

HOW WE KNOW PRECISELY WHEN IT IS NOON

UNCLE SAM'S BIG TIME FACTORY AND MOST ACCURATE CLOCK IN THE WORLD

WASHINGTON, May 2.—(Special Correspondence.)—I spent yesterday at Uncle Sam's big white time factory, on Observatory Hill. I there saw the time manufacturers turn out the hour of noon for the common use of all inhabitants of the United States east of the Rockies. At the Mare Island Navy-Yard, San Francisco, Uncle Sam maintains a secondary time factory, which grinds out the noon of the Pacific Coast states. I am told that any description of the Washington establishment will apply to the methods of that located across the Continent.

Uncle Sam manufactures no other hour except noon, eastern time. His automatic time machine throbs this as far as the Rockies daily. It arrives in the central time belt at 11 A. M., the mountain time belt at 10 A. M. In these belts it is bottled, so to speak, for one and two hours, respectively, after which it is let loose.

I had an interesting interview with the man who acts as Father Time for Uncle Sam. He is neither white-headed nor bald-headed, after the fashion of the mythical Father Time of the New Year pictorial sheets. He is young and in the prime of manhood. His hair glass is one of the most wonderfully regulated clock systems in the world, and his clock, with which he cuts each day in twain, is an electric spark. This real Father Time is Lieutenant Commander Everett Hayden, U. S. N.

Time-Making a Fine Art.
Time-making is, indeed, a fine art, as accomplished at this Government factory. Before being turned out as the finished product the official noonday passes through as many different processes as does any watch which endeavors to record it.

The raw material is the very heaven's canopy of stars. It is from these lesser celestial lights—not the sun—that we get our best seconds, minutes, hours, days, years, centuries.

The first step in time-making is accomplished within a white iron barn which stands in the foreground as we approach the great domed observatory building. By the turning of a series of cranks, opening slits up and down two sides and across the roof, this little barn can be sliced in half just as neatly as if sawed by some ogre. Directly beneath the slit in the roof runs a miniature railroad track, upon which rolls a comfortable, leather-covered couch on wheels, lying upon this and looking out through the narrow opening continued through the walls and ceiling, you can trace the complete path of the meridian line, which, passing through the zenith of the heavens, connects the north and south poles. In other words, this slit in the little white barn is as it would be if cut by a giant blade directed north and south and descending exactly through the center of the building. Every part of the heavens which you can view from the rolling couch through this slit is either north or south.

Beneath the middle of the slit is mounted a brass telescope, pivoted in the center and directed so that it commands a view of any star passing the meridian line. Across the object-glass are stretched, up and down, eleven pieces of spider web. Any star which appears to cross the central spider web, actually crosses the meridian. The observer, Mr. E. A. Boeger—who has charge of the first stage of the time-making—illustrated to me how, with a telescope key in his hand, he records the time a selected star passes each of the eleven webs. Afterwards he figures out the mean of the total time, and thus, with the very maximum of accuracy, determines the exact time of transit across the central web. His electric key connects by wire with a quartz sort of clock, whose dial is a revolving cylinder of paper and whose throbbing second hand is a fountain pen. The regular throbs of the pen mark seconds in saw-tooth hitches upon the

SCENES IN AND ABOUT THE TIME OBSERVATORY AT THE NATIONAL CAPITAL

NAVAL OBSERVATORY—UNCLE SAM'S BIG TIME FACTORY.

SENDING THE NOON SIGNAL.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

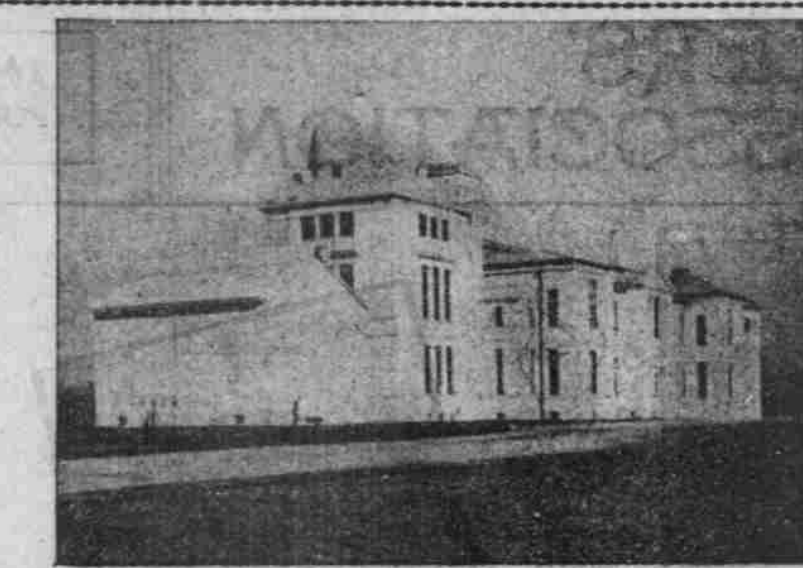
QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

READING TIME FROM STARS.

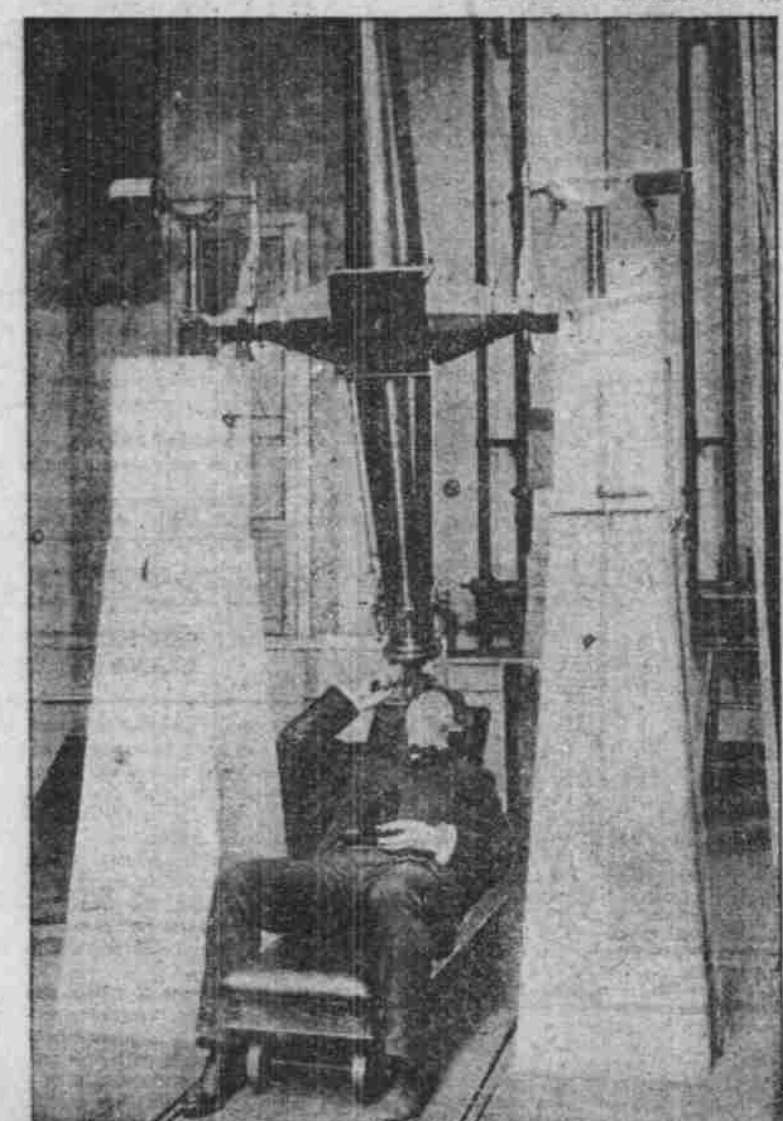
QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.



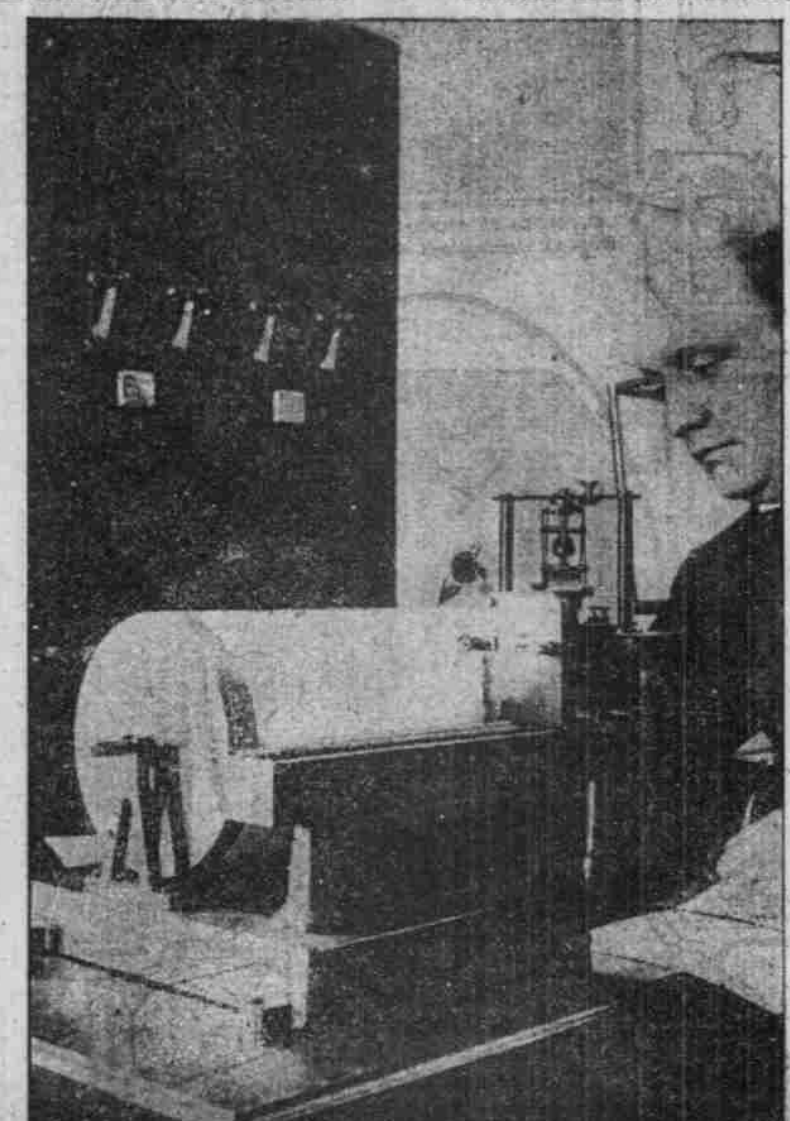
NAVAL OBSERVATORY—UNCLE SAM'S BIG TIME FACTORY.



SENDING THE NOON SIGNAL.



READING TIME FROM STARS.



QUEER CLOCK WHICH WRITES RECORDS WITH A FOUNTAIN PEN.

paper. Each pressure of the telegraph key—no matter how far distant—hitches with a fine. A delicate scale determines how many fractions of a second this line may be from the hour mark. This first step in time-making is accom-

plished at night. Three nights a week Mr. Boeger lies upon the rolling couch, with his eye to the little telescope and his finger upon the electric key. He has before him the nautical almanac, a never failing time-table, which tells to the exact fraction of a second when certain

stars are due to cross the meridian each day. These almanacs have been observed by astronomers from all parts of the world thousands of times from the days of Ptolemy, down to the present. Close by the observer stands a large clock which keeps the time of day stars,

in what are known as sidereal seconds, minutes and hours. It is this clock which is connected with the other time-keeper recording seconds in pen-strokes. The mark of the electric key in the observer's hand shows the error of the big clock keeping the time of the stars. The day

counted by the star clock is the actual time required by the earth in making one complete turn on its axis. This day—the sidereal day—is 23 hours, 56 minutes and 5 seconds long, and is therefore 4 minutes and 5 seconds shorter than our ordinary day of 24 hours even.

The sidereal star clock having been corrected the next step in the conversion of exact sidereal time into mean solar time, such as we use for every-day purposes. While the sidereal day represents the invariable time required by the earth in making one revolution on its axis, a solar day varies in length from day to day by reason of the changing motion of the earth on its orbit. The mean solar day, therefore, is the average or mean of all solar days in the year—in other words, our 24-hour day.

The Standard Clocks.
The next step calls our attention to the "time room" in the main observatory building. At one end stand two large "standard clocks" ticking mean solar time. One of these does actual duty, the other being reserved to serve as alternate, in case of misadventure. In fact, every clock in the Government time factory has its deputy. These standard clocks are mounted upon heavy stone piers free from the floor and imbedded deep in the ground. They are mounted so that the vibrations of vibration from the observatory. Last the merest change of temperature in the surrounding rooms might disturb these clocks' pendulums by the imperceptible expansion or contraction of these piers, the latter are covered with cotton batting—a non-conductor of heat. The standard clock in use is always theoretically correct, error, by the sidereal clock is always known. To detect this error, it and the sidereal clock are both connected in circuit with the chronograph—which is the scientific name for the queer instrument which marks seconds with a fountain pen.

The Transmuting Clock.
Opposite the standard clock stands, with a deputy beside it, what is known as the transmuting clock. Commander Hayden cares not a jot whether this is telling the truth 33½ hours out of the day. During the remaining half-hour its veracity is striven for as truth and precision were never sought before. At 11:59 A. M. daily this transmuting clock is corrected within two-thousandths of a second. From then until now, by aid of the chronograph, its beats are watched, and if they do not prove up to the standard they are accelerated or retarded by gentle jolts of the pendulum.

The transmuting clock has connections with six systems of wires, amounting in length to nearly 50,000 miles. Two are with the Western Union Telegraph Company, one with the Postal Telegraph Company, another with the Government departments, another with time balls in various cities, and the sixth with the offices of the observatory building. Through these wires it automatically, at Eastern time noon, each day, sends the time which connects all of the millions of clocks and watches east of the Rockies. Daily, at 3½ minutes before 12, the telegraph companies shut off all business, and Commander Hayden takes his station before a switchboard adjacent to the transmuting clock. He moves a lever which connects the big clock's circuit with the "companies' wires, and from then until noon not even a dispatch announcing the death of the President of the United States could command the right of way. Time balls in the Eastern cities were all previously raised by a signal sent out at five minutes before noon. The time room is just now the busiest place connected with Uncle Sam's great government system. At one minute before noon a bell upon a switchboard commences to beat each second recorded by the transmuting clock. It does this until within 10 seconds of the eagerly awaited noon. Then there is a silent pause, during which a grain of sand could be heard to drop upon the time room's floor. The seconds are minutes to the impatient onlookers. Finally a spark flashes from the switchboard, and two bells in unison utter a sharp, abrupt

alarm. The throb has been felt by the thousands of operators scattered over the telegraph lines. The Eastern time balls have been dropped, and thousands of blocks in offices, railway stations and private houses, have been electrically corrected. The electric impulse, traveling at the rate of 180,000 a second, is practically instantaneous in Southwestern Texas, the furthest point on the line receives the signal possibly one-tenth of a second late, as a result of the many relays en route.

Never Precisely Right.

But, even with all of this care, the noon signal never goes out on the exact hundredth of a second. The chronograph, with its fountain pen, keeps time on the signal through a telephone receiver. The day I watched the noon hour fall out of the hopper as the finished product this half-splitting instrument recorded that it was a few hundredths of a second slow.

Uncle Sam is putting to rights in a vault beneath an annex of his observatory building what his astronomers believe will be the most accurate clock system in the world. This vault is built of brick and concrete walls three feet thick, with air spaces between, and is roofed over with a layer of asbestos about 10 inches deep. Inside, upon three deeply laid stone piers, stand as many air-tight cases, each containing a clock. The temperature in this vault is kept constantly at 77 degrees F. When it varies the slightest fraction of a degree above or below this figure, a thermometer automatically regulates flow which admit sufficient cool or warm air to compensate for the discrepancy. Moreover, the air inside each clock case is kept at a constant barometric pressure of 29 inches. All of these pains are resorted to for the reason that in even a perfectly constructed clock errors would be caused by expansion and contraction of the pendulum by inclement temperature, and that change of pressure would alter the resistance of the air through which the pendulum beats. The ticks of these three clocks may all be listened to at once through a telephone receiver. Practice has given the astronomers such extreme precision in the use of this instrument that they can detect errors in pendulum beats down to thousandths of seconds.

With Give the National Time.

While this new clock vault was constructed primarily for the use of the Government's astronomers in their delicate observations, it is very probable that it will eventually transmit the National time.

No small part of the work done at the Government's time factory is the manufacture of correct time for our naval vessels. The Navy owns 53 carefully regulated clocks, known as chronometers. New instruments of this class are being bought from time to time, and those in the service are sent back to the makers every four years to be cleaned. As soon as a chronometer which has just been bought or newly cleaned leaves the manufacturer it goes first to the time room at the Naval Observatory. Here it undergoes the most thorough test which any one could very well imagine. Adjacent to the time room is what is known as the "temperature room," and here the degree of heat can be regulated to remain constant for a week at a time. Each chronometer, before being issued to a naval vessel must undergo a nine weeks' test in this room. During this time it is kept for a week at 50 degrees F; another at 55; then at 70, 80, 45; then again at 50, 70, 85, and during the last week at 70. During all of this time each chronometer is compared daily with the big standard clock. In this way is learned how much each instrument will gain or lose each day under various temperatures. This rate of error on account of temperature is given to navigators of our naval vessels that they may profit thereby.

The price which Uncle Sam pays for chronometers depends upon how well they stand this test, and varies from \$300 to \$750. It therefore behooves the makers to exercise infinite care.

JOHN ELFRETH WATKINS, JR.
(Copyrighted, 1902.)

"FEED A COLD AND STARVE A FEVER."

HOW FAR THIS ANCIENT ADVICE MAY BE SAFELY FOLLOWED—PREVENTION BETTER THAN CURE.

LONG ago Sydenham said that disease was an effort of nature to restore health. But we do not treat a cold as if it were of this character; we regard it usually as a thing to be stopped rather than to be helped along gently in its own direction. That is a wrong policy altogether.

There is an old proverb, "Feed a cold and starve a fever." This has led many people to take a heavy meal when a cold is on them, and such a heavy meal may have no stimulating effect upon the system that the system will be put into working order for a short time, and then may be able to go on by itself. But the original proverb was not a command. The first part of it was a condition. If you feed a cold you will have to starve a fever later on. That was the real sense, and the real advice conveyed by it was "starve a cold."

This gives us the best, or at least the most economical means of prevention and cure. When we have a cold the balance of nature has somehow been upset. The cold generally starts from the throat. Give the stomach a rest—fast for a day or two, or for several meals—and probably the cold itself will disappear. It is doubtful whether the mischief has ever come merely from a draught or merely from weakness. It is probable that there always must be some clogging of the system as well. As a rule, some shock, some chill, throws back the poisons upon the system instead of letting them work themselves out through the pores of the skin, which are so many mouths for the purpose of breathing out. The primitive animal breathed out and breathed in all over him, and so do we. For we should look upon our whole surface as covered with mouths. Paint a dog all over with some air-tight mixture, and he will soon die, not from the poison of the mixture, but from the poisons from his own tissues. It is essential, therefore, if we would cure a cold, to remove the clogging cause or to let nature remove it, and meanwhile to open the pores of the skin.

Rest in Curing a Cold.

So we come to the second cure, namely, heat or warmth. This can be produced by exercise, by massage, by Turkish or Russian baths, by warm baths, by compresses, by wrappings in blankets or wet packs; only let such help be followed by cool or cold water and friction, to close the pores of the skin again, and to harden them against a fresh cold. The water should always be soft; distilled water will take up more impurities than hard water. If this cannot be obtained, then let some bath-salt or else some bath-oatmeal be added.

Not one person in a thousand knows the value of soft water as contrasted with hard. Let the body be soaked in the warm water, and let it be rubbed. Afterwards (I must repeat) let a cool or cold application, together with the friction of exercise, restore the circulation and invigorate the nerves.

This, one would say, was surface-work, whereas the trouble is in the stomach. We should not add a weight of food to overtax the nervous system, which is already heavily handicapped by having to get rid of excess. We should do what we can to wash out the stomach with water, not taken together with food, but perhaps taken with lemon juice or juice bottled from fruits or vegetables.

There are some who, after drinking two glasses of hot water, will apply the stomach tube to remove the contents of the stomach. This is not to be confused with the stomach pump, a far more unpleasant mechanism. The stomach tube is flexible and small. It goes down the throat, if skillfully manipulated, without difficulty and without discomfort. Then one closes the mouth, breathes deeply and the contents of the stomach come up naturally without the violent strain of nausea.

Those who object to this can flush the organs from below with the enema; the quantity of water which should be warm and mixed with oil and the purest soap, can be gradually increased.

Prevention Better Than Cure.

This, again, is remedial. How much better it would be not to let the causes enter the system at all! It is so weak and negative to have to shun draughts, or even fresh air. He is better off who recognizes the draught as something refreshing. And there is no doubt that careful attention to diet will put nearly if not quite every one in this positive and masterful position.

Of drink we shall say nothing, except that stimulants should be avoided. Of food we shall say little; the problem is so immense. But acid and fermenting foods should be avoided, because of their tendency to produce fever or a feverish condition.

The flesh foods are acid. They contain uric acid and other chemicals, which, under certain conditions are deadly poisons. Uric acid is one of the results of the wearing out of the tissues by the animal during its movements and during its life. Animals cannot live without destroying themselves.

Flesh foods also contain in many cases the causes of fermentation. You may make cider ferment, not merely by yeast, but also by a piece of meat put in it. But it is a mistake to give up meat and to substitute no staple or basis for it. What this basis shall be we can not say. If wheat were properly prepared and not deprived of the its most precious parts it might form one of the best foundations of diet. Graham bread or graham biscuits will be a good instance. Or perhaps milled nuts might be thoroughly

satisfactory. For my own part, colds are almost unknown to me since I have made the backbone of my diet—not flesh foods, for I never eat them, but proteid.

Many starchy foods tend towards acid fermentation, not only because they are eaten without their natural accompaniments, i. e., that which nature supplies with the flour in the grain; but also because bread is frequently raised by means of chemicals, and these chemicals tend towards the fever of fermentation. The inorganic salts seem scarcely profitable to the human system. Besides this, both meat and ordinary fine flour are constipating in their effects.

It is necessary, above all, for him who has to prevent or cure a cold to get rid of constipation. If air-ridden whole wheat bread or biscuits can be eaten, then it is probable that the bowels will work freely; or fruits can be eaten; or proper exercise can be taken. But constipation must somehow be removed.

Light is Plenty is Needed.

The next means is light. It is probable that if the whole body were allowed sufficient light, colds would be unknown. Dr. Forbes Winslow and Sir James Wyke, late physician to the Emperor of Russia, and many other physicians, all emphasize the importance of light. The last of these authorities calculated the effects of light in the St. Petersburg hospitals. He found that the number of patients cured in rooms which were properly lighted was three times greater than the number cured in dark rooms. If natural light cannot be obtained, then electric light is good for the body. At any rate, the underclothing should be white, and certainly not black, which lets in very few of the rays. Every morning and every evening there should be a light-air bath. Air is of importance. The whole body should breathe as often as possible daily. In Germany the air-cure alone has for some decades been employed in curing consumption and nervousness. There is no fear of a chill if only massage and brisk movement be insisted upon.

Deep breathing will also help to keep the body warm. It should form the basis of national education. At present not one word is ever said about it in an ordinary school. It should always be through the nose. The nose passages must be clear at all costs, even if an operation be necessary.

Such are a few of the cures for colds; a few out of very many. No single drug can be recommended; no single drug would be advised by the majority of doctors; no single drug has stood the test of ten years' experience, although it is possible that, in some cases, a drug may restore the upset equilibrium of the system.

A cold seems to be an attempt of the tiny lives within us—we have myriads of them—to get rid of some mischief, to get rid of the results of mistakes that we have made. If the skin will not throw off the trouble, then the nose and the mouth will have to do extra work in the republic of the body. But the root of the

mischief is generally in the stomach. The draught on which we lay the blame, or the wet feet, perhaps, are only the match that lights the fire; the fire has been already laid ready for lighting by errors of diet, laziness, etc. Even slow eating and mastication of food might be sufficient to prevent any cold; even deep, slow, full breathing through the nose might be sufficient, even cleansing followed by invigorating water treatments with rubbings and exercise might be sufficient; in fact, there are numerous avenues to immunity. We must never imagine that the draught or the wet feet can ever be by themselves the real and vital cause. They never light the fire nor (to carry out the metaphor) help to burn up any refuse.

We, for our part, must not stop nature in getting rid of her cloggings; rather we must help her, we must add no more poisons, and we must expel those which are already within us. And the channels of expansion are surely obvious.

EUSTACE MILES.

Our Army Male.

There's a true and faithful comrade To every soldier's side, Though on the army payroll His name does not appear; He's ignorant of tactics, And never went to school; He's born to bear the burdens The good old army rule.

His hair is coarse and scrubby, His ears are long and wide, And in a show for beauty He wouldn't take a prize. His kicks and cuffs intended Are evidence of tactics, Are wanted on the person Of the patient army mule.

On many a field of glory His shadowed bones are laid, An unrecorded hero Of charge and campaign.

The hard and tireless marches, The rest beside the food, Still find him overloaded—The weary army mule.

But if he gets no credit On this terrestrial ball, The power supreme, all-seeing, That notes the sparrow's fall, And measures beast and driver By one celestial rule.

Be sure you will not forget him—The poor old army mule.

—Minna Irving in Leslie's Weekly.

Beecher's Opposition to Black.

Henry Ward Beecher was one of the strongest of sociological preachers against the wearing of black as mourning. It was his request of his family that at his death his women relations dress in white. The wish was carried out, but neither this nor any other sporadic protest against the custom seems likely to have material effect.

Writing of the conventional black that belongs to the poor of England, some one has made a pathetic little point as to mourning poverty in the north country. "The only new cloths that the really poor ever have," he says, "are sable suits, and these, laid carefully by in the family 'kist,' are stored from funeral to funeral."

And he tells how a north-country woman, looking through her "kist" while the body of her dead man lay in the next room, remarked: "A bad 'gown when mother went, and I shawl when father went, and I 'bonnet when 'm' life laid'—her voice broke—"died of 't fever in South Africa, two year come January. A wants nowt new for m' Chris, there."

Oregon Never Favored Secession.

I have heard it stated that at the outbreak of the Civil War Oregon was a doubtful state. Will you very kindly advise me if such was the case, and also give briefly some particulars in regard to it.

—B.

Oregon was never a doubtful state on the question of the Union. It is true that a considerable minority in 1860 and 1861 favored secession of Oregon from the Union. This minority was very aggressive. While no figures are available, it may be said that probably less than one-fourth of the voters of this state favored secession. At the general election in 1860, Lincoln received 120 votes; Breckinridge 506; Douglas 381. The Douglas Democrats certainly did not favor secession, and there is no reason to believe that all who voted for Breckinridge, whatever may have been their views regarding slavery, would have voted to withdraw from the Union. Possibly half of them felt so inclined. There never was a time when a majority of the electors of this state would have voted to go out of the Union.

Cows on Vacant City Lots.

1. If a man owns two adjoining lots in this city, and he encloses one with a fence and builds his home upon it, leaving the other vacant and unfenced, has he a right to forbid the owners of cows to tether their animals on his vacant ground?

2. If the picket stake is driven just beyond the boundary of his land, and the rope is long enough to allow the cow free run upon his ground, has he a right to order her removal?