delight he had married. Worse, her health was frail, her childbirths were agonizing, and

was chagrined to find he had made three mistakes. Instead of excommunicating him, the Pope made him a Knight of the Golden Spur.

The father of this phenomenon was Leopold Mozart, a second-rate violinist and first-rate teacher, of Salzburg in Austria. Always reverent before his child's genius, he nevertheless exploited it. With Wolfgang's sister, a talented young pianist, he dragged the boy all over Europe. The children played before the rulers of France and England, and for the imperial family of Austria. On that occasion the boy slipped on the palace floor, got a bad bump, and was comforted by a girl who helped him to his feet. By way of thanks, Wolfgang offered to marry her when they grew up. But ahead lay a different fate for Marie Antoinette.

Rumbling coach and miry road, wretched inn and long hard hours could not exhaust the merriness and spirit of the boy. Delighted audiences often refused to leave their seats, and the obliging child would play on and on, seemingly in a spell of enchantment, inventing melody upon melody, the notes of the one rushing back and forth across the other like a spring shower dancing upon flowers. Until at last Papa Mozart would call a halt, and the fashionable ladies and gentlemen would shower the child with caresses and applause, none of which ever spoiled his natural sweetness.

The financial returns of the tours, however, always proved less than

the expenses. The high-born listeners were likely to pay in snuffboxes, shoe buckles and trinkets. Papa Mozart took it all with a bow, and bundled the children off to play for their supper elsewhere.

He was the boy's sole teacher. Wolfgang never went to school, but he flung himself joyfully on all forms of learning. Especially did arithmetic fascinate him, and he chalked sums all over the tables and walls, enchanted by a science which could be made to yield the one right and perfect answer. Here is a key to why his music is right, perfect, exactly satisfying. But Mozart is happy, tender and loving also. He is as heartening as he is easy to listen to.

In Mozart's time people found some of his music "too modern, too advanced." And to our ears a Mozart piece, heard for the first time, sounds as though you had known and loved it all your life. The reason is that Mozart profoundly influenced the music that came after him. Beethoven studied him constantly, and Haydn paid his young friend the sincere flattery of imitation. Chopin was deeply imbued with Mozart's spirit and said at his death, "Play Mozart in memory of me." Even the proud Wagner bowed his head to him. You can trace much of the gay spirit of Strauss waltzes, much of the great songs of Schubert back to the pure fountainhead of Wolfgang Amadeus Mozart.

Melodies sprang from his fingertips. He would sit in a rocking coach drumming his fingers on his knee,



MOZART,

Music's Wonder Child

By
Donald Culross Peattie

Positively the last concert! . . . The boy, not yet seven, will perform on the harpsichord, play a concerto for violin, and accompany symphonies on the clavier, the keyboard being covered with a cloth, as easily as if he could see the keys. He will name all notes sounded at a distance, singly or in chords, and improvise on harpsichord and organ as long as desired. Tickets ½ taler.

Thus did a notice in a German newspaper in 1763 advertise, as if he were a side-show freak, the most universal genius of music the world has ever known, Wolfgang Amadeus Mozart. In the audience sat another boy, the 14-year-old Goethe, destined too to become immortal. Years later he could still recall the far-off bright picture of the merry-faced little musician who ran to the bench before the harpsichord in his absurd, exquisite costume of lilac satin, with powdered wig and tiny sword, and flung his heart into the glittering notes.

Born with absolute pitch, infallible rhythm, and natural compre-

hension of harmony, Master Mozart had come into this world with an inexplicably complete gift. That is how, at the age of four, the child began to learn to play the clavier (a forerunner of the modern piano) and at five picked up a violin and, reading at sight, staggered through six trios with his father and a friend.

This child read and wrote notes before he could do as much with letters. Compositions dating from his sixth year are recognizable from the opening bars as the music of Mozart and nobody else. Graceful and sure, spirited, precise and brave, they are the work of a unique stylist and a great soul.

Fingers and brain were endowed alike. At ten the boy astounded the Hollanders by playing superbly on the largest, most complicated organ in the world. At 14 he was taken to hear the Vatican choir sing a long, difficult *Miserere* which was kept so secret that the singers were forbidden to copy the score on pain of excommunication. The boy drank in every note, walked home and wrote the entire thing out from memory. On a second hearing, he

Took me some years to grow to like Mozart. Have six albums of it. Like it increasingly well. Wish could afford about 50 albums of it. Is an immense quantity of it on records.

Yes - His compositions are beautiful but they never impressed me as did Ludwig's. To me Paganini used the right word - dainty - in describing them. I've only heard a few and they were string quartets. Of course he was a child prodigy and was miserably treated by his patrons. Old Beethoven had the guts to tell em where to get off. and freed music masters from having to come in through the back door. To me, Schubert comes next to Beethoven in symphonic works.

(P)



AN INDEPENDENT PUBLICATION
ESTABLISHED 1911
2-6215

Handwritten signature or mark.

51 Dec
Dear Bert and Frances:
Yes, I am still
alive and able to
say Merry Christmas.
Am here alone
resting up after a hard
season.

Three months of a
house too full of
unexpected company
and a very sick
mother who died
the last of September.

My house was
still full up until
November when they

May all the joys
of the
Christmas Season
be yours

all left for Florida.

I have only one neighbor anywhere near me.

The days are long and dreary but I hope to stay here well into January, then move on to Portland.

I have had some fun (as did have until things froze up) making large flower beds.

When I got too cussed I would go spade up sods and dig up boulders until I was fit to live with again.

I do not hear much from Vermont simply because I do not answer letters.

I have refused all invitations to visit here.

Purnell's niece Miriam died and the old home has been sold to

the town for school expansion.

Your friend Bert, Mrs. Enid Pierce had a shock last week.

Her speech is affected and she has difficulty using her hand.

Why don't you two drive the little Ford down and visit me next summer. I would like so much to see you and have you here.

Best love

Alice

Well - I am entitled to no musical opinion. You
two are. From what I've always read I'd have put
Bach first, Beethoven second and Brahms third.
I don't think Chopin is quite so shallow as
they make him, but I suppose that proves I'm shallow.
I'd put Mozart fourth. Schubert strikes me as a
feeble reflection of Beethoven. Liszt always seems
a show-off. Wagner - nuts, but I'm prejudiced, contra
his Hitler's favorite. - Sir Andrew Brown laughs

Jack Hariland is a musician - Jack what's
your sequence?

Dear

7/21/43

While I am a wonder-
fully skilled musician
(I think) my taste
in composers is uncon-
ventional. They all
wrote lousy numbers;
some of them wrote
good ~~ones~~ ones. For
orchestration I like
Tchaikovsky, Mendels-
sohn, Brahms and
others for piano
Chopin, Grieg, Mendels-
sohn. But don't
quote me. Beethoven
is at the bottom of
my list for everything
he thinks

If Russell sees this he will have
another coronary occlusion. I know
Jack so I realize (as you fellows

Sincerely yours
Jack

This is of Jack Hariland who never
softens any thought he has - thus
you know exactly what he thinks.

Author of ATMA chapter on
objective lens. He was at Cornell
taking M.E. when I was, but I don't
know him. He and Professor Vladimir Karpeloff,
who lives near Jack, was do a lot of ^{immune} recording on Jack's apparatus. This is a Bell Labs noise
research man. But his so sloppy
I hear he gets along badly.
(over)

(wonder) that he
likes to say
things bluntly for
dramatic effect.

Curious to find out what he means by
quartets - you like quartets. I
like a few of Wagner's songs. Also
like Gounod, Dvorak, Sibelius & others
and sonatas and trios and quartets
also piano.

I just can't believe Haviland means what he
says. Where would all of those fellows he likes be,
if it hadn't been for Beet.

I don't believe it. I think he's trying to get a rise
out of me.

(P)

He likes to say cynical things that jolt people.

He'd walk into a church and kick the
stool out from under the priest - or don't they
sit on stools? He doesn't mean it, but thinks he does.

Poll on Who are the greatest composers.

Taken by Stanford University psychologist
Farnsworth, a redemptive Liebf

Among 500 Stanford Students Among Am. Musicologist Soc

1 Beethoven	Bach
2 Bach	Beethoven
3 Wagner	Wagner
4 Mozart	Mozart
5 Gershwin	Palestrina
6 Tchaikovsky	Haydn
7 Schubert	Brahms
8 Brahms	Monteverdi
9 Chopin	Debussy
10 Debussy	Schubert
11 Mendelssohn	Handel
12 Liszt	Chopin

My Poll (Potato!)
(In order of greatness)

BEE TO VEN ← ^{intentionally misspell} (P)

Tchaikowsky

Schubert ←

Rimsky Korsakov

Mozart

Hayden

Chopin

Melodephon

Brahms.

Just a pale, diluted Beethoven. Thin
no. not all of it (P)

Mine

- Beethoven

Rimsky Korsakov

Wagner ← Gr. Gr. ^{oh! amos!} (P)

Schubert

Mendelssohn

Brahms

Sibelius

Chopin

Now, Andrew Brown, lets have
your poll (P)

That's out of mine he misspells for.

yeah
he can't spell.
we he can draw
pictures, so let
the page find it
(this time)

D

CARNEGIE INSTITUTION OF WASHINGTON
MOUNT WILSON OBSERVATORY
PASADENA, CALIFORNIA

CONFIDENTIAL

June 20, 1928

Mr. Albert G. Ingalls
Associate Editor, Scientific American
24 West 40th Street, New York City.

My dear Mr. Ingalls:

I owe you my thanks for both your letters, the check for seventy-five dollars, and Porter's revised drawing, which seems to be all right.

As for the prominence, I think it is one, 80,000 miles high, photographed on Mount Wilson long ago and reproduced as Fig. 14 in my "Ten Years' Work of a Mountain Observatory". I am sending this under separate cover, as you may not have it. It is far out of date, of course, but will serve to give you an idea of how we developed the Observatory in its earlier stages.

I think another similar job lies just ahead, though the Astrophysical Observatory of the California Institute of Technology will be confined chiefly to a 200-inch reflector and very complete accessory apparatus, designed to supplement and not to duplicate the Mount Wilson equipment. The financial problem is not yet fully worked out and we can make no public announcements regarding gifts until this job is completed, probably by the autumn. But we are beginning preliminary studies, and these and related financial negotiations have taken practically all my time

Mr. Albert G. Ingalls

-2-

June 20, 1928

since I got home. You may be sure, however, that I shall finish your second article (already begun) at the earliest possible moment, as I am as anxious as you are to complete it.

Please regard this letter as confidential, as we are not yet ready to say anything publicly. Our first public statement will merely indicate that we are raising funds for the project.

I will send blueprints to Dunlop as soon as possible. He is the kind of man we want to enlist.

Very sincerely yours,

George E. Hale

He says your drawing is now all right

Yes, but you sent this fragment of his letter to dangle before my curious eyes. For God's sake, Ingalls, don't push me too far.

These wonderful friendships already as a matter of course - human nature

Ha ha!
- on December 20

"All was that 'subliminal' - well, so it did, I found the morning at 11 o'clock private observation trying to get a periodic error out of the drawing, which I could state

(14)

CARNEGIE INSTITUTION OF WASHINGTON
MOUNT WILSON OBSERVATORY
PASADENA, CALIFORNIA

August 10, 1928

CONFIDENTIAL

Mr. Robert G. Ingalls
Associate Editor, Scientific American
24 West 40th Street, New York City.

Dear Mr. Ingalls:

I am making no definite plans yet, but am wondering whether Mr. Porter would consider taking charge of the new instrument and optical shops to be built at the California Institute in connection with the 200-inch project. Dr. Anderson, as our Executive Officer, will be in general charge of all the work, with Pease in general charge of the optical work. But all of us will work together on instrument design, etc., in consultation with men like Swasey, Dunn, Michelson, Elihu Thomson, and others. I am sure Porter could help very materially on design, and believe he could supervise the machine and optical shops to good advantage. They will be on about the same scale as those of the Mount Wilson Observatory (see "Ten Year's Work of a Mountain Observatory") and with the latest and best tools. If Porter were to come, we would want his help in designing these shops and their equipment.

But perhaps Porter is older than I hope he is, and wouldn't want to come in any case. Millikan's shop, as well as that of the Mount Wilson Observatory, are supervised by men who have been instrument makers or machinists, but in this case I would like to have a man of broader calibre, who

Mr. Robert G. Ingalls

-2-

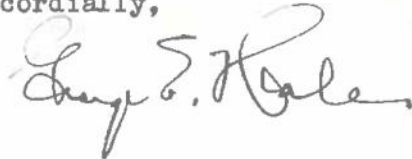
August 10, 1928

[could also look after much of the drafting. We can't pay
a very big salary because of the susceptibilities of the
and the inadequate salary scales here
(very good) men in charge of the other shops, but Porter
might possibly be willing to come for \$3500. or \$4000. because of
the interest of the work.

However, he may be too old (as I am) to tackle
the near end of a ten years' job (which will of course also
continue indefinitely after the telescope is finished). Anyhow,
please give me your impressions in confidence.

With best wishes for a splendid trip,

Yours very cordially,



P.S. If you know a first-class book on machine shop design,
please order it sent to me with bill.

TYPE-WRITER
AUG 14 1928

August 14, 1928

Dr. George Ellery Hale, Honorary Director,
Mt. Wilson Observatory,
Pasadena, California.

Dear Dr. Hale:

Thank you for such a prompt reply on the proof corrections. This greatly facilitated finishing up the book before I leave. The printing may be delayed until about October 1st. A copy will be sent you then, before my return.

Porter's age is 56. You will find it in "Who's Who".

The proposal would certainly interest him. Whether he could afford to accept, I do not know. After "sleeping on it", and knowing him and his circumstances (except his income) pretty well, I imagine he will want to accept but may not be able to make the salary suffice. He has a wife and daughter of 15, and Pasadena living expenses are higher than Vermont's. I do know he would like to get out of Vermont's winters; his twelve years in the Arctic inclined him strongly in favor of warmth, and his often expressed idea of a place to live is directly astride the equator.

His inventiveness, creativeness and especially his versatility ought, I think, to be an asset to the plan, but his present employer appreciates the same qualities - to what tune (\$) in annual salary, I have never had the least idea. His address is 2 Hill Place, Springfield, Vermont.

Cordially yours,

AGI:F

I recall getting scared,
here, for fear I had
scared him off. So
I put this next sentence
in as a come on.

Albert G. Ingalls
Associate Editor.

(over)

AnsP
Don't scuff
your heels, it
makes you
take on 20
years - a
"tip from
father"

I don't know just how to say it but somehow I think your reply to Dr Hale was a masterpiece and paved the way to landing my present job. That and along with my reply to Hale's telegram asking for what sum I would consider coming. This reply was not mine but the Governor's. We tried half a dozen before framing the one I sent. At the P. O. L. they speak of my being "on furlough" which, I take it, means being loaned after a fashion.

But I am glad to see this letter of Dr Hale for it gives me a better idea of what he had in mind for me to do than anything I have been able to get hold of.

Last week after a conference with Anderson and Pease, he got me down on the sofa alone and told me many things in confidence. I was surprised that he had enough faith in me to let me into the general situation here to the extent to which he unburdened his ~~last~~ mind.

Dr Hale is a wonder, when you come to take in all he has accomplished and guided. He is very much like Gov. Hartness - broad vision, and not hindered by precedent. I told Dr H I wished he could meet the Gov. and he said "write him to come out and look over the plans." And so I have, but no reply as yet. Believe my caps if happeners would be free to have him here and be able to "show him around" instead of vice versa, as has been the case to date.

(P)

Nov 26 1925



TWENTIETH CENTURY LIMITED

Monday p.m.

Well, you won't have to read any farther when you see this letter head - to know that the Porter family ~~are~~ headed for California. First minute we had to write you. Well Hale accepted my terms which were really very favorable to us. The agreement is until July 1st when he'll probably say to go back to Ct. Or perhaps they'll

Je 46
 Well have you been fired
in disgrace yet?

No - not just exactly fired - just sorta retired. But they still keep shoving stuff at me

(P)

direct charge, and I took immediate

I
 you
 wanting
 my
 ago
 my
 ing
 that
 ing
 fully

magazine section of Sunday's times.

First time the Porters have traveled
so luxuriously - in a Pullman
drawing room and we
are residing in it.

Mrs P sends regards
Caroline is enjoying.

Porter

Shamie

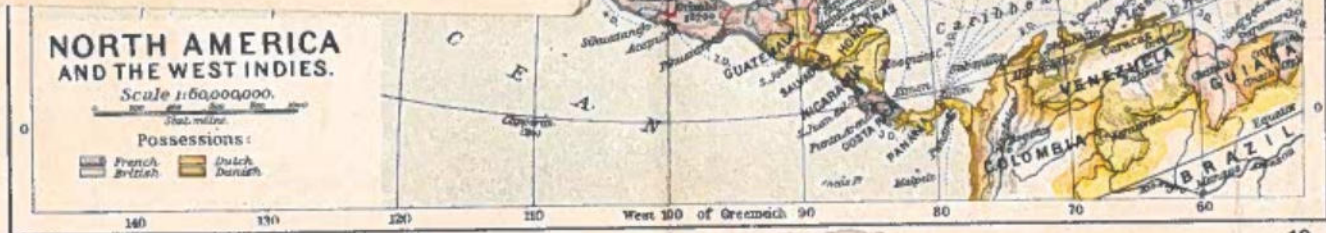
Bulletin Am Geog. Soc. (down arrow)
 Vol 30 1898 pp 95-110
 KAA

Probrar Bay revisited by
 R W Porter

Trip was in 1897
 Embarked Boston July 19
 with six college students
 and A. V. Shaw

Abundance of game ptarmigan
 reindeer, ducks ptarmigan
 and sea trout, (under ducks)
 (over)

Aug 1, reached Beaufort
 Hired 12 Eskimos



Where?

Well, I was tied up Sunday night so I
couldn't give you a lift, but I see you got
through a.k.

Land's end good as ever but
dense fog ever since we arrived Wednesday.
The Woodbumps showed up Thursday, and have
just left. Alice and I think Pasadena better
than this fog so we are thinking of pulling
out tomorrow (Sat), am: - and go west
via Lake Champlain (cross St Lawrence) and
along north side Lakes Ontario & Erie to Port
Huron - Thence across Michigan, Lake Michigan
(at night on boat) Wisconsin, So Dakota, Wyoming
to Salt Lake City - thence S.W. into Southern
Calif. — Hoping this northerly route will
be somewhat cooler than the more southerly
ones. Will drop you a postal some where,

My dear Ejemskal,
Yours, and love
To Frances.

Ludwig Van Petak
(né Beethoven)

Monday Morning

Dear Russell: Just reached NY. Was thinking in the night, rolling along the old B and M, of something I should have thought about yesterday. Would it be practical to get some of those trees that lie near Stellafane trucked to the local mill, sawed up and freighted to Glenora to serve as the ceiling and interior woodwork of my Rock Cabin??????? *No!*

That, I suppose, is black spruce. Will that kind of wood work OK or is it N.G.?(Never used it) *yes, it works*

Full of knots but these are actually attractive, provided the knots in black spruce stay sound. Finish with oil: I like the natural wood.

But I can't think what sort of set-up I would encounter at Springfield. Need about 400 board feet of 1" stuff, any widths. 12" lengths.

Last year I investigated the lumber I otherwise would get, at Watkins, and found it would be sugar pine from Idaho, at \$200 per M. I'd far prefer black spruce from right near Stellafane.

Is my idea practical?

No, 'tain't.

Why buy most costly wood on the market - (pattern pine) at \$200 per thousand?

Need it, positively, September 11.

Wonder if that wood has had time to season so it wouldn't twist etc.

No, it would twist.

Had a fine PM at Habitat. Went out on a rock and took a bath with a teakettle of Mr Redfield's warm water, slept all PM, and walked to Town. When do you start west?

Wildest and most impracticable idea you ever gave birth to. - But if you want to go lay wire route to Geo Perry. You ought to get good framing and boarding for less than 50 per m. near Glenora (over)

Albert G. In
Associate

AGI:ME

Please excuse, Bert - I'm too da-
even think what to say about
just tell him I'm sick - ~~to the~~
is God's truth. (P)

Ames



America

24 1.1

My god, this looks bad. I had known he had grippe but supposed it just one more short illness. Moreover, he is not at all inclined to exaggerate illnesses -- on the contrary. So he must have been sick.

Only good side is that by now he must be better or we'd have heard.

I suppose one of these illnesses will get him some time and - dread it.

Or maybe he was just expressing to me his thoughts, like "Godamit, lemme be will yuh and quit a-sendin me all this stuff." Damn if I'd blame him. On the other hand, the way he has handled it, returning all of it promptly and losing none of it as he has with other things, suggests that he likes to see the stuff.

Afraid he's been pretty sick.

Dear Russell

My God - I didn't realize you had been as sick as that ("sick-sick-sick"). You mentioned grippe but didn't previously stress it much. I sposed you just had a bad cold. Now it looks like a serious illness and alarms me.

Letter you sent is postmarked Jan 31 - five days ago. By now you no doubt are better - I sincerely hope so.

Yet tho you were sick you went over this batch. Thanks. In sending you this one I am assuming that, after five days, you are pretty well along to OK again but if not, just forget it.

Anyway, things have not gone so well for past two weeks; men dropped out, Arsenal not seemingly alive. However, I won't quit or weaken.

And sincerely hope you are recovering now.

Oh don't worry 'bout me, I only get back on my job before I should. with customary sick back. But my doc will probably give me hell tho. Today is good thing he got a tough old woman to lay down the law. Broadhead's letter was well worth waiting for. another timely one from Anne. Says Spencer friends about ready to go forward! Hope he leaves Spencer

and goes all out for the animal - animals, persons,
Lem and etc.  We too

Animal not seemingly alive. However, - won't quit or weaken.

And sincerely hope you are recovering now.

Monday AM
Dear Bert, ~~7/29~~
for heavens
sake, send along
all the work you
can find that I
can do in bed.
He is in bad
shape but can't
be told too much
+ he's affected
heart.
Goes out every -
but he feels a

but better, coming
home much work.
Doctor does not
believe in Scars
him.
He can write and
draw in bed if
and if he's his
ownself.
Sleeps from 2 PM until
5 wake him for dinner
+ lie again until

mid night - and most
of the night -

He is weak -

Doctor on the job -

Love to your body

Bob

115 So Monitor

During first week of
illness, Callah National
Defense men stood
over him two hours
at a time, too much
for him. They said
"He or not the work
had to get to Washington
on time"

from now on
am born

"sick" His mind was
not working well
today. Couldn't remember
much except the
bed pan. He has never
been in a hospital -
had a nurse at
used a bed pan before
He said the nurse
wouldn't let me go
to the bathroom and
that bed pan ruled me
You can joke him
about it as I told
him I would send
you a note, but
do not give him the
idea that you think
he is sick.

He says for you to
send mail to 615 So. Main
but please address
it to Mr and Mrs
so that I can open
it and see what

Tuesday! / 19
Feb 174
Dear Al.
We took Pursall to
the hospital yesterday.
He was very weak -
couldn't walk or
stand and would
get out of bed every
time I left him and
fall, sometimes six
or seven times a day
and forgot about it
very soon after I got
him back in bed -
and getting him back
was a job for me.
It took the doctor, a
nurse and myself a
long time to persuade
him to go. He was mad
when I left him last
night. Said you and
the doctor have made
a mistake. I am not

3 we can have
A large envelope
came from your
tracy, but doctor would
let him have it and
I dare not open it
to sent out the thing
that would help him

The doctor insists
that he is weak from
over dining. Still has
infection from flu
and must be in
the hospital where he
can't get out of bed.
They even have
the child like bars up
to keep him in. as
that boy is not to
be trusted.

The doctor never
tells me the whole
truth, lest it scare
me and that gets me

hired. I know that
Puss is worrying
about his legs, because
his father had a lingering
death from locomotor
ataxia. (can't spell it)
Puss has always
been afraid that he
would have it.
I told the doctor to
ease his mind, and
hope he has.

Your Raymond Claffer
jokes did him a world
of good. He made me
read them over and
over to him.
He gets people's stuff
in our S.A. Paper.
Anything bad that you
can think up about
dear Eleanor also
helps. I will let you
know when he can
have more letters
from nuts other

5
+ has your self
the biggest not of
all.

The doctor told him
two or three days
in the hospital. but
it will be longer.

He has the old-
fashioned idea
that a hospital
is a place where
people only go to
die, and it's hard
to change the mind
of a stubborn Porter

but to know what
he is doing. I think
at the hospital. I think
it is not as you
would.

I think you think
knowing you need
to have a long time
and I am thinking
about air mail that
and then it is not
615 So Memorial (over)
done to you all
Glenn Porter

The one-thing that
would help Furs all
most would be
good news about
Fersons work.

I have not had
time to write Furf.
but you could
exaggerate a bit -
He constantly worries
about it.

I arrived this a.m. He is
very proud of his bed, which
has all sorts of things
attached to it. When he woke
up, his bed was wet. He
called the nurse and told
her and ask her if the
bed had plumbing and
told her that something had
broken and wet his bed.
The nurse thought he was
trying to be smart - and
wouldn't talk. The other
nurses, who
wouldn't talk, but finally
an old timer came in
and understood that Russ
really had no idea that
he wet the bed himself -
a thing which he has never
done since he was a
baby. He just couldn't
believe it. I told him
that I was going to tell
papa, so that papa could
have a laugh. He said
my pap, won't Andy raze
me.

A letter came from Fred & Truitt
I knew that it would help Russ

Thursday 11 PM 6
July 19

Dear Bart,
I am home from the
hospital and will write
in bed because I am a
tired old lady.
Russ will stay with me
I stay with him. The nurse
kicked me out at 9 P.M.
but man, who calls this a
friend, wake me up every
morning on their way to
work, asking for Russ.
Truly, I could talk the
art to every man and
here - especially the doctor
who tells me lies -
I do not know what
is wrong with Russ.
but they are not telling
me. Dr. has consulted
with other physicians and
Russ has the best of care.
I still have no idea if
he can walk, because
they keep him in bed.
and the poor man was
terribly wrought up when

more than the doctor so
I gave it to him and he
read it four times and
said "Poor Andy, he must be
awful busy, but to write!"

The doctor has forbidden
me to give him the three
large letters from you -

When you write to Mr
and Mrs P, I will ask
them and give him what
I think he would enjoy.

If those letters contain
things you need - letters
on name and I will send
them back -

He is going to visit
the doctor if he can write
you a note. He still
remembers everything
about his work, but
nothing else - Sometimes
he remembers for ten
minutes - but he is
learning to eat - and
the food is good.

I am trying to believe
the doctor, but it does not
sound right. I have been
watching Quis for
for twenty years, but it
was never anything like
this.

The doctor is a good
friend and knows a lot
about "Anos and Andy".
He enjoys your best jokes
and the bigger talks -
He does not know that
P. has the letter from Anos -

I am p. b. l. o. r. -
A. wrote a very fine letter
so that P. has stopped
worrying about him.

I am almost asleep -
and no wonder after so
many nights of no sleep.
Love to you all

Alice

615 So. Main St.

Collis P. and Howard Huntington Memorial Hospital

100 CONGRESS STREET

PASADENA, CALIFORNIA

Apr 24 42

Thursday P.M.

Dear Bert:

Quis was delighted to have your letter today. He seems to improve and I feel encouraged. Got out of bed twice today and walked a few steps and was so mad because the nurse held on to him. I was so worried over his back which refused to work the last week at home, but he moves around in bed now very well.

He is now being worked up for supper, and then comes the enema which hurts terribly.

He was strong enough yesterday to be examined and, when the doctor arrived early, he found

He was sitting up, drawing
a fine picture of his
section, is essential, just
where it hurt most.

He got so ~~interested~~ ^{interested} in
the instruments, which
had mirrors on a lens
that he wasted a lot
of time. When I arrived
he proudly told me that
he only had two "edwards"
meaning hemorrhoids (I can't
spell it). I had to stop writing
and go back to R. so am
writing home in bed as usual
and am too tired to write
think or spell, but you
are a forgiving saint.

Everybody in our end of
the hospital are still laughing
over Russells sketch -

The nurses never under-
stand him, and take such
good care of him, but at
first, they couldn't understand
any man being so innocent.
The third day, he said to me
"The nurses do not like me

Collis P. and Howard Huntington Memorial Hospital

100 CONGRESS STREET

PASADENA, CALIFORNIA

They always seem to be on the alert" and no wonder, after the queer things he said to them.

His mind is clearing up, but probably he will never remember the last two weeks at home.

So many crepe hangers walked into his room, that we put a no visitors sign on the door with a note, saying "Squire at office, They still wish in, and last night Dr Jesse Diamond, who had been forbidden to come, walked in with a roll of Defense plans, about three days work for Russel, a nurse called to him, but he paid no attention to her, I hid and watched the fun, a tiny little head nurse ordered him out. He was mad, and the little nurse ordered him around like the army. Russ was

very much amused and
has remained bent it all day.
Knewles Person saw her
and told me that Dr. Preslee was
in the same condition, but
recovered and worked for
two years, but could not
remember his illness.

It knows is going to "write
Juggals to keep his shirt on"
He is a first class and
lawyer. Put on your and
Fred do.

Pasadena only got the
police and warden alert
last night, and a radio
blast out until mid night -

I came home in the midst of it at 9-30 o'clock, and went to bed, not knowing of the excitement, and it was a good thing. I needed sleep.

Somebody was working
over Run all day, but
he read your letter, and
gave a big whoop when
he read the note about
Fred's work. The best
medicine for him -

was too tired to look at
the ~~book~~ books, but the
doctor and I read some
of it to him. He said "well
Andy that it's no good. It
tells how to cure every-

Collis P. and Howard Huntington Memorial Hospital

100 CONGRESS STREET

PASADENA, CALIFORNIA

thing except my adenoids" and he also wants you to know that he has ^{it} met the bed for two nights - and hopes you can find a rubber diaper for him cheap.

He tells me to write these four things. so I have to and he expects a reply - but not in the Scientific.

He was glad to hear that Stefan ^{Stefan} has been called off this year. He has talked about it since the war -

He would hate to miss it. and they will keep him too busy here, if we can get him well. The doctor visited tonight that he might come home in a week, but made no promises. He had to cheer him up. His faith in this doctor helps a lot. He was in the army during the first war and he told Russell that the quickest way to get back to

his work, is to stay in
the hospital. He will talk
music, and knows Gunells
adher habits. It all has
a soothing influence even
if I can't remember it 15
minutes later -

I couldn't read this if
I tried, so won't, and do
not expect you to -

Now I "blame the clock"
and try to get some sleep.
Have to get up too early
for an old lady -

Thanks and love to
you all -

Alice -

I promise not to lose
any of your junk -

Wednesday 8 AM.

Very nice night, but
I made myself stay in
bed, but I break a leg
in the dark. Could hear
the guns and see flames
across Pasadena.
Thus would not know
as he hears nothing with
earphone off -

Collis P. and Howard Huntington Memorial Hospital

100 CONGRESS STREET

PASADENA, CALIFORNIA

Feb 25 - 10 P.M.

Dear Bert: Here I am in bed again but an hour early. I fooled Russell by setting his watch forward an hour. He had a little setback tonight and the doctor gave him something to make him sleep.

He vomited with all his might and main at 5 P.M. and got panicky. Dr. came and examined him. Saying nothing wrong, Russell's belief that his mind made him vomit and the doctor let him believe it.

Russell has never been able to vomit in his life and anything new scares him as he still believes that we are "putting something over on him".

For three days he has teased the doctor to let him write to you. I was told

Today to use my judgment about it, so after he had nagged me for an hour after lunch, I gave him a pencil and the back of an envelope. He was two hours making the little sketch. Got tired and nervous. You can see that he dated paper note A.M. He wrote it after 4 P.M. He is very weak and nervous, I feel sure that he was sick. Because he was tired.

It was a hard day at the hospital. Because the morning nurses could not drive their cars in the black out and were three hours late. It's dark here until after seven a'clock.

Rumrals room was blacked out shortly after 2 A.M. He had his bath in the dark at six - and ate his breakfast in the dark. The private rooms have not a complete black out system. They have an indirect light system, and use one light in the floor.

When the nurse started his bath, he turned on the light and she had to tell him

Collis P. and Howard Huntington Memorial Hospital

100 CONGRESS STREET

PASADENA, CALIFORNIA

why he couldn't

He begged to come home tonight, that he wanted to be home, with me in all black and I, He knows that I am not afraid. I told him that he was safer there and that I could run, He just insisted that he could run with me. He knew that I couldn't reach the hospital during a raid, St's 4 or 5 miles from our house and no cars run. and we can only phone in an emergency, and in that case the doctor could arrange it.

I do not feel worried tonight because I am sure the exciting day was too much for him, and no real damage is done. I learned tonight that some of our best friends called today asking for me but were kicked out by the head nurse. It's nice to have a lot of friends, but

- they can be of use.

Russ thinks I am sending
his note in the envelope
of Nell's letters, which we
finally got away from him.
I will mail them tomorrow.

The doctor has tried his best
to get that envelope. But Russ
held on to it. I could not get
it without making him very
unhappy. so I let him write.

Nobody knows just what
happened here last night
except that the sky was full
of glows, and flares.

News papers, went wild,
and everybody was mad.
It was what many people
needed, to wake them up.
So few realize that we
have a war.

No news will always
mean good news.

Alice -

615 So Mental

which can't be picked 12
out on. St the fags bomb
us, it can burn up, write
again if you are worried
about it. R. says, that it's
something to look forward to -
but he will understand if you
want it. Ha! Frances said that - and stuck to it!

At least a dozen people have
told me that R. had a shock -
Stree the doctor, and tell him,
but he swears that it's not
true, just exhaustion - anyway
everything about R. works.

He is too nervous and
the red blotches ^{in his face} which were
my guide during his heart
attacks are back - otherwise
he seemed quite normal
today - but very sad as usual
when I came home. Is it

there from 10 AM until 9 PM,
and am not allowed to do
anything except give him his
pipe. I leave him for twenty
minutes to eat while he has
his early supper - and he
can't wait for me to get back -

Feb 26. 11 PM

Dear Bert! Found R cheerful
this morning, and ^{he} had
forgotten the tantrum he
had last night. He walked
around the room three different
times today and got back to bed
alone, one grand little boy.

I gave him your two letters
and one from Fred. He has
stopped worrying about Fred.
Believes all your words.
But gosh! he began showing
your bed wetting story to
the nurses, and I had to
get off with him. He talks
to them just as he does to
me at home - as as he
would to you. I lost the
pencil on him, or he would
have written again.

He is too smart not to
miss the gap in your letters,
so we had to tell him of the
mail at home. He said O/P;
still in good. I went loose
it. I have it locked up in
the liquor closet, the help got
so drunk that I had a lock

Sometimes I don't worry very much.
Intuition said he'd get by

Stag worrying me vice
pull him out of it -

How my bones ache -
my taxi got pinned tonight
a nasty cab held us up
just minutes - it was just
mean, but fortunately I
was too tired to slug him -
Don't worry if I do not
write -

Alice

Heeze wild man.

I feel sure that Kray has
no friends in So Calif -
they do not like to see
laughed at. Hundreds slaved
all night, and the blackest
was no joke -

Casa Del Camino = road house!

MR. AND MRS. A. LINUS •• KARL MARTINIUS

EAST ENTRANCE
1447 N. PALM CANYON DRIVEWEST ENTRANCE
1446 CAMINO DEL NORTE

Palm Springs, California

Dear Bert:

Runs take about writing
to you but is it quite up
to it yet. Still weak and
has little appetite. but I
can see that he gains
slowly.

He tried driving the car
yesterday for the first time
and two miles tired him out.
Stays mostly in bed.

He likes this place -
It's run by Swedes who
are nice to us, and we
are right under the snow
capped mountain.

Weather is dry and very
hot - I sent a man of
flowers.

Please give Frances the
inclosed cards. The colors
do not lie. They are even
brighter.

Subconscious mind seems to say to the consciousness,
"Well, you damn fool, if you insist on forcing
us (you and me) to work past our strength, I will
not cooperate but will draw a curtain and
partly dark you out so you will give me a rest."
This is interesting. Sounds very logical.

Guess she wants us to give him a rest - no mail.
Maybe that's best. If he could wholly forget us
all for a time would raise his battery enough
on rest. Wish I could write her but had see it

*I did. Wish I hadn't but told her not
to give to him (letter) unless she wanted
to.*

ORIGINAL DET 5030

Spring, so we will
go there. Russ hates
the place but the
doctor insists.

I am hunting for
a place away
from the Marine
Stans - and fresh.
which is what makes
R. hate it. He can't
drive yet, but I
will find a way
to get there.

In haste

Alice

March 13/

Dear Bert:

If all goes
well, Russ comes
home tomorrow
night.

The doctor's orders
are that he rest
at home two
days, then go to the
desert for two
weeks, without
work.

It's warm at Palm

Great Palomar Telescope Nearly Done, Says Expert

Active for the past thirteen years in the design and construction of the two-hundred inch telescope at Palomar Mountain, Russell W. Porter said in Palm Springs yesterday that the great instrument is nearly completed. It awaits only the finishing of the large mirrors which are being polished in the optical shop of California Tech in Pasadena, he said.

At present all work on the huge instrument, excepting the mirror, has ceased for the duration of the war.

Mr. and Mrs. Porter, whose home is in Pasadena, are now stopping at the Casa Del Camino for two weeks.

Made Arctic Trips

Porter is a Vermonter and his wife is from Maine. As a young man Porter made several voyages above the arctic circle in the capacity of astronomer and surveyor. He also, as a hobby, enjoys sketching desert scenes.

age to write my first letter - and to you. Had two shocks. All I could do to fill out a check a few days ago - couldn't recognize my own writing. But I seem to be coming along all right now, and if all goes well, will be back in Pasadena inside of a week. Doc insisted I go to the desert for 2 weeks to recuperate (real reason probably was to isolate me so I couldn't work).

Well, it seems to me to have been a long hard fall - lets see - must six weeks since I took to my bed with something that acted like flu. - queerest symptoms - double vision, unsteadiness (falling down) - constipation. increased deafness. Threshold of hearing now is considerably below what it was. Don't expect to get it back. Oh, forget it!

I suppose you know by now
that Stellaface is out for this
year. The reasons are of course
good and obvious. Got the news
from Will Workson and Geo Perry.
Please continue to send me Lu-
galsonia as of yore, and right
now Bert let me thank you for
your letters received in hospital. Was
Blessed with three good looking
nurses but they were too damned
shy - wouldn't hold hands or let me
know their first names. But the
head nurse, a Kentucky girl, let me
hold her hand and - Byfibre - I made
a date with her when wife was
away - going to show her the two
inch mirror. Alice kept a pretty
sharp watch on me. - Now was
it from love, or suspicion of those
nurses. One, a Jap, woke me up
and gave me a bath during a black-
out.

We've found, strange to say, just
what we wanted in this Hollywood
play boy town - off on the outskirts
and run by Swedes - Alice says
"Send Bert the (today's) local Palm Spring
paper; just to show him that you're
alive"

(P)

Dear Bert - Sunday Mar. 29 '42

I'm holding the folder of articles for which you want drawings - Assume there's no hurry and I'm not quite up to it yet.

Shipping you a lot of stuff accumulated while ill. It's not in sequence so you'll have to rearrange. You know that damn tyrant wife of mine (under doctor's orders) locked up a bunch of ^{your} stuff in the wine closet in the kitchen and only handed it over when we got back from Palm Springs. This accounts for the late return of same.

Say, do you thumb them through & make a few comments thereon? but nothing of importance - only reactions - same as Ann's. Seems as though my hearing has improved a little. But expect it to rise to former level. After every cold - flu they say the threshold goes down ~~down~~ ^{up}. Still I get along pretty well with my amplifiers.

Spending the day clearing a pile of letters that came in when I was knocked out. Only to day - most 2 months - have I had the ambition to tackle it.

For "Telescope" note
Rough draft.
May be scribbled on.

SELDOM does the pupil stop to think that there must have been a time, long, long ago, when the teacher was ^{himself} only a pupil, making the same lowly beginnings and having the same ^{perplexing} troubles as ^{he is waking} himself. In case you have ever wondered how your preceptor, Russell W. Porter, first took up telescope making, Figure 1 will take you back to the original locus. This photograph was taken only one year ago, but the surroundings ^{shown in it} are the exact ones in which Porter worked at Port Clyde, Maine, when ^{himself only} a tyro in ^{approx. 1909} 1907. The site is the cellar of his house at the center of a 50-acre peninsula jutting into the Atlantic about one third of the distance up-
see (3) or "down" as they say ^{down there - meaning up there.} the Maine coast, The pedestal shown is the original, nothing having been altered, and when your scribe last saw the place in 1932 a number of the original pitch laps were lying about. The jug shown in Figure 1 is a "prop," surreptitiously slipped in at the last minute by G.A. Mitchell of Pasadena, who took the picture, ^{or also by that inexpressible bag boy, Byron L. Graves of Los Angeles, another TN.}

How did Porter happen to become an amateur telescope maker? ^{himself?}
We jump back to 1894 [?] and find him working his way through the Massachusetts Institute of Technology. One evening he hears ^{Commander} ~~Admiral~~ Peary lecture on the Arctic and from that moment ^{on} he is down with ^{a bad case of} "arctic fever." Peary cannot include him in his personnel - he wishes to - but along comes a certain Dr. Cook, unknown but affable and plausible enough. He takes the youthful Porter on an expedition to Greenland but the ship is wrecked and sinks. In 1896, however, Porter goes with Peary to Greenland, and in '97 he takes his own party to Baffinland. In '98 he starts over-land to the Klondyke, reaches the headwaters of the Peace River in British Columbia ^{but} can get no farther. In '98 he takes a party to Greenland on Peary's ship. ^{and another in 1900} In 1902 he goes to Franz Josef Land with the Ziegler Expedition and in 1903-4-5 he is with Fiala ^{on the second} in the same high latitude. In 1906 he goes to Alaska with the same Dr. Cook, not yet "shown up" and, as every explorer will tell you, a likable man despite

- 0 - 110 inch (see Astrophysical Journal about time of the Armistice)
- 1 - Around one hundred
- 2 - The frame of an old Stevens Duryea automobile given me by Hartness.
- 3 - Hartness is really responsible for my start in mirror making - by sending me several copies of Popular Astronomy - and in which I found an article by one Holcomb, a coffee merchant of Drexler, Ill., who described making a reflector. Through correspondence with him I obtained "glass making by heat and abrasion" (Paul Hasluck) - and started work on the a 10 inch disc. I shudder even today when I recall its horrible figure.
- 4 - This stone pier supported 4 fireplaces in the rooms above, but it was in my way when testing a 16-inch mirror whose radius of curvature (36 ft) could just squeeze into the cellar diagonally. So there was nothing left to do but remove part of this pier. (Note - Is it worth mentioning that I also cut through the dining room wall (during Mrs. Porter's absence up town shopping) in order to try out a polar type refractor.)

by chance (just as you

The print looks almost
good
An engraver could proba

Got a photo of you, pushing glass in Port Clyde cellar! Mitchell sent it but it wasn't good - thin. I got our photographic editor to intensify the negative, and she comes out better (sent Mitchell a print).

Some time want to publish that, to show the boys where it all started. I was in your cellar at Port Clyde and saw a lot of old laps and things lying there. Mitchell speaks of an old Stevens-Duryea frame, but I don't recall that or its significance. Too bad - Mitchell was

badly disappointed the way it came out. Don't believe you can do anything with it. Somewhere you once published a yarn about

In P.A. 1921 November
Porter said "some day came up an
article by Mr (Holcomb) Decatur
Ill caught Lin's eye

show
must
nail

This article is in P.A. 19(1910) 169-71
By Geo Holcomb. It contains
500 words. He says that in 1907
John Mellish had an article in
Pop Mechanics. He read this and
made a 10"4" that he made in 1909.
Says "I hope to see an interest created
in speaking making in this country
among laymen." Mellish found a corner
like ^{Holcomb} also read one in P.A. 1907
by A.R.J.F. Hassard who had made
one "after the same manner as had
John Mellish."

This proves to be in P.A. 1908 Aug-
Sept p 455 (Vol 16) and as he
says is that he is making a 10"4"
reflector of 80" f.l. is a Toronto
man.

Mellish article is in Pop. Mechanics
9 (1907) 1109-10 October over

15 instructions for making a 6"

Entire article for shaping the
blanks the silver and mount
is £16.00 and very compact
and correct - especially if
you already know how to do
the job and get into no
troubles.

Fig 2 drawn wrap, probably
by editor.

Amos
In an old drawer in the little shop I found the enclosed file, all letters from Russell and dated 1925 when I was beginning. ATM did not yet exist. I had run across Russell's Popular Astronomy article, also obtained Ellison's "The Amateur's Telescope" from England, had met Russell when he was in New York on business ^{spring 1925,} and finally begun a mirror. All dated 1925.

in June and wrote
I ~~had~~ visited Stelafane ~~and written~~ a human interest account of the visit in Nov Sciam, which brought 368 requests for actual instructions.

How
1925
Began preparation April 19 see (my log record)
Chop house meeting perhaps May
To Stelafane June 13 and took along 1/3 polished mirror.
Up again and finished it Nov 21 (see log in ATM)

These Russell hurriedly wrote and they appeared in Feb and March 1926 Sciam. I took them, with part of Ellison book, and made up the first thin edition of ATM, publishing it in May 1926.

See how patient with me and my naive questions Russell was in the attached letters! And please return.

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

± May
1925

6 am, Sunday

My Dear Ingalls.

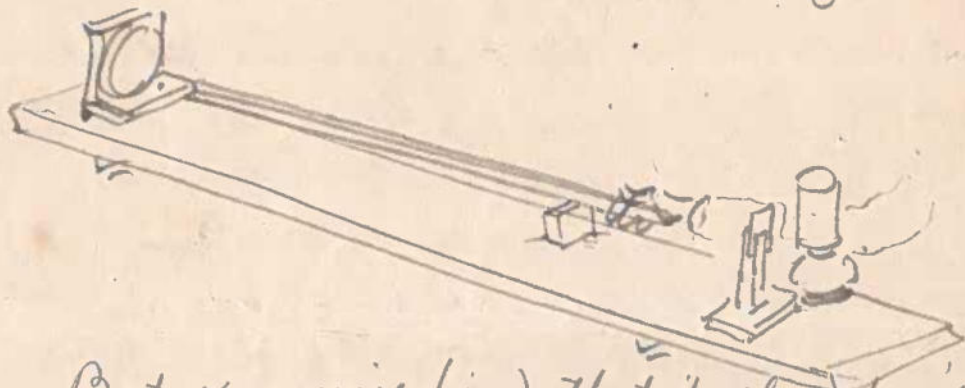
Please excuse the pencil.

With my feet cocked up before the fire,
I find this the most comfortable way
of answering your very interesting
letter. It came at a time when I was
unable to answer it promptly, as I have
just lost a dearly beloved sister and
there were many things to look after.
You are going at your mirror in the
right way, and are fortunate to have
such an ideal place to work in. The
arrangements seem o.k. Don't worry
over lack of symmetry in your stand: it
cannot effect the figure of the spectrum.
It will come out a perfect surface of

revolution.

2

Suggest some way to adjust mirror or stand from your position at the knife edge. to save going back and forth. perhaps a long stick with a mark viz



But you will find that if the position of the glass is once adjusted so it will always go on to a positive support, the image will always be found not far from the same place near the razor blade.

Your attempt at using the carbon filament was amusing, for I have spent many fruitless hours over the same idea. I can only recommend

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

the good old oil lamp with a flat wick - not a big one, for the flame of even a small wick is ample - in area and intensity.

The size of pinhole is also unimportant that is - between limits of ~~1~~ $\frac{1}{50}$ to $\frac{1}{500}$ of an inch diam. One hundredth of an inch hole is about right. The one you sent me is all right - could be a little larger.

The pitch is o.k. but a little too soft. errs on the right side for a few moments boiling will free it of enough turpentine to harden it a little. Note that ~~it~~ ^{the sample} gives readily to continued pressure under room temperature or held between the teeth. It should

just barely give under teeth pressure without crumbling. I prefer this test to indentation of the finger nail. The Burgundy Pitch I am unfamiliar with, so cannot advise, no need of using it.

I held a meeting of the Telescope Makers Friday evening to set a date for your visit to Springfield. We have, after due consideration of the moon's phase, configuration of the planets, found that horoscopes, and astrological incantations, Saturday the thirteenth of June seems the most auspicious for the night on the mountain. There is enough to see and do, for you to come up on the sleeper Thursday, the 11th, spend Friday in my laboratory and the shops and Friday evening with a good sized reflector well adjusted on an equatorial

5

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

mounting at the home of one of the
mechanics here in the village, Saturday
I want you to go over Governor Hartness
Turret Telescope and get up to
stellar frame some time in the afternoon.
Let us pray for clear skies - at least
on one of the evenings.

The men are very glad to
know you are coming up. and extend
a hearty invitation. A rather feminine
inquiry of one member was "were you
married?" He said you must be
as you referred to your mother-in-
law in your letter. The laureate-cook
is already planning a wonderful menu
for the mountain space.

Get busy grinding your glass.

6

A little quinquing experience before
the 13th would give you more ap-
preciation of the stuff you will hear
discussed here.

Thank you for going into
the silvering end of the subject. I
knew^d the difficulties of depositing
metal on glass electrically. But if the
only solution is to change to a mirror
of steel, I would prefer to stick to glass
and resilver chemically when needed.
We will talk that out when you come.

I probably won't get to N.Y.
before you come here. but if I do, be
sure I will let you know.

Should say you lay out for
articles on reflecting telescopes a good
one.

Your sleeper leaves Grand Central
Station about 11 P.M. ^(standard time) and is side tracked
at Springfield Mass. I think, you change

7

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

There Friday Morning ^{7 am.} for the train up
the valley arriving at Charleston ^(six miles away) N.H.
at 10.42, where you will find me
waiting for you. Better check ~~up~~
this up.

Should our date be inconvenient
or impossible for you, we can change
it.

good luck

Barnes W. Porter

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

Tuesday

Dear Ingalls

After writing you today
your other letter showed up.

I see no reason for holding
to precisely f_8 . And I do not
believe f_7 or f_9 or any particular
 f around this length to be easier
than another. For me, if I had
no length to adhere to, any
vocal length from 7 to 9 would
be ~~the same~~ and I would give the
exact length little attention. You
are safe in taking my word for this

By all means take all the eye
pieces that come your way gratuitously.
Microscope ^{project} oculars will work very
well in your reflector. and save
you quite an outlay.

A rough template is cut to a radius double your focal length is all you need for holding curve of glass to desired focal length. Now let's go to bed and read one of your books on Evolution. Good night Rev. Mr. [unclear].

JONES & LAMSON MACHINE CO.

MANUFACTURERS OF

HARTNESS FLAT TURRET LATHE
FAY AUTOMATIC LATHE
SPRINGFIELD, VERMONT

U. S. A.

JAMES HARTNESS, PRESIDENT
W. D. WOOLSON, TREASURER
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R. E. FLANDERS, MANAGER

BRITISH OFFICE
QUEEN VICTORIA STREET
LONDON, E. C.
CABLE ADDRESS, "TURRET"

September 8, 1925

Mr. Albert G. Ingalls
c/o Scientific American
Woolworth Building
New York City, New York

My dear Ingalls:-

The reason your handle came off the speculum was because the glass was too cold when the pitch was pored on it and prevented good sticking qualities. The next time, warm your speculum in luke warm water, then thoroughly dry it and smear on a little turpentine, then pore on your pitch, and on this press down the wooden handle which is also warm. While I am sorry that you broke your glass the experience you have gained will show you how much more rapidly you will go through the next one.

The pits are nothing more than what I expect using carborundum. If you will buy some flour emery which is very cheap, and wash out the finer ~~grains~~ you will probably get rid of this trouble. I notice that the edge is not as finely ground as the center. This is a very common condition in fine grinding and due probably to a slightly turned down edge. The sample of pitch you have submitted is about right; if anything it is a little soft, that is it yields a little too readily if a chip is placed in the mouth and pressed between the teeth. The next time you prepare your pitch lap, warm both the tool and speculum in water that feels a little warm to the hand. If you do this the pitch will not be chilled and will retain its softness longer, then leave the speculum on the pitch until the glass and pitch have slowly acquired uniform room temperature.

We are all waiting to see what you have written for the Scientific American about Stellafane and I shall be curious to see what response you get among would be telescope makers.

Answering your inquiries:-

1. Do not leave speculum on the tool over night in fine grinding; it might dry and stick.

*Broke disk first day or two.
While running out.
Started with another*

*Grades,
10, 20,
60
minute
suspensions*

JONES & LAMSON MACHINE CO.

Mr. Albert G. Ingalls

September 8, 1925

2. Surely make a paste of your carborundum and apply it wet to the tool.
3. This query relating to preheating the tool and mirror I have answered.

Thank you very much for the books. I shall enjoy reading those on evolution and the copy of Brashear's life will go into our library on the hill. In hastily glancing over the other literature you have sent us, I can see several things of interest, especially as regards deaf people.

I am hoping that after you have your second glass well under way in the stages of polishing, I may have occasion to be near New York and you may rest assured that I will look you up.

Yours sincerely,

Russell W. Forten

RWP:EML

Stellarium
Sunday P.M.

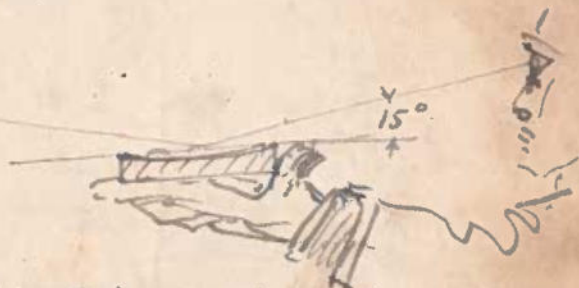
October
1925

My Dear Ingalls.

The rain has, at last, driven me inside, but I managed to lay up quite a little wall in front of the building before showers.

The cook - Redfield, and Mrs P. are my sole companions on the mountain today. The Sabbath quiet is almost oppressive.

This is the way I tell when my mirrors are sufficiently fine ground. Dry it and hold it up between your eye and an electric lamp thus -



Get the reflection of the filament in the glass and slowly lower

the glass. When the reflection disappears the angle between the eye and surface of glass should be about as shown - say 15° .

I can see great possibilities in making "sliding boards" for all the babies in U.S.A. It might be quite a profitable industry for some one. However, I am gratified I came to your aid at the critical time.

Thanks for the magazines. I went through them all with pleasure. "South" I have nearly finished, what a wonderful narrative. I was thrilled like reading Nansen over again.

Great for S.A. to have its own building, and how handy for me when I come to N.Y.

Mrs Paul Redfield sent best regards.

Porter

glad the sketches for cover design were of some use. R.W.D.

Lamp on right - eye on left



At 7 ft 11 1/2" - Shadow moving with knife edge



At 7 ft 11 3/4" Shadow still moving with knife edge



At 8 ft - Shadow reverse of knife edge motion



At 8 ft 1/4" Shadow reverse of knife edge motion



At 8 ft 1/2" Shadow reverse of knife edge

I haven't got down to evaluating the relative depth of the shadows yet. Will leave that till I get elements better

7084 D

THE HAMILTON EMERY & CORUNDUM CO.



MANUFACTURERS OF
QUALITY ABRASIVES

CHESTER, MASS. Sept. 21, 1925.

Sold to Mr. Albert G. Ingalls, c/o Munn & Co., New York City.

Terms 1% 10 DAYS: NET 30 DAYS Order No. G292 Shipped by P. Post.

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		<u>3</u>	
	Sample--no charge.		

WE GUARANTEE THAT IN THE PRODUCTION AND MANUFACTURE OF THE MERCHANDISE LISTED ON THIS INVOICE ALL THE REQUIREMENTS OF THE FEDERAL CHILD LABOR LAW IN FORCE SEPT. 1ST. 1917. HAVE BEEN COMPLIED WITH, *The Hamilton Emery & Corundum Co.*

PORTER
2 HILL PLACE
SPRINGFIELD, VERMONT

Let
an
1925

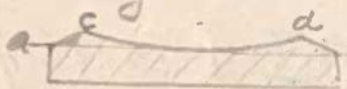
Sat Pm.

Dear Luella.

Your sketch and discription
gives me a thrill: it always does
when the beauty & and elegance of
the knife edge test finally dawns on
a man for the first time.

The shadows speak for themselves
In interpreting them let us consider A.
We know that a spherical surface will
appear uniformly grey as the knife edge
touches the apex of the radii (reflected).
This being what we are after, an apparent
section through the glass would be as
I have indicated assuming the surface
to be illuminated by light coming as
shown by the arrow. From ~~B to C~~ F to G
the shadow is fairly uniform in tone.

the turned down edge showing up as would be expected, and if we were to go ahead polishing with this focal distance ($7'-11\frac{1}{2}"$) it would be a question of normal ($\frac{1}{3}$) strokes viz:  until the turned down edge disappears. (f.p. 8')

Considering shadow C. The apparent shadow is  and the problem would be to wear away at c and d until we have reached a-a — obviously a much harder job than the one first mentioned.

And so, slowly warm, tool and glass in water until you have good contact; let them cool to room temp. with the glass weights and go ahead with $\frac{1}{3}$ strokes. The ^{glass} polishing first at the edge indicates (as you say) that the lap was not in good contact, and you were wise in stopping when you did. I anticipate that the turned down edge is ~~not~~ only slight and will disappear. Good luck
Porter

Keeps all this Andy.
It's historic and sometime
I'd like to buy some photostats.
Very interesting. Wish I
could have started then —
rather, wish I had known
I could start. Oh, well,
I'll have to catch up. Thanks
for sending these to me.



Miss

Baffinland

KAA

Bree Amberg Soc

30 1898 98-110

But fossils are -

Schuchert

On the Trenton fauna

of Baffinland,

a prelude

Mr. W. C. White
Aluminum Co. Of Amer.
Gulf Bldg.
Pittsburgh Pa.

11-Apr-36

AGI

USE A SEPARATE SLIP FOR EACH TITLE

CLASS MARK
(In upper right hand
corner of card)

Author:

United States National Museum

XEA

Title:

Proceedings

Vol 22

U 61

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2. If reference is to a periodical article, give title of periodical, date, volume number and page.
3. Books will be delivered to your seat if you write the seat number on your slips and are there to receive them.
4. Return books before leaving.
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seventh Peary Arctic Expedition in 1897. Hall's collection was only a handful, consisting of twenty-seven species in all, but he was the first to make known the occurrence of fossils on the southeast side of Baffin Land. His collection is now in the museum of Amherst College. The collection made by the five members of the Peary Expedition was better and larger than Hall's and numbered seventy-two species. Part of this collection is now in the U. S. National Museum and part in the American Museum of Natural History. Dr. Schuchert, of Yale University, described and figured this collection in his publication "On the Trenton Fauna of Baffin Land." The collection made by Mr. Roy contains many species not listed by Schuchert and is believed to be the best and most complete assemblage of Arctic Trenton fossils that has yet been made. From the observations and collections it is concluded that both sides of Hudson Strait, Frobisher Bay, Cumberland Sound and the interior of Baffin Land as far north as Ellesmere Land have but one fauna, namely, the Middle Ordovician fauna of Trenton and Utica stage.

GEOLOGY AT THE NASHVILLE MEETING OF THE AMERICAN ASSOCIATION

SECTION E of the American Association for the Advancement of Science (geology and geography) will hold its sessions at Nashville on Tuesday and Wednesday, December 27 and 28, in the geological lecture room at Vanderbilt University. The general headquarters for the section will be the Andrew Jackson Hotel, Deadrick Street and 6th Avenue. The stated price of single rooms at this hotel is \$2.50 to \$5.00.

Tuesday will be devoted to a symposium on the Mesozoic-Cenozoic stratigraphy of the Gulf States. At the morning session from 9:15 to 12:30 the mappable formations will be discussed by state geologists: Florida, by Herman Gunter, of Tallahassee; Georgia, by S. W. McCallie, of Atlanta; Alabama, by W. B. Jones, of Tuscaloosa; Mississippi, by E. N. Lowe, of Jackson; Louisiana, by W. C. Spooner, of Shreveport, and Texas and southeastern Oklahoma, by E. H. Sellards, of Austin. Vice-president Charles Schuchert will present "The Paleogeography of North America during the Triassic and Jurassic." At the afternoon session, 2:00 to 5:30, correlations will be given by paleontologists: L. W. Stephenson, "The Major Marine Transgressions, Regressions and Structural Features"; T. W. Stanton, "The Lower Cretaceous or Comanchean Formations"; L. W. Stephenson, "The Upper Cretaceous or Gulf Series"; C. Wythe Cook, "The Cenozoic Series East of the Mississippi River"; Julia A. Gardner, "The Cenozoic Series West of the Mississippi River on the Basis of

the Larger Fossils"; F. B. and H. J. Plummer, "The Midway Correlations on the Basis of the Foraminifera"; E. W. Berry, "Correlations on the Basis of Fossil Plants"; O. P. Hay, "Correlations on the Basis of Fossil Vertebrates." A smoker for Tuesday evening is tentatively planned.

On Wednesday one or two sessions will be held for the reading of general papers. Titles accompanied by abstracts of not more than 250 words should reach the secretary not later than November 29. On Wednesday also the section will join with the Association of American Geographers in a symposium on "Problems of the Mississippi River." On Wednesday evening Section E will combine with the Association of American Geographers in a joint dinner, at which the addresses of the retiring president, M. R. Campbell (A. A. G.) and the retiring vice-president, G. H. Ashley (Section E), will be read.

The railroads are offering reduced rates on the certificate plan and all who attend are urged to secure certificates when purchasing tickets.

G. R. MANSFIELD,
Secretary, Section E

U. S. GEOLOGICAL SURVEY,
WASHINGTON, D. C.

SCIENTIFIC NOTES AND NEWS

THE Nobel prize in physics for 1927 has been divided and awarded by the Swedish Academy of Sciences to Dr. Arthur H. Compton, professor of physics at the University of Chicago, and to Dr. Charles T. R. Wilson, Jacksonian professor of natural philosophy at the University of Cambridge.

THE Royal Society has awarded the Hughes medal to Dr. W. D. Coolidge, assistant director of the research laboratories of the General Electric Company; the Davy medal to Dr. Arthur A. Noyes, director of the Gates Chemical Laboratory at the California Institute of Technology, and a Royal medal to Professor J. C. McLennan, director of the physical laboratory at the University of Toronto.

ON the occasion of the celebration of the semi-centennial of the University of Colorado, twenty-three honorary degrees were conferred, including the doctorate of laws on Dr. Robert A. Millikan, director of the Norman Bridge Laboratories of the California Institute of Technology; on Dr. Roscoe Pound, dean of the law school of Harvard University, and on Dr. Melville F. Coolbaugh, president of the Colorado School of Mines, and the doctorate of science on Dr. S. C. Lind, director of the school of chemistry of the University of Minnesota, on Dr. Henry Sewall, professor of physiology in the University of Denver, and

Two of these fossils have long names ending with Portieria

Gas Association, New York Edison Company, Philadelphia Storage Battery Company, and 26 companies representing the metallurgical industries. The latter group is financing six of the investigations.

Assignments of problems to the research fellows have been made as follows:

Equilibrium between manganese, iron and sulphur, by Hershall V. Beasley, University of Tennessee.

Synthesis, testing and application of warning agents for manufactured gas, by Harry A. Brown, Lehigh University.

Formation and identification of inclusions, by John M. Byrns, Case School of Applied Science.

Coal ash fusibility as related to clinker formation, by Clarence L. Corban, Rose Polytechnic Institute.

Methods of determining inclusions, by John F. Eckel, University of Kansas.

Distribution of iron oxide between slag and metal, by Hyman Freeman, Georgia School of Technology.

Base exchange in relation to decay and peat formation, by Raymond C. Johnson, Monmouth College.

Safety, costs and efficiency of distribution of electric power in coal mining, by Donald C. Jones, research engineer.

Physical chemistry of steel making, by Frank Morris, analyst.

Relation between composition and oxidizability of coal, by Harold M. Morris, Cornell College.

Viscosity of open-hearth slag, by Frank G. Norris, Purdue University.

Composition of oils and heavy tar from distillation of coal at low temperature, by Robert N. Pollock, University of Washington.

Determination of relative ignitibility of low temperature coke compared with coal, by Donald L. Reed, University of Washington.

Study of cause and control of abnormality in case carburized steel, by Alfred W. Sikes, University of Illinois.

Physical chemistry of steel making (field studies), by R. W. Stewart, Massachusetts Institute of Technology.

FOSSILS OF BAFFIN LAND

MR. SHARAT K. ROY, assistant curator of invertebrate paleontology of the Field Museum and geologist of the Rawson-MacMillan Arctic Expedition, has recently submitted to the director of the museum a report regarding the fossils collected by the expedition during the past season. The area covered included the Labrador Coast and the southern end of Baffin Land. The only fossils found in Labrador were a few drift fossils that had evidently been carried down by ice from the Hudson Strait region and Baffin Land. With the exception of one solitary area north of the Strait of Belle Isle, no sedimentary deposit was found on the entire coast of Labrador. The single area referred to has been fully worked by the Canadian Geo-

logical Survey. The only important collecting ground observed was in Frobisher Bay, Baffin Land. This bay, situated on the southeast side of Baffin Land, extends in a general northwesterly direction for about one hundred and fifty miles. The upper part of the bay has many rocky capes, numerous islands and shoals and is divided into two arms. A group of larger islands, containing Chase and Gabriel Islands, occupy the middle of the bay. The southeast coast of the bay (Kingaite side) is composed of high, rugged, barren, igneous hills indented by numerous fiords and partially covered by Grinnell Glacier, which discharges by way of several tongues into the bay. The general dip of the beds was found to be S. 70° E. and N. 70° W. The coast has all the marks common in a glaciated region, such as lakes, cirques, hanging valleys and deep fiords. In the valleys between the hills, lakes formed by the damming of streams by moraines, eskers and kames are not uncommon. The physiography of the southwest coast is essentially the same, except that the hills are not so high and there is no existing glacier. The northeast coast of the bay is also a barren, rugged land, but does not show the work of ice as conspicuously as the other coast. Another contrasting feature of the northeast coast is that the hills are massive and seldom show any bedding planes.

Both coasts of the bay were examined as thoroughly as time permitted and collections of fossils were made at eleven different points. The fossils found on either coast of the bay were all drift fossils of Trenton and Utica stage and were doubtless brought to the coast from the interior of Baffin Land. No sedimentary deposit in place, either fossiliferous or non-fossiliferous, was observed anywhere except at Silliman's Fossil Mountain, where the largest and best collection of fossils *in situ* was made. This mountain is in 63° 43' N. Latitude and 69° 02' W. Longitude. It stands at the head of the bay, about 300 feet from high tide and 2½ miles south of the Jordan River. It is a hill of limestone which lies unconformably on the hills of Meta Incognita. It is about three fourths mile long and 320 feet high (by aneroid) and runs in a general northwest and southeast direction.

All the fossils found here were of Middle Ordovician age (Trenton and Utica stage). They included the classes Brachiopoda, Lamellibranchia, Gastropoda, Cephalopoda, Trilobita and other Arthropoda, Echinodermata, Coelenterata and Porifera—the Cephalopoda being the most abundant. About 500 specimens were collected.

The only previous collecting known to have been carried on here was by two parties, one led by Captain C. F. Hall in 1862 and the other including Messrs. Carpenter, Porter, Shaw, White and Goodridge, of the

Amos - Now it comes out what this man has been up to on all these mysterious jaunts to the desert.

Bert - This explains one reason why I am out
Yes, he is in the desert so often at proving grounds watching
the development of rockets - and their launchers.

Then my pencil comes into play, as well as my
imagination, picturing many situations on the battle
front where these gadgets go into action. If we
can ever get together after this mess is cleaned up,
you'd be interested in going over these "brain storming"
of mine. I'm down on the roster of OSRD as
Amos Consultant - third man down on the list.

That am songen - West Van Petal am Third Insultant PS Sure is! Fine work Amos.

Say - send this back and I'll give it to Pandey, who is doing a book on rockets.

Now you can get an idea of some of the work I've been sweating over for the past two years.
The Navy must be pretty confident about the war to release all this. Sabotage is so easily done.

Triumphant American Tank Forces Seal Breton Peninsula

WEATHER DATA

Forecast: Clear.
Minimum, 53; Maximum, 91.
(See Page 2 for Full Forecast)
Published Every Morning

The Pasadena Post

(MORNING ISSUE OF THE PASADENA STAR-NEWS)

PASADENA, 1, CALIFORNIA, SUNDAY, AUGUST 6, 1944—FIVE CENTS. SUNDAY

GOOD MORNING

Poverty is the Test of Civility and the Touchstone
of Friendship.—Hazlitt.

Phone SYcamore 2-3111

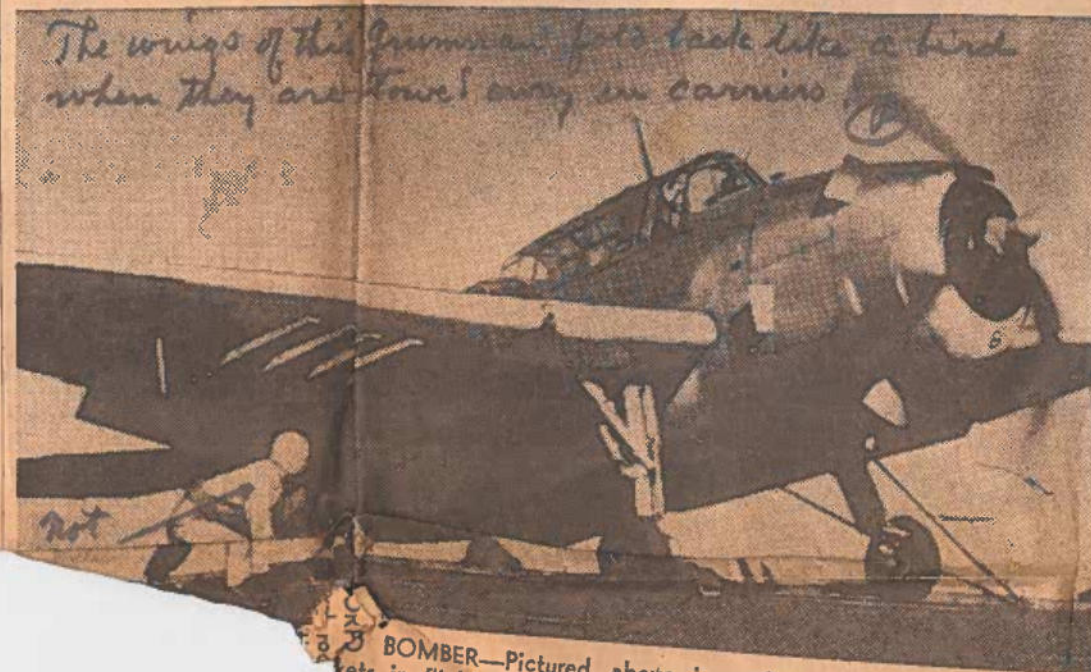
Caltech Rocket Story Bared by Navy

Strike Heads
Jailed as

the **lookout**

A Column of Comment Edited
by W. Blair, Managing Editor
Pasadena Post

Four German
Divisions
in Yank T



BOMBER—Pictured above is a Grumman Avenger torpedo bomber in flight, warming up on the flight deck of a U. S. Aircraft carrier. Rockets are visible on the underside of the wings.

Pasadena Made Weapons Play Major Part in All Land, Sea, Air Fronts

Caltech's war secret, well kept by thousands of Pasadena men and women who have been at work on the project since September, 1941, was revealed today as Rockets—the weapons that have formed one of the scientific sensations of World War No. 2.

Details were officially announced by the public relations office of the 11th Naval District.

Rocket weapons, according to the official release have been in general use in warfare for more than two years and others in the invasions of North Africa, Sicily, Italy and France; on the shores of Araware and in the island-hopping in the South Pacific.

Now for the first time, tribute can be paid to the great number of Pasadena men and women for their patriotic contribution to the important war effort. This includes not only

the workers under direct Caltech supervision, but also those in the dozens of parts plants, doing subcontract jobs in all parts of the Pasadena area.

The official release from the 11th Naval District reads as follows:

Rocket weapons, which have already proved their effectiveness in U. S. naval and amphibious operations and which promise to play a more and more effective part as the war proceeds, were revealed today by the Naval Bureau of Ordnance to have been developed by the co-operative work of the Navy and a National Defense Research Committee group of scientists and engineers at the California Institute of Technology.

Helped Sink U-Boats

One type of rocket weapon developed by this co-operative effort has been in general use in anti-submarine warfare for over two

Rocket Making Caltech Needs Workers

Manpower Shortage Hampers Production of Vital Weapons

By E. B. McLAUGHLIN

While thousands already in Pasadena have participated in the manufacture of rocket weapons for the United States Navy, opportunities remain open for hundreds of others to establish a personal help-win-the-war record by taking jobs offered today by the California

NAZIS USING CULTURAL CENTER FOR ARTILLERY

8th Army Occupies All Florence South of Arno River; Hold Off Shelling

By REYNOLDS PACKARD

ROME, Aug. 5. (U.P.)—Eighth Army troops have occupied all Florence south of the Arno River against withering enemy artillery fire which the Germans, despite repeated claims that the great cultural center would be an open city, have massed along the river's northern bank within the city. As dusty and battle-weary British, Dominion and Indian troops plunged to within two miles of the river on a 25-mile front on either side of the bitterly contested city, the Germans drew up artillery formations and rushed in crack paratroops in a final effort to hold the Arno River line.

(The London radio, heard in New York, reported that Allied troops already have penetrated into northern Florence over temporary bridges thrown over the Arno. The Germans earlier were reported

to have destroyed all but one of the six bridges spanning the river at this point.)

Because of the tremendous historic, architectural and artistic value of the great Tuscan city, it seemed most likely that the Allies would hold off shelling the city until the last moment in the hope that the Germans would pull out without bitter and devastating street to street fighting.

It was feared, however, that the Germans would take advantage of this situation to bog down the Allies along the Arno River as they have at Pisa, the ancient Tyrrhenian city on the far western Allied flank.

Miraculous Escape from Death

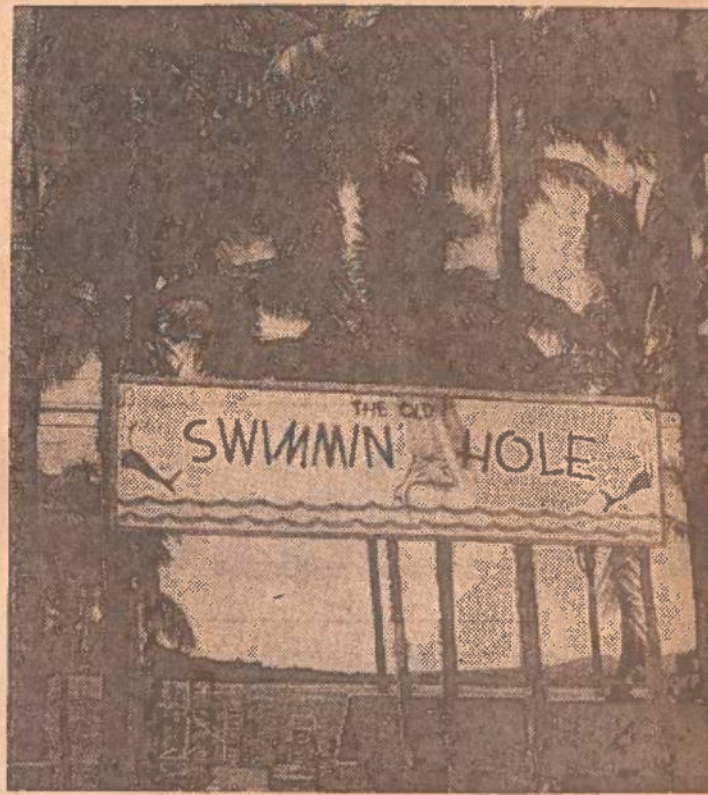
OAKLAND, Aug. 5. (U.P.)—A. O. Peterson, Concord truck driver, had a miraculous escape from death today when the gasoline tanker he was driving went up in a sheet of flame when struck by a Sacramento-bound local freight train at the Walnut Creek crossing.

Engineer Oscar Schindler, Sacramento, also escaped injury in the crash and fire which merely singed the back of Peterson's head.

Protest Internee Will Join Army

INDEPENDENCE, Aug. 5. (U.P.)—Ralph Lazo, 19-year-old Los Angeles boy of Mexican parentage who registered and was accepted as of Japanese ancestry two years ago, is to be released from Manzanar Relocation Center soon to join the army, the War Relocation Authority announced today.

Lazo followed his Nisei classmates of Belmont High School Los Angeles, to this evacuee center May 16, 1942, as a sympathy protest.



SOUTH SEA SWIMMIN' HOLE—It looks like a summer resort back home, except for the palms, but it's the U. S. Army recreation center at Lambeti Plantation, scene of a fierce battle for Munda airfield, New Georgia.

Gov. Dewey Completes 2350 Mile Trip Through Mid-West

PAWLING, N. Y., Aug. 5. (U.P.)—Gov. Thomas E. Dewey, completing a 2350 mile trip through pivotal mid-western states, returned to his Pawling farm tonight after charging the Roosevelt administration has "failed to show a degree of competence" necessary to prepare the nation's war industries for production.

The Republican presidential nominee said he planned to get his first

Nazis Resume Rocket

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real rest since he began his tour of the United States, Illinois, Missouri and Indiana. The governor retired to the seclusion of his Quaker Hill farm immediately after stepping from his special car at 7:37 p. m.

Latest Attack
Dewey's latest attack on the New Deal came at a press conference, which was held aboard the train.

Movie Colony Ripped by Fist Fights

By FREDERICK C. OTHMAN

HOLLYWOOD, Aug. 5. (U.P.)—The p-snorthingest series of movie fights yet, in which nobody got paid for their fistic endeavors, left half a dozen top flight picture heroes dribbling blood tonight from their handsome noses.

They included Jon. Hall, whose wife, Frances Langford, was over-ruled by Bob Hope, while Hall was wounded in the neck on the same front; Edward Norris, the head of many a movie; Tommy Dorsey, the horn tootler; Pat Dane, a beautiful wife; Charles Bickford, who usually tangles with lions; Barney Oldfield, the race driver; Mike Romanoff, the bogus prince and restaurant proprietor, and several others yet to be identified.

Bloody Brawl
The bloodiest of the brawls was at the home of Dorsey in the Sunset Plaza apartments, where he threw a party for numerous movie beauties and their escorts. The party broke up in fervent thanks and emotional goodbyes at dawn; a few minutes later Norris and Hall returned to pick up a purse left by a feminine guest whose name they wouldn't reveal.

Miss Dane opened the door, according to witnesses, Hall threw his arms around her, and she slapped him in the nose with the back of her hand. This, the goggle-eyed bystanders said, made Dorsey unhappy and he took a poke at his wife.

Norris found himself on the floor, with two ladies kicking him in the stomach.

Neighbors Join In
Nobody rang all the doorbells in the neighborhood, but one of them—accidentally—rang the doorbell of a neighbor who was celebrating who was celebrating what he'd seen on the news.

work over a knife—went to the neck.

Photo Reconnaissance Pilot Most Important Man in Air

WASHINGTON, Aug. 5. (U.P.)—His job isn't glamorous, death is always making passes at him, and he can't fight back.

"But the Army photo reconnaissance pilot," Lt. Col. Clarence A. Shoop said in an interview tonight, "is 10 times as important as any fighter or bomber pilot."

Now Shoop, as commander of the first United States photo reconnaissance group over Normandy on D-Day, is an enthusiast. His appraisal of comparative pilot values may not be entirely objective.

But no one in the Army will deny that the kind of war they're fighting in France and Italy couldn't be fought without photo pilots.

These pilots fly the fastest, trick-

iest fighter planes the Air Forces possess. But they fly without guns because their job is to get pictures. "If we had guns," Shoop explained, "we might feel obligated to take after enemy planes now and then instead of concentrating on doing our job and getting back without our stuff."

On D-Day, 150 P-38s, Spitfires and Mustangs of Shoop's group crossed the channel and photographed every German gun, road block and troop concentration in

the landing area and 25 miles inland.

They flew over the Normandy beaches at 6:30, just five minutes after the first Allied soldiers hit the soil of France. They were armed only with five cameras per plane and 180 exposures per camera.

Because the ceiling was low, they flew not at 25,000 feet altitude—as defenseless photo planes are supposed to fly—but at 500 to 1500 feet. Most of them came back with flak-riddled planes. Many did not come back at all.

By the time D-Day plus 7 rolled around, Shoop's men had flown more than 500 sorties and had produced nearly 3,000,000 prints of inestimable value to staff intelligence.

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Do



Rocket Making Caltech Needs Workers

(Continued from Page 1)

rk of the United States Navy and
ational Defense Research Com-
tee of scientists and engineers
the California Institute of Tech-
ogy, has been "manned" by thou-
ds of workers, 95 per cent of
om are Pasadena residents.

o, the important war project
y be called "Pasadena's Own"
d, it is believed it can remain so,
the response for the call for man-
power is as great as is anticipated.

Secret Well Kept

Today's announcement will have
s effect in hundreds of Pasadena
omes. Employment officials at
e Caltech Project Employment
ffices tell of numerous cases,
here night after night, wives have
at at dinner tables with sealed
ips and evasive replies as to "just
what" they were doing on the Cal-
ech project. *John H. and*

If "enemy ears were listening" at
barber shops, cafes or at the corner
drug stores, the "ears" heard noth-
ing about the "secret weapon" from
stray remarks. There were no stray
remarks.

The secret was kept.

It was kept by many with sense
of humor, who with finger on their
lips, just used two words to the
curious—"hush-secret."

The mere announcement that
rockets are being made by Caltech
s no reason, it is pointed out, why
lips should become "unzipped."
"Ears" still may be listening and
etails of rocket construction still
re a vitally guarded secret.

All will have a new respect for
he rocket-making member of the
amily, just as all respect the boy
n uniform aboard a fighting ship,
r on the battlefronts of the world.

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Pasadena Weapons on All War Fronts

(Continued from Page 1)

Atlantic and against Japanese shipping and land installations in the Pacific.

Work on rockets began at the California Institute in September, 1941, under contract with the Office of Scientific Research and Development and under the technical supervision of the National Defense Research Committee. (The Office of Scientific Research and Development is the Federal contracting

and spending agency for the promotion of research contributing to the war effort; the National Defense Research Committee is a technical advisory committee within OSRD which recommends and supervises contracts). The use of rockets as weapons of war was not then by any means a new idea. The British had had considerable experience with artillery rockets in the 19th century but abandoned them as the development of rifled cannon gave greater accuracy. Interest in rockets revived in England, however, shortly before the outbreak of the present war because of their possibilities in anti-aircraft defense, and considerable development work was done there. Investigation in this field had been conducted by the War Department, Navy Department, and civilian scientists for some years. With the formation of the NDRC more intensive research was undertaken for the Army and Navy by an NDRC group working at the Naval Powder Factory, Indian Head, Md. This group continued to work in the East, but the rocket research and development for the Navy soon came to be concentrated in Southern California. Since this separation, the eastern and western groups, both reporting to NDRC, have continued to exchange their findings.

No Recoil Problem

Rocket weapons have both advantages and disadvantages as compared with guns. The principal advantages are great fire power and mobility. Since rockets involve no recoil problem, they are particularly well adapted to installation on light landing craft, airplanes, and motor vehicles. The rocket launching device is light in weight and relatively simple and cheap to manufacture.

The rocket weapon itself consists essentially of two parts. The first is the body or "pay load." This may contain high explosive, incendiary material, or smoke. The second part is the "motor." This name may be somewhat misleading, since motor suggests moving parts. Actually, the motor is a tube containing the propellant, the tube being closed at the forward end and open at the rear. The propellant is composed of material which burns rapidly—usually some form of powder.

In operation, an igniting device fires the propellant. In its rapid burning it generates a large quantity of hot gas. The gas pressure in the tube rises, and since the gas cannot escape through the sides or the closed forward end, it rushes out the opening at the rear, exerting no force on the area of the opening but exerting its full force on the closed end of the tube. Thus there is produced a net force on the rocket acting in the forward direction. (It should be noted that the rocket motion is caused by this thrust against the push of the gas on the atmosphere as it issues from the opening. As a matter of fact, a rocket operates equally well in a vacuum as in the air). As the rocket moves forward, the launcher, which is essentially a guide rail, directs it in its flight.

Faced Stiff Problems

The problems involved in rocket development are many. Perhaps the first is a suitable propellant. This involves not only the propellant material itself, which must have certain qualities of stability through a wide temperature range and a desirable rate of burning, but the problem of forming it into suitable sizes and shapes by processes which can be used in mass production. "Arming" devices for the fuzes in rocket bodies present another difficulty. Artillery shells, for safety in handling, have a device which keeps the fuze from operating until after the shell is fired; the release of this device is called "arming" the fuze. New principles and mechanisms have to be worked out for arming the fuzes of rocket projectiles. Accuracy of fire is still another problem. Any launcher design must be kept as simple as possible, both from the point of view of construction and also of installation. All of these problems must be solved so that quantity industrial production will be possible and so that the finished products can be transported and stored safely and used in the field easily and efficiently.

Rocket work, once initiated, made rapid progress because of the close co-operation of the War Department, Navy Department and the Office of Scientific Research and Development. Dr. Vannevar Bush, director of OSRD, made available for the work

report said. "We already have many examples in some of our newer industrial facilities."

The "change house"—where workers change from street clothes to work togs—is one of the changes brought on by women workers, the report said. The men usually are content to ride to and from their jobs in work clothes.

Health Centers Set Up

Health centers already have an important place in the factory, the report stated, although they are relatively new. Nurseries and play areas for workers' children, and solariums for themselves, are in the offing. Shopping centers are another item for larger plants because many women workers still will be responsible for a household.

"The interior of the factory of

the future will be 'hospital clean,'" the report said. "There will be clear, wide, unobstructed floor space which lends itself to any adaptations in equipment."

Noise, probably one of the greatest single distractions to workmen, will be toned down by windows and walls which will be inclined to deflect sound waves upward to an acoustical ceiling.

To Take Time

However, the report pointed out that the factory of the future must not be expected to blossom forth in the next few years.

"We know that costs would be high; we would never recommend it for the present," the report said. "Time is the only remedy for high costs—science teaches us relatively

pers

Suits

Trust our third floor style center to have the newest suit fashions for you.

Brief coats to complement suits like this soft, pure wool suit with its matching top-per in men's wear gray with black velvet collar. 5 buttons, pleated, gored skirts. Size 12 to 20.

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Suit 35.00

facilities of the district available for testing purposes; and upon his retirement in January, 1943, he was assigned to the California Institute as Navy Department liaison officer. Testing range facilities have been provided by the Fleet Marine Force, San Diego Area, and by the Army Service Forces.

Given High Priority

Early in 1943 the British success in adapting the anti-aircraft rocket to anti-submarine use from aircraft indicated the desirability of a parallel development in this country. In June the Bureau of Ordnance and the Bureau of Aeronautics were directed to collaborate with the NDRC group of scientists and engineers at the California Institute of Technology on a project for the development of aircraft rockets and launchers in co-operation with the Commander Fleet Air, West Coast, who collaborated fully in this development, and the following November the project had reached the point where the first aircraft squadron was equipped. The Commander in Chief gave the project high priority.

Don't know it - Spent a month drawing the damn

Log (P)

TOTAL BOMB-BALLOONS LAUNCHED BY JAPS 9000

TOKYO, Jan. 15. (U.P.)—The Japanese launched 9000 bomb-carrying balloons against the United States between mid-1942 and March, 1945, the Allied headquarters intelligence section disclosed today.

The launchings ceased in March, 1945, when the supply of balloons was exhausted.

About 200 balloons were released in February and March of 1944, the report said, but from Nov. 3, 1944, until March, 1945, six months before she surrendered, Japan loosed about

bomb to destroy the balloon itself.

The Japanese estimated that 10 per cent of the balloon-bombs—about 900—made the trip “effectively,” American intelligence reports revealed, but U.S. intelligence officers said this was an “optimistic” guess.

(Latest figures available)

San Francisco showed that 225 of the balloons are known to

myer S.

Uner

Don't

Wednesday Oct 18 - 1944
7 home.

Dear Bert - Just back from the Salt Mines of Siberia -
exiled at Gnyokom - a wallop of a permanent
Naval base way out in the desert where there's not
a drop of water to float a ship in.

The 8 days proved good medicine for me
and they treated me like a prince. Gave me a
fine young fella and a sedan and we went all
over the place - firing ranges - where there was
hell raising bombing and hush hush research
going on.

Next trip after we slept this one off, is
At Mono Lake out on the Mojave where there's
nothing but planes. Am hoping to see the jet
propelled plane in action.

Then on to two other ranges - Goldstone
and Pundleton. They sure are pushing the ole
man round but I seem to thrive on it.

These my work is mostly pencil sketches of
gadgets that are hard to photograph. That's where
I've got it over the man with the camera. I can
cut an instrument all up, show its insides, and
not destroy it. Development is coming along
so fast now, they want a historical record to file
away to show - I presume - the future scientists

how dumb we were in 1944.

I was lucky enough to squeeze in three pastels which fairly bowled em over - Subjects? Can't tell you - yet. But they are being framed behind glass now and ultimately will probably be presented to the Naval Base.

This last camp had a fine setting for backgrounds. The high Sierras on one side and the Argus Range on the other. I usually try to work em into all my sketches to bring out the (by contrast) the particular gadget being drawn.

Alice is still the same. Spends most of her time in bed. This back trouble has hung on so long that I'm beginning to get worried for fear it will become chronic.

Letter from Paul Linder says he's sold all his property in Crossville and is coming out to Calif. later to live.

No word from Amos except through your memo.

Ⓟ

You can send these prints on to Amos if you wish. They are all I have.

The criterion used was simply the presence or absence of soft pellets in the stomach. In 135 of the rabbits examined a note was also kept of the contents of the rectum; in only 4 cases did it contain soft faecal pellets, whereas in 19 cases they were found in the stomach. It is clear from this that the process of formation and evacuation of soft faecal pellets takes a comparative short time and is evidently not a process which is going on continually during the day resting period of the wild rabbit. This is what would be expected, if, as Eden³ maintains, the production of dry faecal pellets goes on most of the time, interrupted at certain points by a rapid emptying of the deeper part of the caecum and production of soft pellets.

Period (G.M.T.)	No. of rabbits examined	Per cent stomachs with pellets
21 — 2 hr.	12	33
2 — 6	62	0
6 — 11	30	86
11 — 14	17	88
14 — 16	21	86
16 — 19	9	45
19 — 21	41	5
Total ...	192	

The accompanying table summarizes data from 192 rabbits. The periods are unequal because it was difficult, when collecting field data at other people's convenience, to narrow down the time of death to within the same range of time all through the twenty-four hours. The number of stomachs containing soft pellets is expressed as a percentage of the total for each period.

It is clear that at this time of the year (March 9-12) there are two periods during the twenty-four hours when refection of faeces takes place. The main period is, as Taylor suggested, during the day from 6 a.m. until 4 p.m., though it is not quite accurate to say that soft pellets are not found during the morning: it would be more accurate to substitute "late night and early morning". From 4 until 7 p.m. the rate of occurrence falls to 45 per cent and from 7 until 9 p.m. it is only 5 per cent. This drop corresponds with the normal commencement of feeding at this season. From 9 p.m. until 2 a.m. there is a smaller peak, and then again, when late night and early morning feeding commences, there is a drop right down to 0 per cent. In practically all rabbits examined at this time the stomach was crammed with fresh food.

These data are confirmed by activity records made at an experimental rabbit warren. The area was wired round with netting: the rabbits went out to feed through gates which operated mercury switches and recorded the time. Through March feeding activity showed peaks at dusk and just before and after dawn.

The apparent discrepancy between my previous observations and the observations given by Taylor² is explained by the fact that the morning occurrences of refection observed by me would come just at the beginning of the large day-time peak: rabbits shot during the early morning activity period would be earlier than this. The lack of observations of evening refection is probably accounted for by the process taking place inside the warrens.

These results, of course, only apply to a season

when day and night are equal. In summer, when the shorter nights give less feeding time, it is possible that the rhythm may change.

H. N. SOUTHERN.

Bureau of Animal Population,
University Museum,
Oxford.
March 31.

¹ Southern, H. N., NATURE, 145, 262 (1940).

² Taylor, E. L., Vet. Rec., 52, 259-62.

³ Eden, A., NATURE, 145, 628-9 (1940).

A Substitute for Glycerine as a Mounting Medium

FIFTY per cent glycerine which is widely used as a temporary mounting medium for sections of plant tissues is now difficult to get. Instead, a nearly saturated solution of calcium chloride can be tried. Put excess of commercial calcium chloride in tap water, remove the slight amount of chalk with hydrochloric acid, let any bits settle and filter if necessary. This solution is rather similar to 50 per cent glycerine in viscosity, refractive index and, of course, will not dry up. At pre-war rates it is a good deal cheaper than 50 per cent glycerine. It can be used in just the same way as glycerine with such stains as iodine, Sudan III, alcoholic phloroglucin (but not alkalis or sulphates). If the bulk of the calcium chloride is removed by washing the section in water or alcohol for a moment, it can be stained and dehydrated in the ordinary way.

T. M. HARRIS.

Botany Department,
University of Reading.

May 2
For a satisfactory answer I will give
\$1,000,000 (promissory note)

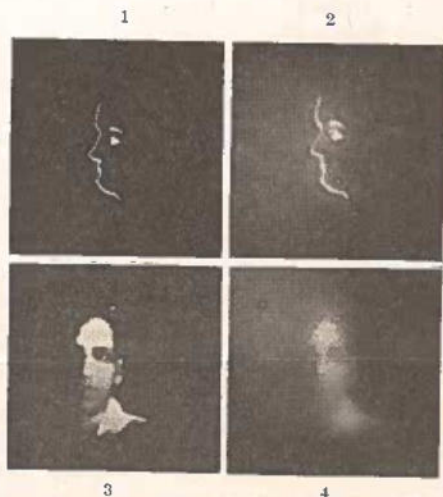
Simplification of Musical Notation

JEANS's great work on music is difficult for the ordinary physicist, if he knows nothing of music, and for the musician, not readily understandable, if he be unsympathetic to physics. There seems a moral to be drawn from it, however, that has been missed. It is, how can we make music simpler so that more people can play, anyhow to start with, the basic instrument—the piano.

I wonder if I shall awaken a chord in the youth of many when I say I tried like others when young, but found it just too difficult, and its difficulty lies in its notation. I maintain, in that all have been taught to read thoughts from printed paper, by virtue of conjuring up sounds to the brain as speech, so it should be simple to devise a method by which we could hit the correct notes indicated on a piece of written music with the facility we do the typewriter. The reason we cannot do this is that there is a conspiracy against us to make it difficult, and it is wrapped up with sharps and flats.

I will not go into the details why A sharp and B flat are not theoretically the same note, but due to what is known as 'equal temperament', they are in fact on the piano actually the same note. What is the point of making such a fuss to discriminate between the two, when all that can be struck is the one note?

We have investigated the explanation of this effect, using a point source as the object, and find that in every case the light reaching the image-point diverges behind it in the form of a hollow cone of rays, the angle of divergence depending on the distances of the object and of the image from the



OPTICAL IMAGES FORMED BY A NAPHTHALENE CRYSTAL.

crystal faces. The image formation is thus due to a kind of generalized 'external' conical refraction which can scarcely be reconciled with the ordinary ideas of geometrical optics. Our experiences show clearly that the usual explanations of conical refraction do not go deep enough into the physical aspects of the problem.

C. V. RAMAN.
T. M. K. NEDUNGADI.

Department of Physics,
Indian Institute of Science,
Bangalore.
March 5.

¹ Raman, C. V., *NATURE*, 107, 747 (1921); *Phil. Mag.*, 43, 510 (1922).

² Raman, C. V., *et al.*, *NATURE*, 147, 268 (1941).

Colour Measurement

MR. GUILD's letter¹ makes it clear that the recent conflict in views on colour measurement arises by his adopting an interpretation of the role of the C.I.E. colorimetric system which puts it outside purely physical discussion. The explanation he suggests does not, however, apply, as I have not been concerned with the public and practical aspect to which he refers. As was clearly stated², my remarks referred to the purely physical analysis of the phenomenon of colour, and measurement of the quantities following from such analysis: the C.I.E. system was therein referred to for what fundamentally, apart from all implication and interpretation, it actually is, namely, a conventional schematization of physical fact, having reference to certain conditions of observation, based, of course, upon averaged data but nevertheless representative in such conditions of a possible *real* observer (cf. the analogous purpose served by Listing's typical schematic eye in ophthalmology). In this sense the system forms in general a repre-

sentative first-order theory. Such use of the system accords with normal physical practice, for no suggestion of compromise in form, or simplification of the phenomenon has hitherto been implied in the reduction of physical data to refer to the C.I.E. normal observer.

Mr. Guild makes no reference to this aspect of the question, but he makes it clear that, in his interpretation, the C.I.E. colorimetric system is not subject to the limitations affecting the physical theory upon which it is based and that it exists absolutely and purely by virtue of definition. A physical phenomenon can, however, only be defined by relation to the conditions in which it is observed, and the existing physical knowledge of the time: the C.I.E. quantities which Guild postulates are, therefore, in general fictitious, and the C.I.E. standard observer in this extended sense, therefore, is artificial and lacking properties relating to the important physical phenomena connected with the variation of such conditions as field size. For some practical purposes this may suffice, but the theory cannot be regarded as complete while such phenomena remain demanding explanation.

Measurement on the basis of such an interpretation is clearly not measurement of physically significant quantities, and considerations involving such an interpretation are, therefore, beyond the scope of the present discussions. My statements on the subject from the point of view of the development of colour physics remain unaffected by the statements made on such other grounds in the recent correspondence.

It is, of course, possible to maintain views on interpretation, compromise and simplification for ordinary purposes, and Mr. Guild's promised statement will be awaited with interest.

J. W. PERRY.

Adam Hilger Ltd.,
98 St. Pancras Way,
London, N.W.1.

¹ *NATURE*, 149, 442 (1942).

² *NATURE*, 149, 76, 247 (1942); 149, 961 (1941).

Periodicity of Refection in the Wild Rabbit

SINCE my previous communication on this subject¹ various fresh data have thrown new light on the coprophagy or refection rhythm in wild rabbits. Taylor² reported, that of a number of wild rabbits shot and examined for the presence in the stomach of soft faecal pellets such as are re-ingested immediately, those shot in the evening contained such pellets; those shot in the morning did not. He suggested, therefore, that the rhythm in wild rabbits was the reverse of that found in domestic rabbits; the resting period of the former being during the day, naturally this would be the time when soft or 'night' pellets are produced and swallowed.

Since then I have taken careful note of the stomach contents every time a wild rabbit, which was killed at a known hour of day, came into my hands. I have also included records in which the time of death could be narrowed down to four or five hours. Recently I was able to examine fairly extensive material from a large area of woodland in Gloucestershire and this constitutes the greater part of the data upon which the accompanying table was based.

Then comes the arch-conspiracy of writing in separate keys, when nothing you see on the paper is what you think it is. Who would ever have learnt to read an ordinary book if at the start of a chapter it was announced that it was a sad story and in a minor key, whereupon most of the letters of the alphabet were changed about, and then to find in the next chapter, when things brighten up a bit, that the letters have changed again in an entirely different way. Nobody but a thought-reader could have persevered, yet so it is with music; no one but a musician goes on with it. But the ordinary man reads his book with enjoyment, though not a student: so should an ordinary man enjoy playing the piano even if he be not a musician.

The first thing I plead for is that all music be written in a straightforward honest way, as if it were in the key of C, with all accidentals inserted. You could at least read it. You would find out later it was not in that key, but would that matter, as you would be playing it in the key desired and what more do you want? If we could get as far as that, it would be something, but I go further. I contend there are only twelve notes in an octave on the piano. All you want to know is which of the twelve to hit and in which octave. Surely not a very difficult problem in notation.

Here is really where a little organized common sense—sometimes called science—might bring great joy to millions. Surely such a thing is worth while trying and not beneath our dignity, but do not expect help from musicians; they revel in the mysticism of their trade union.

BRABAZON OF TARA.

70 Pall Mall,
S.W.1.

Quality Control in Manufacture

THE note in NATURE of April 11, p. 408, on "Quality Control in Manufacture", repeats an error made in the article on which the note is based. Prof. R. A. Fisher has made many notable contributions to statistical theory and practice, and his elegant analysis of variance may possibly be considered the outstanding contribution of the century, but I think he would be the last to agree with the statement made in the opening phrases of the second sentence of the note. The theoretical foundations on which the control charts for averages of samples is based have been long known, and those for control charts for measures of variability have been laid by the work of British statisticians other than Prof. Fisher.

Apart from this error, I think that by not referring to the British Standards Institution publication of 1935 on this subject, the notes may leave the impression that the technique is only just receiving attention in Great Britain after many years practice in the United States. Dr. W. A. Shewhart's visit to England in 1932 focused attention on the work proceeding at that time in some British industrial organizations and stimulated interest in it. The formation of the British Standards Institution Committee in 1933, which led to the publication of B.S.S. 600 (1935) and the formation of the Industrial and Agricultural Section of the Royal Statistical Society, were some of the results of the increased interest in the subject.

The interested reader will find on close examination that the use of statistical methods has been growing

simultaneously in Great Britain and the United States, and that the development has differed in detail but not in principle. A careful study of the two documents to which reference is made (B.S. 600 R: 1942 and B.S.1008: 1942) will reveal this.

BERNARD P. DUDDING.

Research Laboratories,
General Electric Company, Ltd.,
Wembley.

Education for Culture and Citizenship

THE conflict between subjective and objective biological teaching, referred to in the leading article on "Education for Culture and Citizenship" and by Mr. L. J. F. Brimble² need not arise when the subjects of a school curriculum are more closely related, so that matters undesirable to teach from one angle can be taught from another. Such closer relationship could be obtained were education regarded as the fitting of man for his environment.

The subjects of the school curriculum would then fall into two groups: (1) man in relation to environment (the humanities), and (2) environment in relation to man (the sciences). Each group would dovetail into the other, and each subject be taught as part of a related whole, to the relief of overcrowded curricula. Environment for juniors would, of course, be the vicinity of the school, and syllabuses be based on its natural features and human activities. Even great cities provide a surprising amount of material for biological study and for that training in habits of observation and inquiry which is the root of true education. As the students get older, environment would broaden out to the whole world, and travel and research begin to play their part in education.

T. S. DYMOND.

14 Albany Road,
St. Leonards-on-Sea.
April 28.

¹ NATURE, 149, 447 (April 25, 1942).

² NATURE, 149, 457 (April 25, 1942).

First Publication of the Geological Society

IN reply to Mrs. Eyles's query¹, there is no reason to doubt that the pamphlet "Geological Inquiries" was issued in 1808, which is the date inscribed by Horner on his copy now in the library of the Sedgwick Museum. That it was published before the first volume of *Transactions of the Geological Society* is clear from the following extract from the Preface (*Transactions*, 1, June 28, 1811, p. v): "shortly after their establishment [Nov. 13, 1807] they [the founders of the Geological Society] drew up and distributed a series of inquiries."

L. HAWKES.

1 Chaucer Road,
Cambridge.

¹ NATURE, 149, 442 (1942).

where if one can read a score, he is not entirely a mental light weight

FLOODS OF SEPTEMBER 1938 IN NEW ENGLAND

THE hurricane which visited New England in September 1938 is rather artlessly described in a massive volume of 562 pp. as "the greatest catastrophe since settlement by the white man". The loss of life was very heavy and the material damage by flood, wind and wave exceeded three hundred million dollars. The greater part of the damage was caused by flooding of the rivers resulting from heavy rain, and coming so soon after the great floods of March 1936 it caused much alarm. The U.S. Geological Survey has accordingly collected all the available information about rainfall and river-levels as a basis for the design of protective measures for the future.

The antecedent conditions were unfavourable but not in themselves dangerous. In the preceding months rainfall had been above normal, and by September 11 there was an accumulated surplus of moisture in the ground. Heavy rain during September 12-16 added to this, but though the rivers ran bank high there was no flooding. On September 16 there was even some improvement, but from September 17 onwards the weather was consistently unfavourable. On September 19 a trough of low pressure lay over New England in which moist tropical air moved northwards, giving falls exceeding 5 in. in twenty-four hours. Meanwhile a tropical hurricane was moving rapidly northwards near the coast. As a rule these hurricanes keep well to the east, but this one was diverted into the open trough of low pressure, and on September 21 moved rapidly inland towards the Canadian border. On the eastern side of the centre the winds reached hurricane force, doing widespread damage, and the rainfall was torrential, but with the passage of the centre the rain ceased abruptly. In the twenty-four hours ending at 6 p.m. on September 21, 6 in. or more fell over 1,020 square miles, and floods which, though severe, might have been manageable, burst all bounds.

Rainfall charts are given day by day and again for every twelve hours, but since the effect of flood rains is largely cumulative, greatest interest centres in the map for the whole period September 17-21. The distribution is remarkable, for while there was a rainfall of 6-10 in. in these five days over a very wide area, the greatest amounts of 10 in. to more than 17 in. were confined to a comparatively narrow belt along the hurricane track northwards from Long Island, comprised mainly within the basins of the Connecticut, Merrimack and Thames Rivers. Over an area of 100 square miles in Connecticut and central Massachusetts the rainfall exceeded 16 in., equivalent to the total average rainfall in London from January to September inclusive. On the eastern side of this belt the rainfall diminished almost abruptly, so that the coast of Massachusetts received only a few inches, but on the western side the decrease was more gradual and flooding extended for some distance with decreasing severity. In many places on the smaller streams in the central belt the crest of the flood reached levels several feet higher than any previously recorded. The tables of flood height and discharge which make up a great part of the book show instances of discharges which were only a few

cubic feet per second per square mile of drainage area on September 18 and 100 cub. ft. on the morning of September 21, but had risen to 400 or 500 cub. ft. a few hours later. On the larger rivers the rise was naturally slower as various tributaries came in at different stages, but the cumulative effect was as great. Under the pressure of the water, dams and bridges gave way and the rivers spread over their flood plains, destroying roads, railways and houses; the damage is vividly shown by a fine series of photographs.

The coasts naturally did not suffer from river flooding, but they were swept by a great storm wave, which in the eastern areas coincided with the normal time of high tide and rose to heights of 10 ft. and, where the waters were heaped up in narrow channels, more than 17 ft. above the average level of high water; New York's holiday coast was devastated, scores of houses being completely demolished.

The flood problem of rivers in populous country is one of great complexity. To enable the waters to flow away freely and naturally, the flood plain should be kept unobstructed, but the life of the towns and villages depends on the river, and encroachments are hard to avoid, while it is to these low-lying settlements that the danger is greatest. Reservoirs, whether constructed specially for the purpose of controlling flood water or for other purposes, play a useful part in minimizing the rise, but if the river sweeps away the obstructing barrier and empties the reservoir, the sudden influx of stored water may add to the catastrophe; in fact, many of the curves of flood height show a double crest due to this cause. The volume of flood water depends on the absorption of the ground as well as on the rainfall; the great flood of March 1936 was magnified by the melting of the snow and by the imperviousness of the ground, which threw practically the whole of the rain-water into the rivers; by contrast in September 1938 the ground, in spite of its previous soaking, managed to absorb a good deal of the earlier rainfall, though it could not cope with the torrential downpour of the last day.

Hurricanes have visited New England before, and will doubtless do so again, but this detailed record compiled by the U.S. Geological Survey will at least provide American engineers with the data for plans to minimize, though they are unlikely to be able entirely to avert, the effects of future visitations.

C. E. P. BROOKS.

BIOGEOGRAPHIC DIVISION OF THE INDO-AUSTRALIAN ARCHIPELAGO

ON April 16 and 30 a discussion was held by the Linnean Society under the chairmanship of the president, Dr. E. S. Russell, on "the biogeographic division of the Indo-Australian Archipelago, with criticism of the Wallace and Weber lines and of any other dividing lines, and with an attempt to obtain uniformity in the names used for the divisions". The following papers were contributed: Mr. J. B. Scrivenor, "Geological and climatic factors affecting the distribution of life in the Indo-Australian Archipelago"; Mr. I. H. Burkill, "A historic account of the divisions which have been proposed"; Dr.

* Hurricane Floods of September 1938. U.S. Geological Survey Water-Supply Paper 367, 1940.

To continue :- I'll explain better what I mean - since I don't if musical people I've asked about this understood me.



Here's - well, from what?
You'll recognize it.

Now a poor devil has got to play sharp all notes that lie on the four lines in base and ^{which carry # signals.} ~~table~~ that makes about 2 or 3 mental calculations (and some more where accidental ~~for~~) - all while racing along and with both hands, each ~~batting~~ ^{batting} two to four keys and ~~batting~~ ^{batting} simultaneously.

Now I ask you - how in Hell can a mere human being do that? Especially since I've seen some I'm having as many as six sharp or flat marks. (my musical "education" consisted of 12 lessons when I was 10, given by a neighbor girl of about 15 - that's where I got what little I did get. I could play in in the key of C only.) All of the above has multiplied me 45 years.

Well, although I can't perform a piano score except as a dirge (slow), yet to others it seems

to come naturally - they don't even look at the keyboard. - like a lightning typewriter - might as well blindfold him.

Bartelme sees only one way out - to make the staff of 12 lines and spaces - ^{one} for every note in the octave.

Funny - your picking out the bar in Liszt's piano score in the slow movement of his Trio (Op 97). Just to show you how this intrigued me I enclose a duplicate I copied off years ago. Please return in your next batch. I think you and I both shook our heads in wonderment and joy down in your cellar when those harmonies came off your record.

Say, I'll return your "Letters of Beethoven" if you'll send me Jean's book. Did you get anything out of it? And why did you this particular bar as an example?

Q

Dec. 16-1946 - Dear Bert -

Now that the tumult and the showings are over -
(I'm not only referring to PORTER'S DAY, but to the last
teeth (2) that came out today) - I can give you a
sketchy report on what Raible was responsible for.
I'm enclosing a few samples of what came, mostly by
air mail. The cupie ogling a star with a scope came
by the dozens, some of em signed by groups, one
had over a hundred signatures.

Of the two embossed scrolls, yours was the
cat's whiskers. The other one, most a yard square
~~has~~ was half covered at the top with a badly distorted
drawing in ink of the Zoo inch. This one - obviously -
came from Pittsburgh. The wire from Cambridge
was signed "Pres. Harvard Observatory". Does this mean
that Harlow Shapley has resigned? Coarse Not.

Those last two China Clippers that went today require
that I hold my pipe now by my hand. With all the
nippers gone now I can't bring my two jaws together.

[When I asked my tormentor today if he was going to give
me a temporary plate, he said "No, they used to do that
but not now". So you must have been given some
obsolete treatment.] Or perhaps my dentist is ultra-
modern. Well anyway hooray - They're all out
now. I've been a coward through it all. I'd rather face
a dozen polar bears than go through it again.

(over)

Barkelund wants to read that account of Newton
in the British "Engineer". So I'll return it
in a later batch.

Bert - Here's a good one for your contemplation.
 Now will you please ^{distribute} these Xmas cards among
 your friends of the merry twinklers - just to
 help along the good cause. I have over half a
 hundred of em - so don't be niggardly. I'll be glad
 to send you more. And it might be nice
 of you to write the four "Sisters" a fullsome
 letter of appreciation.

But I'll be damned if I acknowledge all
 these canned birthday greetings that have come
 in lately. I appreciate the motives that
 are back of it (but likely they are all cooked
 up by that well meaning but slightly wacky
 fellow Raible).

After the tumult and shouting is over
 next week I s'pose I'll have to write him. But
 I'm out on a limb as to just what I should
 or wish to say.

Read the imprint on the back of the cards!

P

46 Dec

Your account of actions on Porter's Day is as I suspected. You were on the spot and hadda go through with it as if you were lappin it up with glee.

Well, it is a wunnerful thing, that Day. Potah's Day.

Is just the kind of thing Mr Babbit would get up. - Right (P)

I supposed all the Pittsburgh gang entirely sold on Raible. Here is a letter that suggests not quite. However, not a word to them. Play out the game. *They appear to respect Raible - - -*

Say I think Alice put the flea in Raible's ear. Sure she did I saw her whispering to him furtively. So spank her.

Gosh, Franny says if she is ^{able to} paint a kitchen she couldnta had wot she had. We think it was just faked. She was in love with this genius Raible and that is how it worked out. Well, if that's so, I'm sold on Raible, for wifey is certainly better. (P)

But we are glad she can paint the kitchen red. Try the town.

And am very deelighted you are on deck again and havin fun. Barn if I wasn't skeered for a while. You sounded like ~~and~~ sorta fading out.

Yes, I guess I did - but by all accounts he'll be pristin' around

like a kid with these teeth gone.

Dear Albert,

Received a blow by blow description of your battles with the boys and that the wood is finally on its way.

Now it is my turn to see what is what.

Hope, that due to the coal strike, my private freight car is not side tracked some where.

Well I am in no hurry; still too darn busy to even think about cabinet making.

I think I told you before that I had a little accident with the 5" lens I got as a present. Well, fates were kind and I got a new doublet $4\frac{15}{16}$ " dia - 25" f.l., from which I'll assemble a terrestrial telescope for Fine. Got me 2 porro prisms for it.

We sent Porter from our Pittsburgh group a large home made birthday greeting - signed by all members. Our group is the valley (Beaver County) also sent him a list with our John Hancocks, besides individual cards. He ought to get enough paper to fire a furnace all winter. Cliff Raible demonstrated before our Pittsburgh group how to make small castings. All home made stuff, with exception of small blower and a $\frac{1}{4}$ size crucible. He made two aluminum castings for his 200 inch. While he babbled on, I noticed his extreme skill and facility and how the job come out as easy as pulling a tooth. I just wondered, whether it would not be a good idea that he give you a spiel how any amateur can do this, for "Telescopes" is the S.A., including how to make a furnace from a ~~5~~ 5 gall. paint can. He is not at all pushing, except where Porter is concerned - and will not send you anything unless you write him.

Year 2

He has made cast forks for mountings - eye piece holders and adapters etc. I remember that there is an article about a casting (a large fork) in A.T.M., but this was done by 2 skilled professionals.

If necessary I'll make pictures of his equipment.

Well, got no more news at present.

We had Hans & Bill at home for Thanksgiving; first time in 5 years the whole family was together on that holiday. Bill is a Tau-Beta-Pi member now. When he graduates in June, he wants to work for a year and then go to Harvard for a year for a business course. Hans is trying hard to catch up with the lost years in the service. Tech is a great deal tougher than Yale. Hans is a sophomore, but is farther along in Calculus etc than Bill who is a senior. The saying here is, that if you want social life - go to "Pitt"; if you want to know things - "Tech" is the answer.

be seeing you

Rae

10/15
Comm. meeting is ^{2nd Friday Dec 13} town is "Porter Day". I'll have all the photographs of his drawings of the zoo mounted, also the colored pictures at Stedolane - Porter - you & Pierce - the Turret Acque - the meeting house. Les Scanlon will bring stuff. Rae

"eligion and golden rule.

You confuse two separate things.

Golden rule is ETHICS, a rule of mutual conduct

"eligion is a belief in a higher being.(def.)

To separate these two entities better still, a person can have an ethic without religion, and very many do. And another person can have a religion without an ethic, and very many do.

A third idea many confuse is a belief in survival. Not a religious idea, or ethical. You can be religious, or ethical, with or without this belief.

over

I believe you have to have an ethic, otherwise human affairs simply go to pieces.

I have no religion. Most of it seems to me to be plain superstition.

All right - Call it what you want to.
Must be for all ethics and no
religions. I have little patience
with survival - Just wishful
thinking - (P)

47
Jan

1947 Jan

Here's Compton's religion. For the first time, he tells just what it is. Have heard many criticisms of his mysticism.

Apparently, it isn't mysticism. Some kind of pragmatism instead. That's what I make of it.

"He says if you are religious, everything will go fine. I rather agree with him. However, since he apparently realizes he does it for practical ends, how can he kid himself that way?

As I grow older, I'm afraid I approach a feeling of the agnostic - I just don't know. And all the dogmas and focus points of the different denominations seem more and more silly to me. My inspirations come from the discoveries of science - both macro and micro. Astronomy has done more to me than other branches. To fill me with awe and reverence in contemplating the wonderful unity of the universe.

I think I have the Carlson article somewhere. Think you saw it. Is entirely positivist and hardbiled in every way. same as I am.

My religious belief is nearer the Unitarian than any other denomination. I still feel that the golden rule is self satisfying

(P)

1894 Cook, popular excursion to Greenland.

Iron ship Wrecked ^{first} Cruise of the "Merzunda"

96 Peary to Western Greenland

97 own Party Frobenius Bay Baffin Land.

Peary took him up. Spent summer.

98 To British Columbia. for AMNH, Ethnology.
Near Peace River.

99 To N W Greenland near Etah ^{with Peary}
to provide supplies for next season. ^{Took party of} College boys.

1901-02 Baldwin Ziegler Exped, F J Land

03-05 Fiala Ziegler Exped Ship lost. See
Fiala, "Fighting the Polar Ice"

1906 With Cook Alaska

1912 with Bryant, St Augustine River, Lat.

1917-18 B D S.

1920 - ~~1920~~ Port Clyde

1920 Sept 16 new job to get in to
make telescopes

1921 Exhibited 3 at Springfield Fair

1923 J + L Put them on market

He made 75-100. \$400

I still think you could get a lot of pleasure reading the scores Apr 46
of pieces you have heard and have the records. Have you
ever listened to recordings of Beethoven's string quartets?
Listened to 'em! Hell, I've got 'em all — nearly. (P)
Fine. Lets us Two have an orgy — every damn one — down cellar (P)

of glass out, and at that time nothing had yet come in. That's not true now and I hope it will be reflected in future tests of qualifying sample prisms.

May 1, the A reported on two samples by C.S. Walton, 5975 W 44 Ave., Wheatridge, Colo., whose first sample some weeks previous they had rejected asking him to try some more, thusly: "Def. acceptable. Angle: acceptable. Surface: scratched - this prism must be rejected due to scratched surface. Second prism: acceptable (than which they could say nothing whither). Purchase order and priority, 25 prisms will follow. In the future Mr Walton is to deal direct, ship in lots of not less than 5, paid \$15 each. Sufficient glass will be shipped direct. Walton said May 19, no



T'll be with
mirror making
any way.

Let me have your preference in advance, regarding best hearing position of loudspeaker on phonograph. Here we are, in my cellar.

My phonograph contained everything in a single cabinet 22" high but now I am having a more-faithful reproducing-speaker-added and this will go in a separate box, 10" by 22" by 22" and this is on an extension cord, so it can be positioned anywhere. I can set it at the level of your ear and within about 6" of your ear, or even 4". As shown in red. But is that the best position for you???????

I could rig it in front of your face if you preferred. Or behind your head

Please tell me your best hearing position and distance. *Which one?*

turntable from its normal 78 RPM to ± 50 kT.
Can't keep track of everything. Am surprised that there
are calibrative signs that mean Repeat, but haven't
got onto em yet. Evidently will require more persistence.

— Say if I go east this year. Let me make strange
for you, your photograph, (Op 97 Audante movement)
and your cone - to tell with glass grinding.
@



Date '39



Bring figer in on that session next summer with my records. Take phonograph down in my shop in cellar (not that little optical cubby I had) where it's cool and we can run it as long and long as desired.

Put you on a bedspring on floor, as the sound box opening is 12" above floor, only.

Me in chair, to change the records.

Maybe get about 4 feet of this flexible cable to hook on sound volume control, as

you'd need it since Brethorn fluctuates
from barely audible (to me) to loud, and
you'd want your own quick control.
But if you sat in a chair, then I and
phone would have to be on an 18"
platform.

Then we could play the whole 24
albums = ± 14 hours + time out for
food and for coming up for air - oh
call it a week! Bring your scores along.
Sure would enjoy it if I could dish it out
to you so you could hear it and control it
and be comfortable too. Ten years ago we went
to cellar to escape the heat (12° there) and you
briefly sketched my cabin - gave me the design.
Say - this sounds great. Will try to pull it
off. Depends good deal on wifey. But
wouldn't it be an orgy? You'n I in records 'n
scores 'n each one tellin the other what's wat.
Hot dog. (R)

Robt E Peary

John A Cook

My account of the
07-9 \$3

To the top of the
Culvert \$ 2.50 08

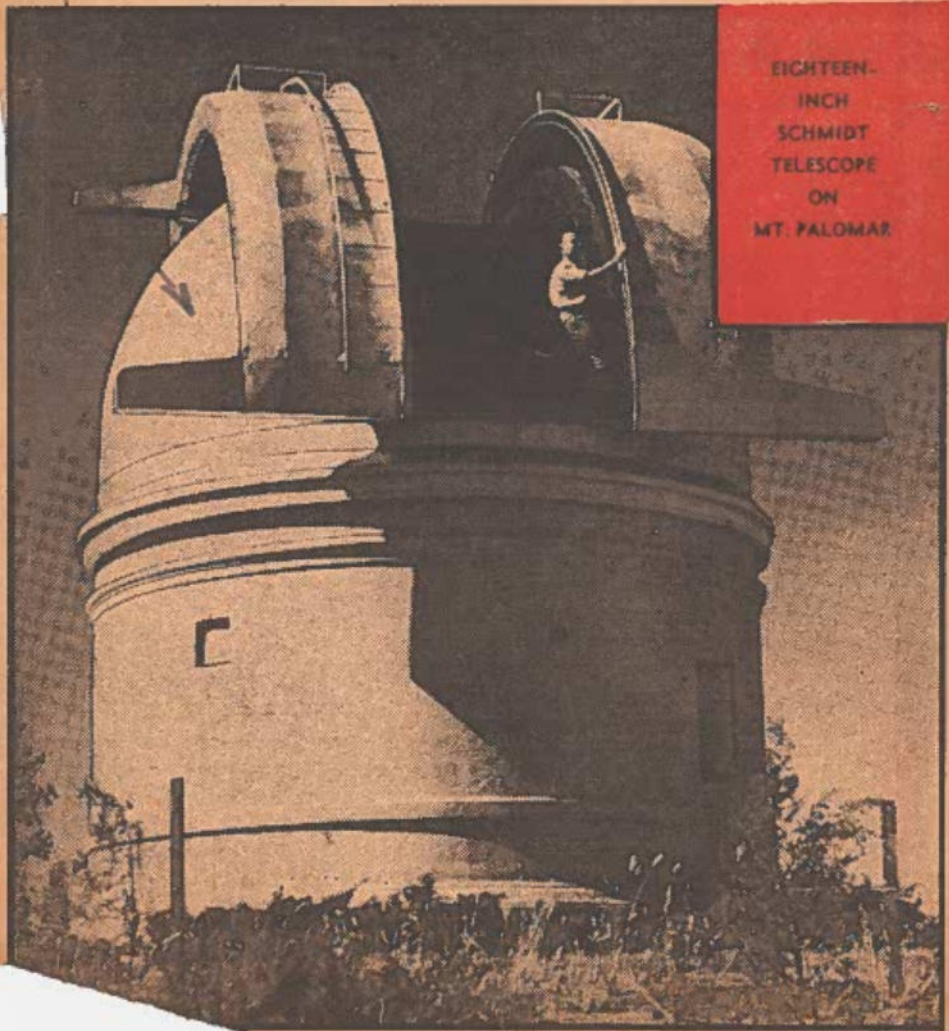
Double

*My Design, but the size of the shutter
makes the tail wag the dog.*

ENDS A BRILLIA

BY WILLIAM S. BARTON

EIGHTEEN-
INCH
SCHMIDT
TELESCOPE
ON
MT. PALOMAR



CUDDLES AND TUCKIE

BY FRANCES ROYSTER WILLIAMS



Tuckie's little hammer gave
A "rap-a-tap-a-tap"
As he and Cuddles finished up
A splendid rabbit trap.



They put some food inside of it
And set it in the wood;
They thought they'd leave it there and catch
A rabbit if they could.



And so they both came sneaking back
Around the briar patch;
The box was down, and under it—
They heard a "scritch-scratch."



When Cuddles lifted up the trap,
As Tuck knelt down to grab it,
They found they'd caught their puppy dog
Instead of Peter Rabbit.

Copyright, 1938

sive as the electron; like an electron, has a negative charge, but possesses perhaps a thousand times as much energy. It is the most penetrating particle known, resembling the cosmic ray to that extent at least.

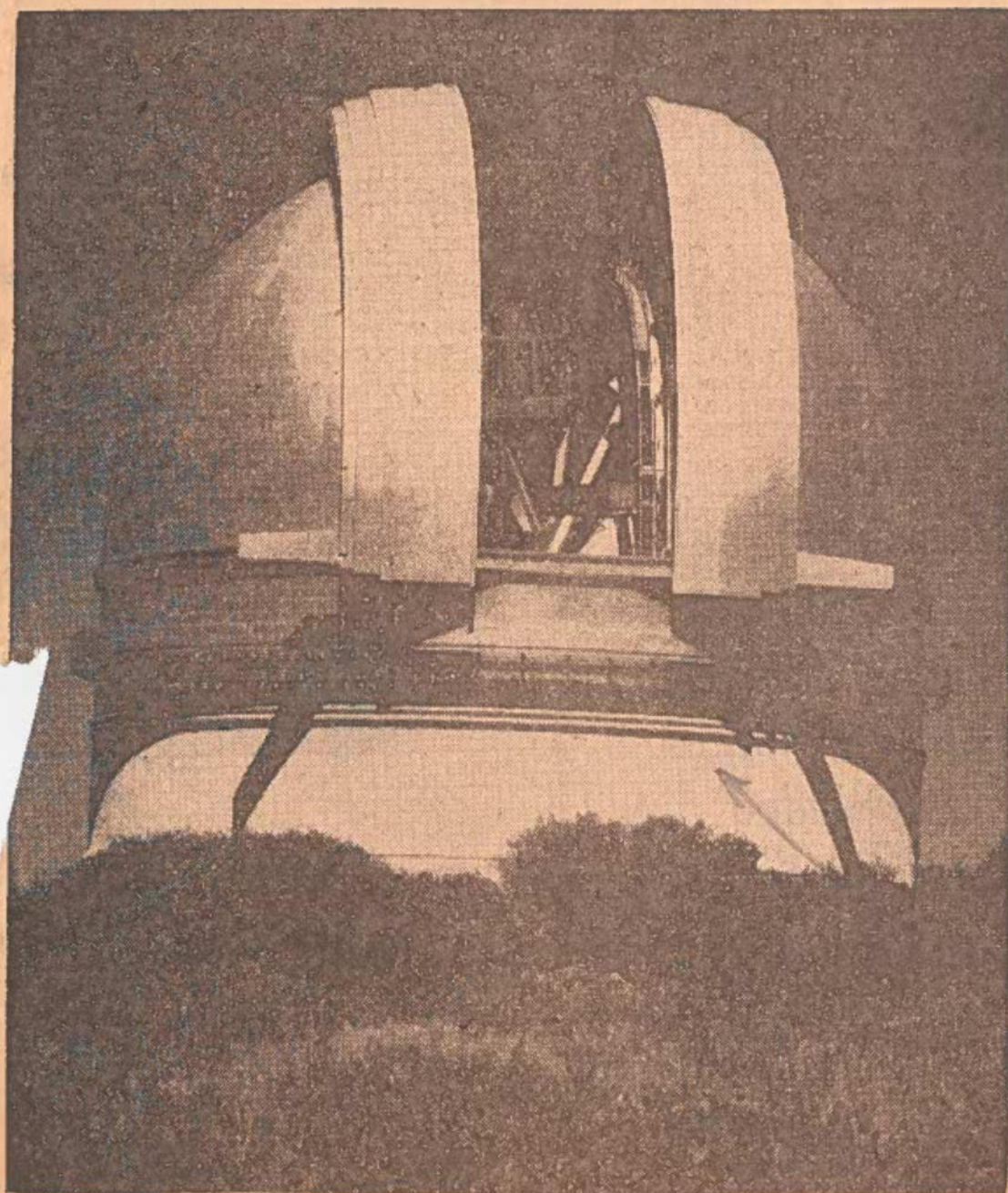
Another of Dr. Millikan's pupils, Dr. Victor Neher, found evidence during cosmic ray research at high altitudes of a new particle which may or may not be identical with particle "X." The Millikan-Neher discovery, it is calculated, must be either the long sought negative proton, which would be a heavy nuclear

other realms in interstellar space, but more important to humanity is the virtually accepted conviction that the action of the rays on living things may explain to no small extent the variety and evolution of animals and men. Dr. Arthur C. Parker of Rochester has just suggested that the "only way we could prove cosmic rays to be the sperm of life would be to dig a hole twelve miles into the earth." Only in that way, he thinks, could scientists determine what forms living things would take when completely shielded from the penetrating rays.

'noter 100' shot club fellows - best craftsman on the

ARE WE MEN OR MICE

Here's Where Mirror Will Be Housed ⁴⁷ Now



END OF TRAIL—Here's the observatory on Mt. Palomar where the huge mirror will be housed. The Caltech caravan expects to reach the end of the trail tomorrow.

(Very baby - architecturally speaking)

CORRESPONDENCE CHARGED

The Woodburys flew in last week and stayed with us 2-3 days - A regular whirlwind. But ^{of course} we were both
TO FILE OF CASE glad to see them. Dane has got some contract with the Navy to write a book on the story of the Pacific Naval Bases. His uniform is grey with rating as a "Technician". He's in
NAME Frisco now probably waiting for a plane or ship for Honolulu.
SUBJECT Well, I'm headed for the "Salt Mines of Liberia" (Myokurn) in a day or so. Been held up on account
REFERENCE NO. of the Woodbury's arrival and rain. Rained like hell here for two days (also at Myokurn in the desert). Broke our dry spell - driest January on record.
DATE Say - if you in France do go to Florida, will never forgive you - Never. H. S. L.

Been marveling about your account of making more dough than R.A.M.

Have you ever stopped to think, as I have just done, that you, starting at a very low earning (years in the Arctic), have consistently increased your level of earnings right up to 75?

No, I haven't.

I don't believe one man in a liberal million does that.

Oh g'wan.

I don't know what you made at Springfield but it probably wasn't as much as at Pasadena. *Sumpin around \$3000 as I remember now*

And I recall Hale looking worried for fear the \$4000 (I think) he was offering you could only be temporary, for fear of sensibilities of others on the campus.

That was when I divided my time between J&L and Cal Tech. When it became all Cal Tech, it jumped to \$5000.

Then you reached normal retiring age of 65 but they kept you on, and I think one of two good reasons for that was you were a pleasant person to have around, as Anderson wrote to me.

Hope I was worth my salt on stronger grounds than

And now you are simply rolling in lucre. Well, I used to know you when you were just a mere mortal, having to watch expenditures like other folks, instead of buying fast cars and yachts and renting blondes and throwing champagne around and taking wine baths and in general going straight to Hell in a handbasket.

All wrong again. Live the simple - upright and moral life. All I care for is comfort - pipe tobacco - good fellowship.

Well, I only hope you are duly appreciative of your gifts

Data picked up at Stellafane visit 1940

House at No 40 ~~part~~ ^{on hillside} Street, Springfield, was built 1813 by R's

grandfather. Brick front. He was the Postmaster. Now occupied by Rs niece, Miss M^{rs} Marsh.

(Rs father manufactured toy baby carriages 75,000 of them annually.

Gross receipts of his factory were \$5000 according to history of Springfield.) His father looks like a preacher. R resembles his mother. Photos of both are in frames on Miss Marshes mantelpiece.

Old house has fireplaces in every room. Original slate roof still OK. R grew up there and went to school just up the hill. R's best sketches, largely made in Italy but partly in abctio, are there in house which is quite large.

R and I spent Sunday PM in guest room and in it both R and his father were born

N.Y. Public Library

10/30/34

Book Order Office

Room 100, 5th Ave. & 42nd St.
New York City

CYCLOPEDIA OF FORMULAS

How was the book by ol Doc Cook?
(\$1.57 recd). Sounded pretty violent in
the places I sampled. Wounded innocence.
Just finished it. It was well worth one
dollar and fifty SEVEN cents. I could
see his faking all through it where
millions of others who didn't know him
couldn't.

Too bad, my hero's feet made of
clay - Ended up a jail bird.

Yes. You - or perhaps we - are responsible for ^(47 Feb)
a lot of very worth while developments in
applied optics. Just the pleasure, alone, that
the movement has given to so many people, should
be ample satisfaction to us. That more than
compensates for all our efforts. To hell with medals.

(a)

(b)

47 Feb

The way I analyze this is as follows:

- 1: How could Porter have popularized telescope making without Sci Am and somebody on it to keep the fire burning?
- 2: How could Ingalls have popularized it with Sci Am as a medium but no Porter to lend brains and prestige?
- 3: Well, I figure that if you had given it to Popular Astronomy, which is what you told me you had planned to do when I came into the picture, it would have attracted relatively little lasting notice. Mainly because a smaller reader group and especially nobody at Popular Astronomy to keep sitting on the egg to hatch it and thereafter dig worms for it.
- 4: Now take the other case -- Ingalls and Sci Am but no Porter. I would have floundered along and maybe petered out. You lent your experience, your ART (especially that) and your personality. Also much time but not nearly so much as I put in.

I often think: "Well, I have to put in about 100 hours to Porter's one because Porter has so much more ability than I have and such a better personality." I have been glad to do this "kitchen work", washing the dishes and peeling the taters and emptying the slops, because I knew my personal limitations and knew I couldn't have got far with it without your help.

On balance, I think we could say you contributed 1 part weighing, however, at specific weight ten, to Sci Am's and my 10 parts weighing only unity, and the worked out ~~sum~~ is 50:50 which is what you put it some months ago in a comment.

$$1 \times 10 = 10 \times 1$$

All right, let it go 50 50 / But don't forget it needed the team work of you, Sci Am, and me, to put it over. (P) That's what I said, above.

Yes, you gave ~~me~~ credit for everything, in Sky story.
Hell, I never did more than sort of be an office boy.
I never knew optics. Hundreds of the TNS know far more.

See you did right to write Scanlon that story. Good one.

"Well, sometime I'll get even with you and tellem without you I couldn't have done it. Felt like sending reply to Sky but such things look silly. Besides, I enjoy the flattery. My ego expands.

*Well, lets call it fortuitous that we cooperated
& drew and you wrote. (P) say - 50 - 50*

Some time when especially egotistical I shall make a list of ~~the~~ people whose lives I have been able to affect. Is funny how, while I never amounted to anything, I was in a position to affect so many.

Here is a letter from one who remembers it. Im bound to say I appreciate this and I accept the binoculars.

You Lucky guy.
My losing my job was half caused by telescopics.

*Well, who was to blame, you or me?
which came first, 'the egg or the hen'?*

(P)

~~made~~
~~July 26~~
Laid low with flu - writing in bed - been answering
at length letter from Broadhead - Hell, and just as I
was going to give Jerry and  a coup de grace

Too bad. He wrote that he had it.

spring & summer, no ship. Autumn and no ship, Winter.
To the hut at Storö. In charge. 100 days of starvation.

1904 Trip to old quarters with Brillant. That drifts over, Fida goes,
but returns. To Alger Island to Zichy Land. Summer wears on - no ship.
July - ship.

Got these as I read and there obviously is some error on date in

(1) Infall from your MS or (2) Fida or (3) the MS itself.
I make it out 1904.

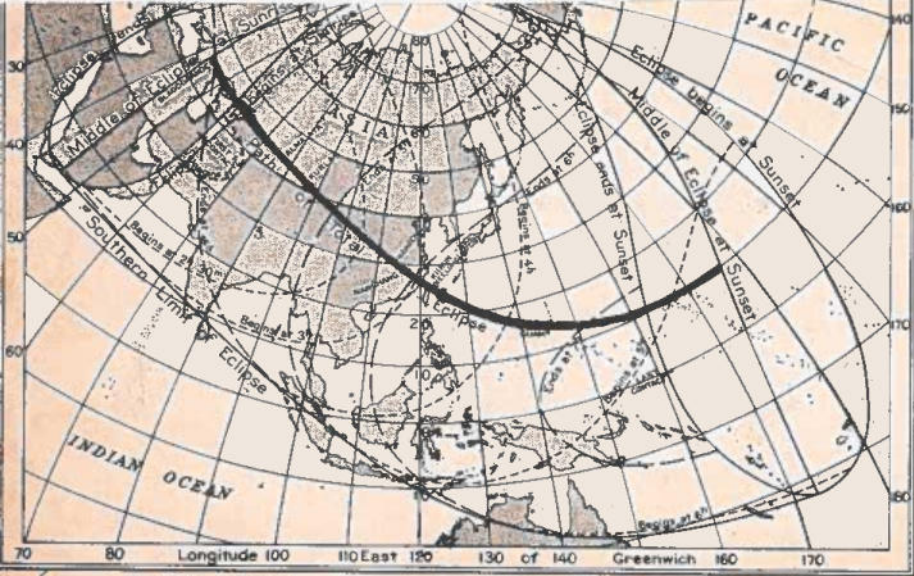
(over)



Russell W. Porter talks it over at Stellafane, 1941. Photo by Peter A. Leavens.

SKS Sept 41

good picture



Note:- The hours of beginning and ending are expressed in Universal Time or Greenwich Civil Time

Was this photo of you sitting on the base
of some structure (waterfall at Palomar?)
taken since your winter illness? (A)
You look OK, seems to me.

The gods must be on your side + two big
reconstructions. Did you ever find out what
ailed you? We thought it exhaustion

I guess that was it - run down on
nat. defense work. OK now see
separate sheet. (B) guess that's it. A

N-S 6-25-40

TUCKER?E.B.

445 Fairview Avenue

Webster Groves, Missouri

SEP 30 1940

Collis P. & Howard Huntington Memorial Hospital

100 CONGRESS ST., PASADENA, CALIFORNIA

Phone: SYcamore 2-2111

A non-profit, charitable institution



Approved by:
AMERICAN COLLEGE OF SURGEONS

Accredited by:
AMERICAN MEDICAL ASSOCIATION

Member:
AMERICAN HOSPITAL ASSOCIATION

History

THE Collis P. and Howard Huntington Memorial Hospital is a general, non-profit, non-sectarian hospital of 200 beds. It was established as the Pasadena Hospital in 1899. In 1936 by arrangements mutually agreeable to the Board of Directors of the Pasadena Hospital and the Trustees of the Collis P. and Howard Huntington Memorial Hospital, a trust created by the last will and testament of Henry E. Huntington, the hospital was taken over by the latter and is now the Collis P. and Howard Huntington Memorial Hospital.

TIME OF ADMISSION AND DEPARTURE

The hospital is never closed and admits patients at any hour of the day or night. However, when patients can choose their time for entering the hospital, it is recommended that they apply for admittance before 4:00 P. M. The hospital day ends at 1:00 P. M. The hospital reserves the right to make an additional charge for patients who remain after that time.

WHAT TO BRING

Bathrobe, slippers, nightgown and toilet articles. Patients are expected to provide their own gowns or pajamas when hospital gown is not necessary. Maternity patients should also bring an outfit with which to dress the infant when leaving.

RATES

West Wing	per day
Adults' ward	\$4.00-\$4.50
2-bed compartment . .	4.50- 5.50
Private room, with toilet and running water . .	\$5.50-\$8.00
Private room Deluxe, with bath	\$9.00-\$12.50

New North Wing

These rooms are all modern, air conditioned, equipped with individual telephone and beautifully furnished:

2-bed compartment	\$5.50 per day
Private room with toilet and running water .	\$7.00 to \$8.00 per day
Corner room Deluxe with bath	\$9.00-\$15.00 per day

See page 9 for Children's Department rates.

See page 10 for Maternity rates.

The above rates include board and room, general nursing service, intern service, ordinary routine drugs, use of fracture apparatus, and special diets if necessary.

All bills are payable *promptly* at the end of each week, and the entire unpaid balance at the time the patient is discharged. A deposit at time of admission to cover estimated first week's ex-

pense will be appreciated. Any excess deposit will be refunded when patient leaves the hospital. Patient is informed on admission of the price of his accommodations, and any exceptions to above financial arrangement can be authorized only by the Social Service or Credit Departments after consultation with the Superintendent, and should be made at the time of admission.

Flat rates for tonsil and adenoid and dental extraction patients: For the convenience of patients who come in for these operations, and who will be in not to exceed 24 hours, the following rates will apply:

Children's cubicle ward—	
entire service	\$12.00
Children's 2-bed or Adults' Ward—	
entire service	\$14.00

LABORATORY

A full time pathologist, Dr. A. G. Foord, is in charge. Each patient admitted is charged \$3.00 for pathological laboratory service—a charge of \$5.00 is made in the case of major operations which covers the cost of gross and microscopic examinations of tissues removed. This laboratory fee covers entrance examinations and any additional routine work necessary during the stay in the hospital provided the amount of laboratory work is not out of the ordinary and does not exceed \$15.00. If work in excess of this amount is required, a charge of one-third of the regular laboratory fees will be made. Laboratory tests for outside hospital patients are charged for at prevailing rates.

X-RAY

Dr. John F. Chapman, a full-time roentgenologist, is in charge. Two new shock-proof units, with all the latest improvements, have been recently provided for this department. Rates in accordance with the prevailing charges are made for both hospital and outside patients. The latest in modern equipment is provided for deep therapy treatments.

OPERATING ROOM SERVICE

Major operations \$10.00 to \$16.00

This covers 1½ hours service. Additional charge of \$1.50 for each ¼ hour or fraction thereof.

Minor operations \$6.00 to \$7.50

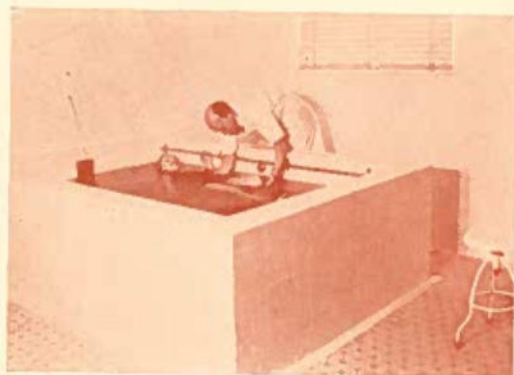
This covers 1½ hours service. Additional charge of \$1.25 for each ¼ hour or fraction thereof.

An extra charge of \$5.00 for major and \$3.00 for minor work will be made for all cases operated from 7 P. M. to 8 A. M. This charge applies also to all operations performed on Sundays and holidays.

The surgery charge includes services of nurses and interns and the complete sterile set-up, the use of sterilized instruments as well as of necessary rubber gloves, laparotomy sheets, sponges, dressings, an ordinary amount of surgical sutures and all the other many essentials which go to make for the best possible service to the surgeon in the surgery.

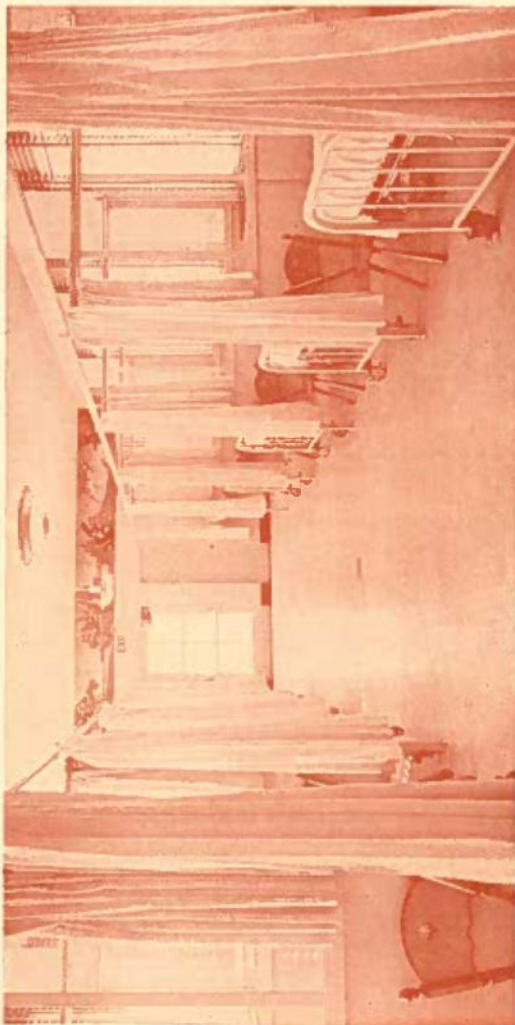
ANAESTHETIC

Your anaesthetic fee does not appear on the hospital bill and arrangements should be made with your doctor with reference to it. When ether or gas is furnished by the hospital a charge is made for material used.



PHYSICAL THERAPY DEPARTMENT

This department was rebuilt in 1938 and is unusually well equipped, offering treatments in ultra violet light, short wave diathermy, massage and the various forms of hydrotherapy. There is a pool for the treatment of infantile paralysis patients and also a mechanical lung. The hospital has a Burdick suction pressure unit for the treatment of peripheral circulatory disturbances. Treatments at current rates are given in this department for both inpatients and outside patients. All treatments are given under the direction of the physician. Capable technicians, who have been licensed by the National Board, are in attendance.



A WARD IN THE CHILDREN'S DEPARTMENT

CHILDREN'S DEPARTMENT

A new and modern building houses this important department. The rooms and cubicle ward are attractively furnished. Spacious gardens are provided where convalescing children may have the full benefit of sunlight and air.

Visiting hours: 3-4 P. M. and 7-7:30 P. M.

Visitors will please see the nurse in charge before entering.

Patients are not to be handled or given food or toys without the approval of the nurse.

Rates in this department are:

	<i>per day</i>
Cubicle ward	\$4.00
2-bed compartment	5.00
Private rooms	\$6.00 to 7.00

DIETARY DEPARTMENT

This important department is under the supervision of Elizabeth Gibson, B.S. Patients are given the best in food service. Daily menus are given from which the patient may choose food to his liking, under the supervision of the physician and dietitian.

Special Outpatient Dietary Service: Patients physically able may now receive, under supervision of their physician, special diet service for diabetes, reducing diets, etc., without remaining in the hospital. A special dining room is provided for this purpose.

Special guest trays are \$1.00 and request for same must be made well in advance of mealtime.

MATERNITY

	<i>per day</i>
Wards	\$ 4.00
2-Bed Compartments .	\$5.00 to 5.50
Private rooms . . .	5.50 to 10.00

The daily room rate is effective on admission. If, because of heavy patronage the quarters desired are not available, the patient is requested to occupy the accommodations available at scheduled rate until the desired room or ward is vacated. A charge of \$30.00 will be made each patient which includes use of the labor room, delivery room, nursery clothing, care of the infant for a period of from ten to fourteen days, ordinary laboratory fees and the necessary supplies for a normal delivery. This does not cover special prescriptions. An additional charge of \$3.50 is made in case of circumcision. If gas anaesthetic is desired, a charge of \$5.00 will be made. If delivery is by caesarean an additional charge of \$6.00 is made. If for any reason it is desired to leave the infant longer than 14 days, a charge of \$3.00 per day will be made.

IDENTIFICATION OF INFANT

At the time of birth, before the baby leaves the mother's side, a letter bead wristlet bearing the mother's name is placed about the wrist of the baby. The baby's footprints and the mother's finger prints are recorded. The baby's crib is marked with a tag bearing the mother's name.

RESIDENT MEDICAL STAFF

In the absence of your own physician from the hospital a corp of interns and a licensed physician are maintained to serve you in any emergency without extra charge.

SOCIAL WELFARE

A Social Worker, Mrs. Elizabeth Flickwir, R.N., is employed by the hospital. If your finances will not permit your having all of the needed hospital services, a frank statement of the facts should be made to Mrs. Flickwir or her representative. Thoughtful friends have made it possible for us to give assistance when urgently needed.

SPECIAL NURSES

Special nurses when called are employed for and by the patient and the hospital assumes no responsibility for their work. Their fees, usually \$6.00 per 8 hour day, are paid direct by the patient to the nurse.

VISITING

1. Visiting hours for adult patients not in critical condition in wards and semi-private rooms, 2 to 4 and 7 to 8:30 P. M. Every consideration should be extended the sick. *Visits, except for the immediate family, should be a few minutes only in length and the number of visitors at one time should not exceed two.*

2. In private rooms, 10 A. M. to 8:30 P. M., subject to the doctor's orders and the patient's

condition. In the Maternity Department, no visitors except the immediate family are allowed for the first 5 days. Visiting in the evening is limited to the husband or the patient's nearest relative and from 7 to 8 P. M. only.

3. Hours of visiting will be especially arranged for patients in critical condition. The orders of the physician and nurse in charge must be respected.

4. Visitors will please not bring food or drinks to a patient without first obtaining permission from the attending physician or supervising nurse.

5. Visiting children under 14 years of age are not permitted in the Maternity Department. Visiting in the nursery or in patient's room when baby is present, is not permitted. This rule is necessary to prevent transmission of infection to the newborn.

6. May we suggest that too many flowers in a room are not for the patient's best interest? Why not an occasional gift of a magazine, or a book, or as is the custom in some hospitals ask the patient to be your guest for a day, paying for one day's service at the cashier's desk?

PERSONAL BELONGINGS

While every reasonable care will be exercised by our nurses, the hospital is not responsible for the personal belongings of patients or visitors. Private lockers are provided in each room for clothing. Money, jewelry and other valuables may be deposited in the Business Office and receipt obtained.

PHARMACY

A regular drug store is maintained on the first floor of the north wing of the hospital. Licensed pharmacists are in charge. Reasonable rates prevail.

COFFEE SHOP

For the convenience of friends, physicians and nurses, a soda fountain and lunch counter is maintained near the Main Office. Here one may obtain soft drinks, ice-cream, candies, hot or cold meals, cigars, and magazines.

TELEPHONE SERVICE

Private rooms have telephone connection. Incoming calls are free. Local outgoing calls 5c. There is a public telephone pay station on each floor from which local and long distance calls may be made.

RADIOS

Radios must be operated with consideration for other patients. Permission to install a radio should be obtained from the head nurse. When using the radio, *patients will please operate at a low tone and see that their room door into the corridor is closed.*

TRANSPORTATION

Taxicabs or ambulance may be ordered if desired through the Information Department at the Main Office.

It is our desire to give every patient courteous and efficient service. We want your visit to our hospital to add to your health and happiness. Any inattention or discourtesy on the part of anyone in the service of the hospital should be reported to the superintendent, who will appreciate receiving such report promptly in order to correct any deficiency and keep the service at highest standard. Please do not tip.

ENDOWMENTS AND GIFTS

We appreciate the opportunity to serve. Endowments for charity beds, gifts for welfare work or funds for special equipment, are gratefully received. Information regarding arrangements may be secured from the Superintendent.

WHY YOU SHOULD SELECT AN APPROVED HOSPITAL

Hospitals are not licensed from the standpoint of minimum scientific service. It is unfortunate that the public is not aware that many so-called hospitals are a real hazard with entire lack of facilities for emergencies. Make sure that the hospital you select is approved by the following organizations:

Approved by the American College of Surgeons.

Accredited by the American Medical Association.

A member of the American Hospital Association.

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CORRESPONDENCE CHARGED

TO FILE OF CASE

We all stirred up again. He is a fascinating writer.

We are stuffing ourselves with good old N.E. sea food. Plenty of cream (no curdling) so we make our own butter **NAME** with an egg beater. But shy on sugar. Got any lying round loose you want to give away?

SUBJECT Our friends are passing us along from place to place. Chester (Alice's brother) drove us from Spfd to

REFERENCE NO. Portland where we spent a day or two with Caroline. Then she drove us on here. And Dave Woodbury will take us back to Spfd. Flanders gave me the use of one of his cars while there. We leave Spfd (VT) for Spfd (Mass)

DATE Aug 5th and get a compartment straight through to Pasadena.

Just dug up my diary of the Fiata-Juigler Expedition. Think it more interesting reading than "Biotic Fever" which you peddled among so many publishers in N.Y. - ^{some} ~~many~~ years ago.

So long

Doc Van Potah

Interesting!

Amr

Cranford June 26 46

Dear Russell:

I've been leaving you alone and in peace, knowing you are back in the old home town having fun.

Did you get your degree, and wasn't it D.Sc. instead of "D.S."?

Yep. The citation says "Doctor of Science". But one of the Cal Tech profs says D.S. means "Dental Surgery".

Where you staying?

Just now at Port Clyde. Leave here the 19th with the Woodburys (Dave) for Springfield. Address there is Hartness House.

Expect to be at the regular Stellafane meeting. See you then. Sorry can't see more of you. I am here, but will get off in a corner somewhere and chew the fat. Heard lately if Amos is coming?

How is Alice making out with her back after the trip? Better than I had expected.

And how are you? Tolerable. Bout the same. Just about holding my own.

Andeh

Well, that was great doings at Norwich. Two others got degrees - one of em Eisenhower - Doctor of Military Science. These honorary degrees make us automatically alumni. Flanders gave the groom (me) away calling me the Leonardo da Vinci - damn him. Had a short chat with the ~~xxxxx~~ General. There were three or four xx, xxx and xxxxx in the crowd. Eisenhower is a remarkable man, no trace of the ordeal he has gone through - affable, approachable, nothing high hat about him. How he kept the allies from scrapping is a wonder. We owe him a deep debt of gratitude.

Ralph Flanders has thrown his hat in the ring again to run for the U.S. Senate. Many tell me his chance is poor. No farmer knows who Flanders is.

Indications were when I left Springfield that the Stellafane attendance will be high - that all reservations within a radius (pen out of ink) of 50 miles ^{are taken}. That Soc. Jack Lovely is trying to get stop overs at private homes.

Vilhjalmur Stefansson came down to see me at Spfd. Just sent me his last book - Unsolved Arctic Mysteries - Got

Didn't drop my sweater board for there wasn't any

Candidates for Junior Cadet Diplomas

John Allen Albree	Robert William Hayes
Charles Riford Boyce	John Augustus Hutchins, Jr.
George Thomas Chapin	Morton Barry Levine
Philip Irwin Dana	Harold Merrill Owen
Donald Lovell Dutson	Ernest James Pozzi
Hamilton Bryant Edwards	Jacob Richardson, Jr.
Thomas Howell Gilliam III	Kenneth Francis Roveto
Howard Donald Hartman	Norman Dion Schwartz
Robert Ames Shailer	

Candidates for the Degree Bachelor of Arts

Roger William Cooper
Joseph Henry Gest Hinkle
Joseph Vincent DeLuca as of the Class of 1944
John Walter Howley as of the Class of 1944
Wallace Ashley Wright as of the Class of 1940

Candidates for Honorary Degrees

Benjamin Parry	Master of Science
Russell William Porter ^S	Doctor of Science
William David Hassett	Doctor of Letters
Leonard Fish Wing, deceased (Diploma received by Mrs. Wing)	Master of Military Science <i>Posthumous.</i>
Dwight David Eisenhower	Doctor of Military Science

1819

1946

NORWICH UNIVERSITY

THE ONE HUNDRED TWENTY-SEVENTH

COMMENCEMENT

SUNDAY, JUNE NINTH

NINETEEN HUNDRED FORTY-SIX

*They say he wrote speeches for
F.D.R. and Truman.*

Mr. and Mrs.

P R O G R A M

Morning

9:30	Greeting the Guests of Honor	Dewey Hall
9:45	Academic Procession Colonel Frank Tompkins, Marshal	
10:00	Graduation Exercises of the Classes of 1946	Armory
	Invocation	Chaplain James B. Sargent
	Greetings	President Homer L. Dodge
	Congregational Singing	"America the Beautiful"
	Address	General of the Army Dwight D. Eisenhower Chief of Staff, United States Army Introduced by Congressman Charles A. Plumley, Class of 1896
	Announcements	
	Presentation of Diplomas to the Graduates of the Junior Cadet Corps	
	Conferring of Degrees in Course on Graduates of the Class of 1946	
	Congregational Singing	"Our God, Our Help"
	Conferring of Honorary Degrees	
	Congregational Singing	"Norwich Forever"
	Benediction	Chaplain Sargent
	<i>Guests are requested to remain in their places until the Cadet Corps and Student Body have marched out.</i>	

12:00 Noon Commencement Luncheon White Hall
(Admission by ticket)

Afternoon

2:00	Annual Meeting of Epsilon Tau Sigma	Trophy Room
2:00	Meeting of Former Members of Skull and Swords	Dewey Hall
2:30	Social and Business Meetings of the Fraternities (as may be arranged)	Fraternity Houses
3:00 to 5:00	Open House	President's Home

"AMERICA THE BEAUTIFUL"

O beautiful for spacious skies, For amber waves of grain,
For purple mountain majesties Above the fruited plain!
America! America! God shed His grace on thee,
And crown thy good with brotherhood From sea to shining sea.

O beautiful for pilgrim feet, Whose stern, impassioned stress
A thoroughfare for freedom beat Across the wilderness!
America! America! God mend thine every flaw,
Confirm thy soul in self-control, Thy liberty in law.

O beautiful for heroes proved In liberating strife,
Who more than self their country loved, And mercy more than life!
America! America! May God thy gold refine,
To all success be nobleness, And every gain divine.

O beautiful for patriot dream That sees beyond the years
Thine alabaster cities gleam, Undimmed by human tears!
America! America! God shed His grace on thee,
And crown thy good with brotherhood From sea to shining sea.

"OUR GOD, OUR HELP"

1. Our God, our help in ages past,
Our hope for years to come,
Our shelter from the stormy blast,
And our eternal home.
2. Under the shadow of thy throne
Thy saints have dwelt secure;
Sufficient is thine arm alone,
And our defense is sure.
3. Before the hills in order stood,
Or earth received her frame,
From everlasting thou art God,
To endless years the same.
4. O God, our help in ages past,
Our hope for years to come,
Be thou our guard while life shall last,
And our eternal home.

"NORWICH FOREVER"

Norwich forever, queen of the hills,
When far from thee, still memory thrills recalling
Scenes and old friendships, songs and old cheers,
Memories that fade not through the changing years.

Norwich forever, through rain and shine,
Sunset and dawning, still we are thine and in
Defeat or in victory we shall acclaim
Thy dauntless spirit and thy deathless name.

Norwich forever, hail, hail to thee,
Bright is thy glory, won in the long years, and we
Pledge thee our future, thee to adore
Till in the skies the stars shall burn no more.

Home - Sunday - Nov 3rd - 46 - Dear But. Well,
I've been sick. As our dear chf Everett Redfield said when
under the weather "I'm let down". It was a damn
bad cold and it's kept me in bed for over two weeks. Not
over it yet, but mostly. Must be I'm gettin old - can't
react to illness the way I used to. Even two hours over
on the campus and I'm glad to get into my nightgown and
hop into bed. To show you how low I've fallen, I
spend most of my time on jig saw puzzles! Always thought
that addiction was the sign of a moron. Must have
bought dozens of one. Then too, I'm hard up for something
to read. After the news headlines - Time - News Week -
N.Y. Post and Colliers' The stuff Alice gets from a nearby
lending library is nothing but trash. As a last
resort I got down old Beethoven's symphonies, quartettes and
piano sonatas.

Scarlott is to hold fourth in Pittsburgh on Porter's
Day! and has asked me for a lot of my criminal record.

Say - wait you be glad to know I'm having my
teeth yanked out? Two out last week, two more this
week (celebrating election day), and two more later.
But it's hard on me in that torture chamber. X rays tell
the torturer that he can save the lowers.

Alice is improving daily. How's yourself? Love
to Frances from us both. Karnak done at last?

Bad! Good! (P)

1946
Oct

Oct 23^d - Home (in bed) - Dear Bert. Damn this cold anyway. I've been a week in bed trying to shake it off. But I'm on the up grade now and been over to the campus couple of times. Guess the sulfur drug did some good.

You ought to be tough as nails by now, wrestling with those hundred pound rocks - Yes, I even envy you doing it. Me - I have just enough energy to dress, shave and drive my car two blocks.

I've written the Pittsburgh crowd (McCalla) suggesting that they take the convention load off the Springfield crowd next year. He replied favorably said he'd take it with their gang at their next meeting. Your hanger on Weertman (who makes fiddles) sent me some nice Kodachromes he took at Stellafane. There's a good one of you in it.

Yes, Amos has recently told me of his physical troubles. I hope he gets back to normal.

Watcher going to do on Porter's Day - get drunk? Please write Truman to adjourn Congress on that day.

Just finished my thirteenth sun clock. Have another cooking. Send me a photo of the finished Karnak. God. Aint I feeling my age.



46 Nov 11
I'm feeling just dandy now. It was that cold
got me down. As the cold finally wore itself
out my hours puttering in the shop slowly increased
from one to five hours ^{daily}. I'm really feeling much
better than when east last summer.

Flanders' address is now Room 311, 508
(Senate Office Building), Washington D.C. - should
you ever have occasion to ask him for a hand out.
He even might pull the strings to make you postmaster
or dog catcher of Cranford. I wonder if that SOB
(above) is what the inmates call each other.

Just finishing Porter's twelfth - and last (?)
gun clock. I also have actually made a small
speed lathe for turning out small stuff - eye piece
adapters - small lens caps. (male & female) - etc.

This is the longest stretch of just playing, I've had
for years.

Alice just finished painting all of the kitchen -
walls, trim and ceiling. Good girl.

Interesting talk at last 100th Shot Club by
Victor Weber on particle acceleration - mostly historical.
Synchrotron - betatron and synchrotron. He thinks the
future development on speeding up particles (parts of
the nucleus) will be of the linear (straight path) type

(P)

decided, at Glenora, to shut up about Porter Day, recalling your reaction at Springfield. And now you are writing pretty little inspirational sermons on it for Leo and The Sky. I have decided you have worked around now to liking Porter Day very much!! And my leaving mention of it out of Sci Am (too late) will look to readers of Sky as if I wasn't very much in favor of Porter. Somebody has been workin' on yuh to make you change your mind and eat up Porter's Day. I suspect Alice done it. Yet I recall it was distasteful to you. I figure you decided to make a virtue of necessity, since you were unable to veto it, and make your pretty bow as if you were lapping it up. That would be the correct thing; veto it or play you like it.

See back of blue sheet.

what ailed us. For there is no use whining around James, if all they wanted was to "get" us, they could have done that 6 months ago-- no, the probable fault was ours -- and so it apparently has proved, as you'll see later; also no major harm was done, as you'll also see later. It's damn tough on the poor guys whose prisms were involved, but I believe they'll come to the time, later, when they chuckle and say, "Remember the time we got a little kick in the pants and stood in the corner; and we thought the world had come to an end? Hell, that wasn't nuthin."

Ol Man Ferson always has sorta grinned at some of gang's tryna set him up on a high pedestal; he's good but he isn't perfect -- yet. Well, I was worried as hell, counta I had in the last offsets spoken of him as the old maestro, and the next thing I knew, he too had some prisms sent back to be fried over -- that's three! I asked him what about keepin this sorta quiet and he replied, "OK to tellem, about the prisms." And he wrote this: "I find mine should have been rejected." That's takin it on the chin. I thought of his statement in the March 12 offsets: "Some will make the grade on the first shot but will be likely to get some setbacks later. Of these some will quit and others will take the setbacks at their worth and fight it out."

Dec 30 46

No, I haven't changed my sentiments on this fools idea of a "Porter Day". Not one bit. But Scaulon was evidently put on the spot, and had to say something about Porters background. So what else could I do but give him a digest. The wife still sees the funny side to it. Scaulon said theres a new generation now of mirror makers who want to know how it all started - and grew. and he's quite right. When our trails first crossed in N.Y. it was most twenty five years ago! - when you inadvertently struck that thumb of yours between the leaves of a magazine carrying an article of mine. In my letter to Scaulon I gave most of the credit to the success of the movement to you. I can only hope that Raible will not innumble the audience to sleep.

How are the teeth now? All out yet?

No - 4 out and three to go. I'll be a toothless d hog middle of next month. Fine thing to celebrate one's birthday.

I am just a few days ahead of you. They took out mine by twos threes, fives, threes, twos and finally one. I's done now, all out but 7 which I am to keep (7 lowers). I still have to have permanent teeth made. Am eating now on a very loose temporary full upper plate plus 7 teeth lower.

Have new ones New^rears.

Heel - I'm eating with only my gums



Simpson like
this to date.

What dentures are they giving you in place of these?

(None)

I don't believe I am normal. I don't have much pain from pulled teeth. The pulling is as free from feeling as when you pull a nail out of a plank, and the effect after the novocaine wears off lasts, with me, a few hours of only mild growling and ends if I take a nap. This is all due to my head being solid concrete.

(This drew a good howl from Alice.)

I find this subject (prosthodontics, ahem!) very fascinating.

Oh yeah? can't say as I do. more revolting to me

(over)

(P)

Je 46

Dear Russell:

Just another batch. Found an old letter that may interest you. May throw a little new light on Lassell source of your mounting. Not source but anticipation, I mean, rather. No word yet from the English astronomer you wrote to?

If its Alice's letter you refer to, I see no reference to it. No, haven't heard from Spencer Jones yet. Perhaps his high battery me.

Amos was here about 30 hours. We mainly chewed the fat. He looks good. I believe he will succeed at optics. Doing all I can to help spread his rep.

Been having my teeth out and false teeth in. Long siege of it. Not nice. Thus far, have upper full plate in and, after 5 days, it seems less like a bushel basket shoved in my trap than it did at first. Pretty soon have to have lower teeth (except six front) pulled and a partial denture slapped in there, also. I believe you went through this before leaving Springfield and have never heard you mention teeth since. Though it seems a hell of a thing to have them, I know that millions have got used to them so know I can.

The modern way is to haul em out one minute and slap in an immediate denture the next (literally true). I thought this would be painful but found not so.

Saves you going around "a-gummin it" for some weeks, half hiding.

They josh me about my degree on the campus. one said D.S. meant dental surgery - Another said they left out a C - Doctor of Christian Science.

Sorry I am not to see much of you on your trip but understand situation.

Yes, too bad

Suppose this picture you drew of machine in your cellar will now lie till next autumn some time. Have it in my "abeyance" file.

Dame.

How yuh feelin, now that you have got a little rest? How's Alice now? Hope she is through with the worst of "plumbago." I enclose a sure cure.

Sincerely

Tolable. Tolable but I'm sure growing old. Feel it in my bones. Say, I'll see the Chief at Norwich. The Esenhouse is to give the commencement address. Hot Day!

CORRESPONDENCE CHARGED

TO FILE OF CASE

New X rays of Alice's back show no change over those taken a year or so ago. That vertebra is still displaced.

NAME

We leave Monday - only two days away - and

SUBJECT

Head straight for Norwich via Boston

Spends the night of June 7th at the Statler Hotel

REFERENCE NO. there

Plan to leave Spfld. Aug 5th right after Conventions

Aug 3-4. Have reservations on the Chief (Santa Fe) from Chicago, but not yet on the N.Y.C.

DATE

Jim bringing a lot of prints of drawings made during the war which I wangled out of CIT, also electronic photos of rouge and polished glass that will make your eyes pop out.

Jim Stokely (q.e. Schenectady) wants me to broadcast for them, but transportation difficulties are all against. He said Dave Woodbury had just dropped in to see him.

Well - so long Andy. See you later

(P)

No - all I had was nausea - perspiration - and 2346
occasionally some time after a little prickling in
my fingers which slowly disappeared

My energy reserve is small. Even
bringing a pail of water up from the well
(300 feet away) brings on a constriction around
my throat. That symptom is all the
warning I need to quit exerting.

Have had one or two dizzy spells but only
momentarily.

If you want to be rancy, get about 5 little round carbide wear blocks and set them into the bottom of each gag block and into the bottom face of the angle plate. These will take the grinding wear better than the material of which the plates are made. This method uses up a little more abrasive but is so easy to get sides square with each other and to the proper dimension, and is especially adapted to small quantities. The vertical face of the angle block can also be drilled for clamping screws and a sine bar used to get any angle combinations desired on a small group of prisms ground singly.

The tit ends and small rectangular base can be ground on the angle plate by appropriate waxing.

Ice writes: "Mr. Schaad now has a machine for cutting the grooves in the polishers that works as slick as a whistle and as quick as lightning. Took a drill press, put a sliding board under it, polisher fits in hole's center and side, so that all you have to do is put the polisher in one of these holes, push it along under the drill, which is shaped to the correct angle and set to correct depth; and lo and behold, you have nice even grooves properly spaced. Saves hours of time and cleaning pitch off your hands and clothes, when you have hundreds of polishers to make."

Waste: My stingy margins represent desire to make the Kat-food go far as it can. If you fellows want em conventional size, can do -- for about 40% more \$. Conventional margins are larger than many realize. Some in Govt mimeo stuff we get here I found to occupy just 60.7% of the pages, yet on same mimeos Govt urged readers to avoid waste! Lincoln Elec Co states recent order for arc welding electrodes occupied but one sheet but was accompanied by 199 priorities, each 3 sheets, all requiring typed fill-ins, total wt 5 1/4 lbs paper. Price of electrodes \$40.90.. My tightwad ways

was enough of that life, a nightmare it was, too.

I always told you that committing life was a dog's life. You won't need to.

Today's paper says the 200th arrived safe and sound. Don't drop it

now! NY Tribune says it will take a week to deposit the coating in

the "illumination" chamber as they call it. Reporter named White.

47 Nov

Well she's there now, and Anderson can take it easy for a while. God, Aint I glad he could stick it out - Ten years. Still, he did it in less time than the 100" mirror, which Ritchey took eleven years to finish.

(P)

SUBJECT

NAME

~~Deep. He was suddenly in the doldrums. 47 Nov~~ I went on the
air 2-3 times. "Now here is Doctor Porter. Doctor Porter would you
be kind enough to tell us your reaction to this safe arrival of the
Giant Eye on Palomar" etc, etc. When I was half thawed out
some press man handed me a bottle of scotch from which I took a long, deep,
draft. And, to help me, it went so to my head that I haven't the
faintest idea what I said when they shoved the microwaves
into my face.

And I could be
at that, at any

bothered them yet. They will take this up when they are ready to.

So I have hopes of at last getting to California next year some time.

And so you've changed your mind, eh? Good. Come on west.

All OK here. Frances has had high blood pressure but they have made her reduce weight, wear glasses, and it is down again. I find I tire awfully easily. Can't now walk more than 5 miles, instead of 40 onct.

My weekly trip to N_v, with much running round, tired me a lot. I don't want to work there again or think they will want me to. 99 years

Rec'd
The 100² club gave me a jolt Sunday^{a.m.} at our meeting
at McMorris - Some one started his phonograph and it hadn't
played four notes before I recognized one of my opuses com-
posed twenty-odd years before ago. After I recovered and
looked around at the crowd, they were all grinning at me - a
put up job. Potapenko last summer had asked the loan of
some of my piano pieces, and it seems they got their heads
together, found a willing professional pianist, and went to
a recording studio and had two of em canned - First time
I'd ever heard em! Course, I had to get critical (looking at
a horn's teeth) - said they were played too fast and lacked the
expression I had indicated in the score, p, pp, f, ff, retardando,
accelerando, lento, etc. They said it was a Christmas
present. No idea what it cost em. But at last two of
my masterpieces have seen the light of day.

42 March

Really want to hear the piano recordings
of two of my opuses! Will send em on if you're
really interested. But be damned sure I get em back.
~~Is~~ it really true that Spenser let

Amos down? Inferred that from one of his late
letters, that those prison. he sent in were accepted

Enclosed letter is by a nephew of Uncle
John Brashers, who had such a hell of a time in
his laps in Java or Sumatra. He drops around
occasionally. Will you reply. Guess he's only a
murder.

P

Received the record. It plays perfectly. (And
you did it up correct, in box).

The allegro sounds like some of Biz
bagatelles though more mature.

I don't recognize your performance from Biz's 8th,
as I am unfamiliar with the 8th.

Anyway I like it. Well - get familiar
with it (P)

The Russian piece is very static and I like
it also - better than the other (because I am
a musical borehead, I suppose).

Francis remarked that neither of these sounds
like you, somehow: too dainty and feminine!!!

When I first visited you in 1925, at Springfield,
you showed me scores - orchestral - of a
moderato, started up on piano. But it then
meant little to me. You had sent them to
Rochester (Eastman) and they had told you (P)
something like Bruch was better. And an
orchestra had come to S and you got it to
play the scores; which revealed gaps or holes in
the composition. Was this the same movement?

oh no - That was scored for full
orchestra. They were all scared over it
and made of it a funeral dirge full of
Lolus. - No, what you have were scored
for piano and why they selected those
two out of a half dozen I can't imagine.
Harold Bauer told me after just looking
at em "No importance"

(P)

Seems you and I were at
Cranbrook. Don't recall it.
Memory must be fore.

Well - we're such
notorious characters -
celebrities - You see -
if in the Patron Saint
you're my Boswell.

(P)

W.H.MacHale
American Cyanamid
30 Rockefeller Plaza
N.Y.20, N.Y.

Astronomical Society of the Pacific

San Francisco, California

■ ■ ■

Leaflet No. 210—August, 1946

■ ■ ■

AMATEUR ASTRONOMY IN AMERICA¹

By G. BRUCE BLAIR

University of Nevada

For reasons which are not entirely clear astronomy affords a greater appeal to the general public than any other science. Many of the lower forms of life as seen in the microscope have a delicate beauty of structure and a chance of practical usefulness to mankind surpassing the forms of sunspots, the feathery outlines of the nebulae, or the majestic symmetry of the rings of Saturn, yet we find an ever increasing number who prefer to see with their own eyes the wonders of the heavens.

Amateur interest in astronomy is world wide, manifesting itself in many different ways, from the silly notions of those who would make the stars and planets responsible for their behavior, to the desire of the mechanical experts to build a perfect instrument for viewing the skies.

In America, interest in astronomy developed at a later epoch than in England and the European continent on account of the pioneer conditions prevailing in this country and the lack of scientific training and instruments. The first period of extended activity began about 1835 when a number of colleges began to make arrangements for astronomical courses of study and to provide the

¹Presented in a somewhat different form at the Reno meeting of the Astronomical Society of the Pacific, June 19, 1946. Amplified and rearranged for this Leaflet by A. H. Joy.

necessary equipment for observing. This period culminated in the founding of the Cincinnati Astronomical Society and Observatory (see Leaflet No. 208) which were the outcome of amateur support and cooperation.

A low ebb in astronomical interest followed the Civil War and little progress was made until about 1880 when the success of Warner and Swazey in building large telescopes and of the Clarks in making lenses of superior quality brought about a popular interest in astronomy which has continued until the present time. During this period the largest telescopes in the world have been built and installed, mostly through the generosity of laymen who for one reason or another were willing to give great sums of money for such activities.

A few years later at the turn of the century the successful use of the Crossley reflector at the Lick Observatory and the 24-inch reflector at the Yerkes Observatory brought hope and eager interest to the amateur who longed for a powerful telescope at moderate expense. Ritchey's description of the methods of grinding and testing mirrors and his enthusiasm for the possibilities of the reflector lent encouragement to the would-be telescope maker. Since the time of Sir William Herschel, reflectors had been made and used in England both by professionals and amateurs, but in America the refractor was given preference and few mirrors were made previous to the year 1900.

More or less formal meetings of societies have played a major role in holding the interest of those kindred spirits who have been interested in telescopes and astronomy. The Cincinnati Astronomical Society has already been mentioned.

The Astronomical Society of the Pacific was

founded in 1889 as a joint project of amateur and professional astronomers who had shortly before been thrilled by a total eclipse of the sun whose path had crossed Central California. For nearly sixty years, the common interest of the two groups has encouraged the growth of astronomical study and observation on the Pacific Coast and neighboring states through the activities of the society. The amateurs have assisted by their interest and enthusiasm as well as by their financial aid; the professional astronomers of the great observatories and the colleges have kept the standards high and contributed to astronomy through their teaching and the inspiration of their scientific accomplishments.

Similar societies for the encouragement of amateurs were founded in France, England and Canada at about the same time,—the Société Astronomique de France in 1887, the British Astronomical Association in 1890, and the Royal Astronomical Society of Canada in 1890. These societies are still flourishing and are active in providing publications, meetings, and suggestions for research programs for their members. In addition, there are in the United States 50 or more local amateur societies which have attained some degree of stability and permanence. The members of such societies usually gather at regular monthly meetings for observation, discussion, or for a lecture by some professional astronomer or scientist. The success of the society usually depends on the personality and continued enthusiasm of a few members who are willing to give time, effort, and often financial support to the organization.

The leading organizations of this type on the Pacific Coast are:

Yakima Amateur Astronomers.

Astronomical Study Group, Portland.
East Bay Astronomical Association, Oakland.
Astronomical Society of Nevada, Reno.
Los Angeles Astronomical Society.
Astronomical Society of San Diego.

For the sake of definiteness, we may divide amateur astronomers into four groups.

Group 1. Amateur Telescope Makers. This group is by far the most numerous in this country and attracts the widest variety of members, from small boys to experienced instrument makers. It is not mentioned first because it is necessarily the first step in becoming an amateur astronomer. In some cases this may be true but, unfortunately, too often the telescope builder should not be classed as an astronomer at all, but as a mechanic of lesser or greater skill, enamored of the project of building an interesting piece of machinery requiring a great deal of skill and patience. Often he remains only a telescope maker to the end. The amateur telescope makers of America form a very large group, but far too few of their products are adequately used. We know of some fine, well-designed telescopes of considerable size which are merely show pieces in the hands of their builders when they could do useful service in the hands of a real observer.

This year the members of Group 1 are holding their fourth National Convention at Cranbrook near Detroit. The conventions are largely attended by the "fans." Their patron saint is Russell W. Porter who has had experience in making and designing reflectors of all kinds from the smallest hand telescope to the 200-inch Palomar reflector. Their chief mentor is Albert G. Ingalls, the editor of "Telescopes" in the Scientific American who for years has conducted a column on telescope making

and has published the amateur telescope-makers' handbook under the title "Amateur Telescope Making." This book which is now in its fourth printing has had a remarkable reception and has guided thousands of beginners on the difficult path toward skill and accuracy in optical work together with instrument designing. Mr. Ingalls sometimes regrets that the telescopes have not been more extensively used in astronomical observation, but takes much satisfaction in the realization that through his assistance many have been encouraged to turn out a praiseworthy optical instrument and have had much real pleasure in the accomplishment.

The skill acquired by the telescope makers proved to be of great value to the government during the war when experienced opticians were badly needed for the large scale production of optical parts.

In the development of the Schmidt telescopes amateurs took a leading part, often trying out new methods and actually producing excellent instruments before the optical companies were ready to undertake their manufacture.

Group 2. Dilettante Observers. Such amateurs trundle out their telescopes occasionally to observe some unusual celestial phenomenon, or to give a glimpse of some of the heavenly bodies to their neighbors and friends. This group comprises a considerable proportion of all amateurs and it is not the intention of this paper to belittle it. Such telescope owners have "good fun" in this way and it is well worth while on that score alone.

Group 3. Interested Observers. It is a pleasure to see that a considerable number of amateurs properly belong to this group. They follow the planets in their courses both with the eye and the telescope and occasionally check on the progress of

the sunspot cycle. To them the advent of a bright comet or nova is an occasion of real interest. They are familiar with the changing book of the sky and never tire of reading it.

Group 4. Serious Observers. This is a relatively small group. Its members have definite interests and programs of observation, and are willing to give time and effort to carry them through. A number of opportunities for fruitful observation are open to serious observers having good telescopes of moderate power. We can mention only a few of the more popular programs:

- Variable stars
- Meteors
- Occultations
- Solar spots and prominences
- Comets
- Planets and moon
- Novae
- Double stars
- Celestial photography

Observers usually find it profitable to cooperate with other workers in the same field by means of the appropriate society, such as the American Association of Variable Star Observers, or the American Meteor Society. As much time as can be spared may be devoted to the program. The Variable Star Association, whose Recorder is a member of the Harvard College Observatory Staff, has been most successful. Its members have completed more than a million observations of variable stars and piled up a vast amount of data in this field which could not have been obtained by the limited number of professional astronomers.

Professional astronomers are always glad to give

assistance to serious amateur observers and to encourage the work of amateur societies. Some are members of these societies and take an active interest in their activities.

For the past six years the writer has been attempting to encourage active amateur observers by supplying them with late news of objects of current interest. Rather close contact with amateurs has resulted, both by means of correspondence and by personal contact. At first the service was planned specifically for the Pacific Coast amateurs, but has gradually extended to cover the entire United States. "Astronomical Information Sheets" have been multigraphed and mailed out to subscribers to the service at as early a date as the information could be obtained and made ready for distribution. They are prepared with the purpose of making them immediately useful to the amateur. Charts and instructions for finding and identification are given. The observer then knows what to look for and where it may be found. His interest is consequently whetted by new and up to the minute material. Solar and planetary phenomena, observable comets, extraordinary meteors and fireballs, and unusual variable stars and novae are described in such a way that they can actually be observed. Reports from the observers are welcomed. In this way the amateur is encouraged to make use of his telescope and to gain enough confidence in himself to undertake an observing program of his own.

With training acquired during the war and the leisure afforded by shorter working hours the outlook for the amateur astronomer in the future should be brighter than ever before.

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Opus 74 - Again, the opening 15 bars - the Adagio
movement - and finally the 6 variations on a simple
air - Yes, they mean a lot to me now that I have become
familiar with them, - Got so now I can open the score
and get most as much from reading it (learning it inside me
some where) as if it was being actually played.

Dear Russell:::::

Well, your ol pal Dave Woodbury has been in to see me and carried from you to me a breath of news. Sorta brings you out of the fog of distance and into clearer focus. Says you are in good health and a picture sent me by Abbott shows it. Sprry the Saintly Angel hasn't been so well. - *Much better now.*

By golly - Woodbury is a damn good writer. Read a story of his, on seismology, yesterday, prior to publishing it in Sciam as a probable pre-publication to publication in Reader's Digest, a little trick we and they often pull off. That is, they buy a story and pass it to us to run it and then they copy it back from us. He had worked this story up from the dope given him by Martel and others and it wasn't merely accurate: he has a real flair for presenting accurate pictures of answers to questions laymen often ask, in just the turn of a phrase. Mrs W brought the story in - they are bohemianizing in an attic down under Brooklyn Bridge. She seems to be a breath of optimism. - *Damn good egg.*

Woodbury also spent an hour with me last week and I hope to see him again. He asked me just how I happened to become interested in Beethoven and whether I took it from you. Well, yes and no. I had heard that you were interested but I did not at first go after Beethoven when I had my phonograph. I regarded it as way off in the clouds of advanced stuff. Instead, I started out (last May) by buying 20-odd records of single short compositions, Chppin, and MacDowell and so on. Largely what they call salon music.

After a few months I found those things became tiresome.

About August I mentioned to the man whosells redords that the cello was the instrument I liked best of all and he at once took down an album from his shelf and said "Try that." It was Beethoven, Op 69, the cello and piano sonata. I liked it and bought it and he offered me another : Opus 101, No 2, another cello-piano sonata (and not, as I know now, a very gracious one). I liked that too and with the liking for the cello tones I discovered a second liking: Beethoven's music itself.

I fixed the interview

Yes

Says he wrote a play on Beethoven

I tried more of him and bought Op 97, the Archduke Trio, my present pet.

From then on I was actively trying out Beethoven, because I saw he had something the others didn't have - or so it seemed to me. I still think so. At that time the best I could do in describing that something was to say, as I did in a note to you, that Beethoven "proceeds while others sort of fumble around." In reading Deems Taylor's book the other night I encountered the phrase I was grasping for: he puts it, "a composer of completely articulate music."

Just to show this up by contrast, I was recently picked on for having a lopsided taste, so I began putting in Saturday mornings trying out other music than Beethoven's, spending from 9 till 1 every Saturday in one of the little cells they give you. I tried systematically nearly all of Brahms, and bought four albums of it, the rest striking me as chill or bleak; also one album of Franck. Tried several modernists and got none. Well, the result of that spell of going whoring is that I have five albums of non-Beethoven music but I can't now say I enjoy it one quarter as much as Beethoven. It is good - for Brahms and Franck but on a very different scale of evaluation. I shall later (when the ducats are in pocket - that is, if) try systematically Schumann and Schubert but have little hope of finding music I had rather play than Beethoven or that I would as soon hear.

So my finding it came really through the accident of liking the cello and asking for more cello music and having Beethoven handed me.

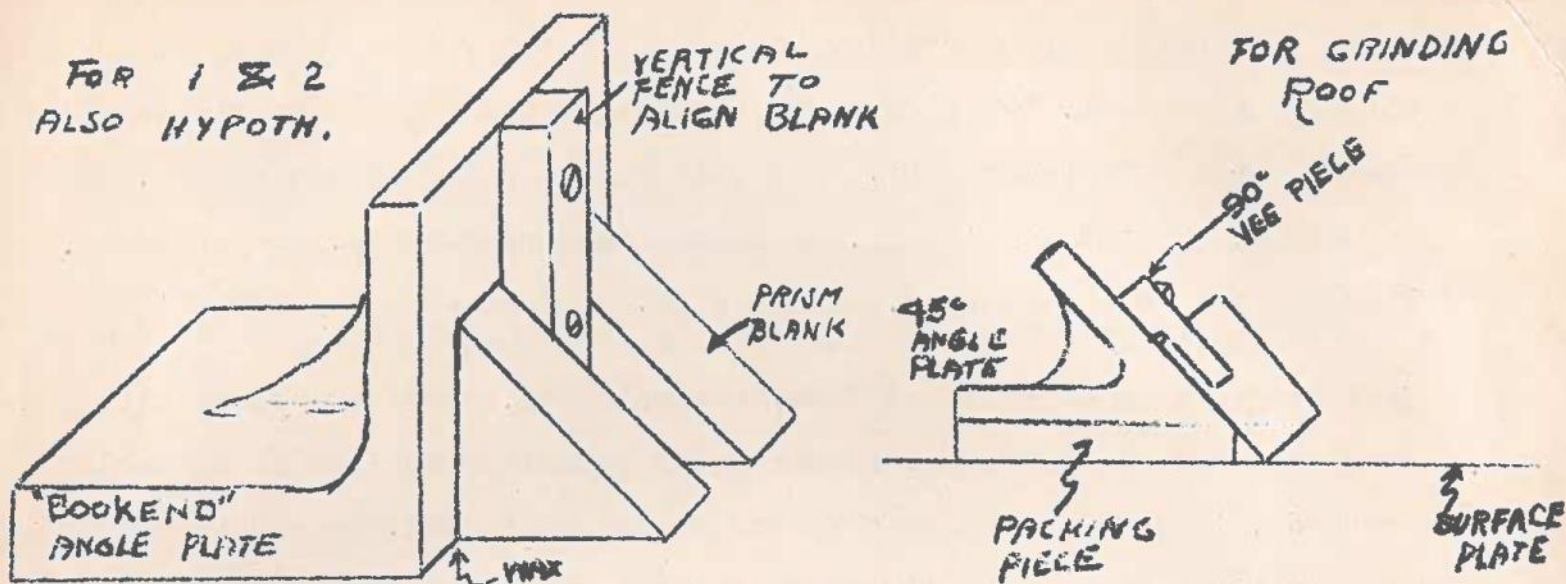
Your story on sun-clock came in fine shape and I plan to work it up with Amos' sun-clock, as one story: Of Amos and van Potah, Incopulated.

Hope you're coming east. Wanta see you - Same here.

Sincerely

Andrew Hellfried Brown
(himself)
President

You don't mention Rimsky Korsakof.
still get no kick from the
Symphonies?
Try also Smetana's "On the Walden".
Also von Weber - Goldmark - Muldusson



If you want to be fancy, get about 3 little round Carboloy wear blocks and set them into the bottom of each gag block and into the bottom face of the angle plate. These will take the grinding wear better than the material of which the plates are made. This method uses up a little more abrasive but is so easy to get sides square with each other and to the proper dimension, and is especially adapted to small quantities. The vertical face of the angle block can also be drilled for clamping screws and a sine bar used to get any angle combinations desired on a small group of prisms ground singly.

The tit ends and small rectangular base can be ground on the angle plate by appropriate waxing.

Ice writes: "Mr. Schaad now has a machine for cutting the grooves in the polishers that works as slick as a whistle and as quick as lightning. Took a drill press, put a sliding board under it, polisher fits in hole's center and side, so that all you have to do is put the polisher in one of these holes, push it along under the drill, which is shaped to the correct angle and set to correct depth; and lo and behold, you have nice even grooves properly spaced. Saves hours of time and cleaning pitch off your hands and clothes, when you have hundreds of polishers to make."

Waste: My stingy margins represent desire to make the Kat-food go far as it can. If you fellows want em conventional size, can do -- for about 40% more \$. Conventional margins are larger than many realize. Some in Govt mimeo stuff we get here I found to occupy just 60.7% of the pages, yet on same mimeos Govt urged readers to avoid waste! Lincoln Elec Co states recent order for arc welding electrodes occupied but one sheet but was accompanied by 199 priorities, each 3 sheets. all requiring typed fill-ins, total wt 5 1/4 lbs paper. Price of electrodes \$40.90. My tightwad ways are a sort of protest against things like the above. See no virtue in wastefulness just for sake of showing off.

Just received copy of A's letter to Buchele: That is, to The Modern Optical Co., which is his new alias (he has two brothers working for him now). Their salutation is now "Gentlemen," no longer mere mister, and that alone is psychology. They write: "In compliance with request contained in your letter of April 26, 1942, P.O. 42-21727, for twenty-five Amici prisms per drawing A36234, has been closed with the acceptance by Frankford Arsenal of nineteen (19) prisms. A new order for Three-Hundred (300) Amici prisms per drawing A36234, at a unit price of \$15.00, is now being prepared and will be issued within two weeks. Sufficient glass to fabricate these prisms with allowance for spoilage, will be shipped from Frankford Arsenal as soon as it is available." Thought you'd like to read the original and if he fills the 300 I bet he gets 3000. Re the \$15, orally, Dr. L. once told me that was pretty high -- they produce em for \$8 --- but they weren't trying to back out. I gathered they just wanted me to know they doing pretty well by us, but would stick by their (non-recorded) bargain.

Dope from Washington is that there have been too many A-1 priorities, issued in the field by the Army and Navy, and WPB may try to take away this privilege. Thus newer men who qualify as prism makers may not receive such high ratings as the present crop. However, a man really seldom has any actual use for the ratings at all -- we have found practicable ways to get around the difficulty in most cases.

May 46

Joan is a secretary and works for Radio Corporation, Victor Division, in the publicity department. She is able to bring home quite a lot of Victor records picked up free --leftovers etc. I just played a lot of her albums. Stuff by Prokofieff, Debussy, D'IIndy. My tastes ~~are somewhat conservative~~ are conservative; I like one van Beethoven best. Mozart also. *Same here, but don't forget Rimsky-Korsakov or Tchaikovsky - if you know who I mean.* I just played over an album of Beethoven's 6th. Reason --or main reason-- I don't care for orchestra is, so much that sounds to me like so much blare. On records, it rattles and squawks and sounds plain bad. Better in original orchestra. Even then there is too much brass and kettledrum. The violins are buried by it. All the best instruments outblared. I still prefer chamber music. A trio suits me best of all. Guess I'm sorta simpleminded.

I'm rather surprised you didn't take to the 6th. The first two movements have no percussion instruments - just pure melody - harmony - and rhythm. Of course, when it came to the Thunder Storm he just let loose on the drums and cymbals.

It was his only programmatic symphony. I love best the 7th movement "By the brook" (Scene am Bach). Furthermore Beethoven also wrote "It is left to the listener to discover the situation for himself." (P)

I've just pulled down the full score and checked up on the above. I'm writing this in bed. (P)

11 PM - I've just heard - for the first time - Beethoven's
Missa Solennis (Op 129), over which he sweated so much
blood. I'm not surprised. It took over 2 hours to run
the records through (12 discs = 24 turn over).

You know I never got much out of vocal
music (except light stuff like Sullivan), so that most of
the "Missa" at first hearing didn't click. The way
Be gave instrumental stuff catches me right off.
There was one pause near the middle where he
omitted the voices, and it was beautiful. The most
seemed to me to be fugato - two opposed motifs
constantly fighting each other.

Nov 39

Been searching for the reason
I don't take to symphonies -
that is, for the nature of the big
distinction I feel between them
and chamber music. Have it
at last - Frances suggested it.
She says the symphonies are
"majestic but not intimate."
Yes that's about it. Like some
great dignitary or intellectual -
you respect but don't feel
comfortable with. Previous to
her suggesting that the closest I
could come to the feeling was
that with a symphony I feel
the sense of impersonal, also
ponderosity - heavy momentum etc

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I think both Frances and You are
wrong. There are just as many in-
timate and quiet passages in *Upsilon*phonics
as the more grandiose parts - fails to suit each
other's. Go into your stone and listen to,
the Pastoral, No. 6, (P)

Philharmonic-Symphony Orchestra
of New York, conducted by John
Barbirolli in an all-Tchaikovsky
concert; Nathan Milstein, violinist;
is the soloist and Deems Taylor is
the commentator: WABC, 3-5 P. M.
Suite for Strings, "Souvenir de Florence"
Concerto for Violin and Orchestra, in D
major, Op. 35; Symphony No. 5 in E
minor, Op. 64.

There at last is
something of Tschai-
Kowsky's I can
cheer for - especially
the third movement.
Very melodious. Not
great but most
appealing. Sweet

Adagio is
fine stuff.
Light but
melodious.
Sweet

Like to listen to this man.
Talks like a human being -
not like these asinine announcers.

Not always sure whether the soloist
is playing or tuning his fiddle.
Even so, it's appealing as a whole

Guess I got wrong slant on
your Tschaikowski. When you
recommended him it
was Xmas and they
said no such music
as these selections,
but mainly his
Nutcracker Suite
(till my nut cracked).
Well now I've listened
to him 2 hours
straight and can
aprox with you
(aint = to Berth over!)

HARRY HERSH
3014 RICHMOND TERR
MARINERS HARBOR S 1 N Y
D 1251
2-JULY/36

Read Deems Taylor's
"Of Men and Music"
I have it here - Pretty
good tho he seems to take
B for granted - says little
about him. (P)

Arturo Toscanini directs the NBC Symphony Orchestra in the first concert of a six-week Beethoven festival during which all the composer's nine symphonies as well as many of his overtures and other major orchestral works will be played: WJZ, 10-11:30 P. M.

Symphony No. 3, "Eroica," in E flat Major; Symphony No. 1 in C Major.

I assume you're listening to these on national hook-up.
First time I ever heard 1+3.
One is awfully empty stuff.
~~About~~ like village band music
Three is better but I can't get very excited over it.

Mixed 1 and 3 (Tho
Anderson warned me in
advance, but the absent
minded professor did get
2 and four. 5 and six
come Saturday.

You poor, dumb thing
(over) (P)

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A
7-6/32

3, The so called Heroica is universally
conceded to be the finest piece of
symphonic instrumentation ever
written.

Oh Bert, don't pass it by so
easily - Plenty of time - plenty of time
P

I still can't do
out just what ol
Rube Goldberg has
got here.

No importance



as Harald Bauer told me
after glancing at some
of my compositions. 20 years
ago.

Think I've improved a
little since then.

VAN DER DECKER, GEORGE

12/12/38

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ESSEX COUNTY, N.J.

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February 17, 1939

Yes - they all say it was lucky for posterity that
B was deaf, which, along with his haggling with
the English prevented his going to London - contributed
to produce his last works - particularly the last
quantities.

(P)