

## ABOUT YOUR WATCH.

FACTS ABOUT TIMEPIECES WHICH MANY ARE NOT AWARE OF

A Wonderful Piece of Mechanism—Springs and Screws That Are Only Visible Under a Magnifying Glass—They Are Also Very Costly.

Open your watch and look at the wheels, springs and screws, each an indispensable part of the whole wonderful machine. Notice the busy balance wheel as it flies to and fro day and night, year out and year in. This wonderful little machine is the result of hundreds of years of study and experiment.

The watch carried by the average man is composed of ninety-eight pieces, and its manufacture embraces more than 2,000 distinct and separate operations. Some of the smallest screws are so minute that the unaided eye cannot distinguish them from steel filings or specks of dirt.

Under a powerful magnifying glass a perfect screw is revealed. The slit at the head is one-fiftieth of an inch wide. It takes 100,000 of these screws to weigh a pound, and a pound is worth \$1,500.

The hairspring is a strip of the finest steel, about nine and one-half inches long, one-hundredth of an inch wide, one-fourth-hundredth of an inch thick. It is coiled up in spiral form and finely tempered.

The strip is gauged to one-fifth of an inch, but no measuring instrument has as yet been devised capable of fine enough gauging to determine beforehand the size of the strip which the strength of the finished spring will be.

A one-hundredth part of an inch difference in the thickness of the strip makes a difference in the running of a watch of about six minutes per hour.

The value of these springs when finished and placed in watches is enormous in proportion to the material from which they are made. A ton of steel made up into hair springs when finished is worth more than twelve and one-half times the value of the same weight in pure gold.

Half-spring wire weighs one-twentieth of a grain to the inch. One mile of wire weighs less than half a pound. The balance gives five vibrations every second, 300 every minute, 18,000 every hour, 432,000 every day, and 157,680,000 every year.

At each vibration it rotates about one and one-fourth times, which makes 107,100,000 revolutions every year. Take, for illustration, a locomotive with six-foot driving wheels. Let its wheels be run until they have given the same number of revolutions that a watch does in a year, and they will have covered a distance equal to twenty-eight complete circuits of the earth.

A well known Cleveland man, who is never without his camera, was visiting in the neighborhood of Plattsburg, N. Y., a few days since. In his rambles he came across a queer freak of nature.



He found himself in a grove of tall poplar trees and through the trunk of each ran from one to four boards. They extended from one side to the other through the very center of the trees. No one seems able to find out how the boards became so strangely a part of what they were in their original state. It is thought the boards were placed between small sprouts and as the latter grew surrounded the boards.

Items Worth Perusing  
Flying machines are used by air-castle dwellers.

The enthusiastic scorcher seems to have a special bent.

Worthless people are always more amusing than worthy ones.

The actor who has a summer engagement has no fear of a "frost."

It's unnecessary to tell a boy to practice economy in the use of soap.

The average man prides himself on the possessions his neighbor can't afford.

All the messages sent to the world through the medium of books are sent collect.

Some men try to make light of their troubles by burning their unreciprocated bills.

Prohibitionists will no doubt rejoice when Uncle Sam makes the Spaniards take water.

Courtship seems like a dream to the average girl—and after marriage she wakes up and finds it was.

About the greatest difficulty some people experience is in trying to keep appearances up and expenses down.

In Paris accident insurance policies are issued guaranteeing the holder against the consequences of the damage he may inflict on others. They are taken out chiefly by cab drivers.

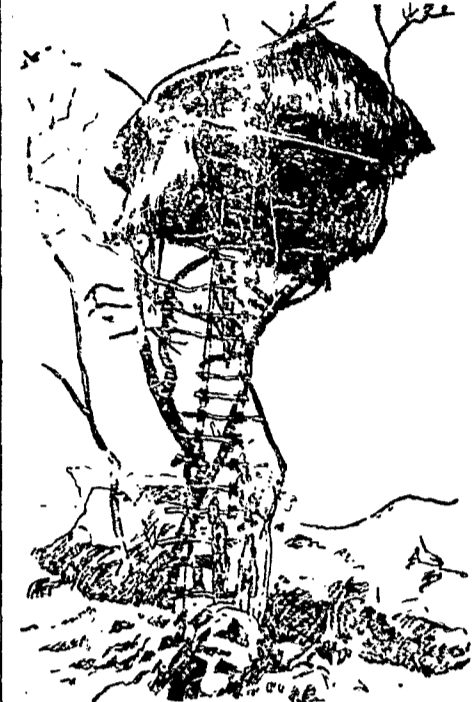
The Adirondack mountains comprise an area of 3,588,800 acres. There are over 1,300 lakes and lakelets, with 30 rivers and about 100 rivulets.

## PEOPLE WHO LIVE IN TREES.

The Strange But Gifted Inhabitants of New Guinea in the South Seas.

Of all the islands of the south seas New Guinea is in some respects the most peculiar. With its towns built on the water, its native castles in the trees and its strange native inhabitants, who have been steadily dying out since the advent of the white man, it is an intensely interesting bit of the world. The natives are gifted with such remarkable powers that they can see into distances far beyond the vision of the white man; they can track the wild beast by signs that the white man cannot learn; they can go to food and drink in deserts where the white man would perish of thirst and starvation.

The accompanying picture represents one of the treehouses built by natives



HOUSES IN THE TREE TOPS  
of the island. Among the savage tribes are warriors who are known as the "head hunters." The aerial houses are built as refuges from the head hunters. When the cry is raised that the head hunters are coming the feeble and the women flee to the tree huts and the able men arm for the fight.

A new kind of safety paper for banks, &c., is announced, though the inventor's name does not appear. It is a foreign idea, one feature of the invention consisting in printing or otherwise impressing on the paper employed a plurality of sets of lines or marks, one or more of which sets are indelible and the remaining sets delible; these lines or marks are made so fine and so closely alternating or relatively disposed that, in ordinary observation with the naked eye, no single line or mark is distinguishable. Again, the indelible lines or marks are made of a color differing from those of either of the sets of lines or marks. Thus, any chemical action or erasure on such paper would, it is claimed, be at once discernible, and the shade made by the two color combinations would be hard to duplicate.

New Uses of Aluminum.  
Aluminum has lately found its way extensively into vibrating and reciprocating machines, both large and small," says the Engineering and Mining Journal. "Here the advantageous use of the metal is entirely a matter of reducing the weight. Probably the best illustration of the use of aluminum in revolving machinery is in using an oil cup on the driving-wheel of a locomotive in connection with a driving-rod. With the increased speeds that the roads are now aiming to attain, it is necessary to increase the diameter of the driving-wheels, and consequently the tendency to break the shank of the oil cups materially increases, and with some of the large engines which have been built, cups made of composition are frequently broken. These cups are now, and have been for some time, successfully cast in aluminum, and have given great satisfaction."

Protection for Railway.  
On the new Russian military railway from Europe to Antijian, on the borders of the Chinese empire, a tree like shrub called the sasacoul had to be planted all along the line through the desert to prevent the rails being covered by sand. For further protection a ribbon of wild oats runs along both sides of the railway.

Fruits Which Are Injurious.  
Bananas are very bad for some people and so are raspberries and rhubarb. Indeed, all fruit like gooseberries, that have numerous tiny seeds, are very often undigested where the person is not strong and cause various disagreeable complaints.

The Mushroom's Life.  
The mushroom's life is measured by hours, but it flourishes long enough for an insect to hang its egg on the edge of the "umbrella" and for the eggs to become an insect ready to colonize the next mushroom that springs up.

Wonders of the Turnip.  
A turnip seed increases its own weight fifteen times in a minute. On peat ground turnips have been found to increase by growth 15,999 times the weight of their seed each day they stood upon it.

Waste of Time.  
Before a fire brigade can start for a fire in Berlin the members must all fall in line in military fashion and salute their captain. This proceeding wastes at least three minutes.

Tobacco Patents.  
The necessity of preparing tobacco for the consumer has developed 2,274 patents.

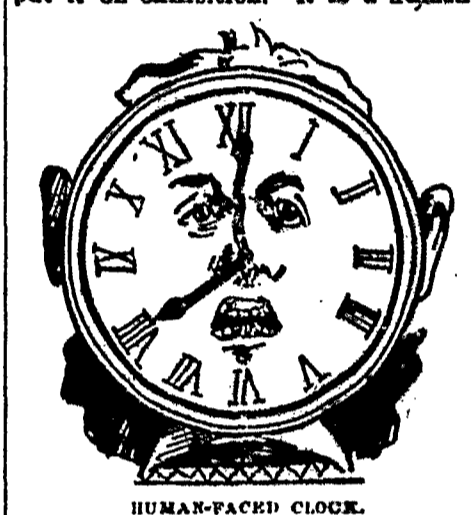
## EFFECTS OF TEA DRINKING.

The Majority of Physicians Contend That It Is Injurious.

"Moderation is the best temperance; temperance is the best diet, and diet is the best doctor," says an old New York physician, "and some authorities insist that tea is a most potent destroyer of the digestive organs, while others insist that it is comparatively harmless if taken in moderation, and that it is only in exceptional cases that it has this injurious effect. But the majority of physicians and scientists are unanimous in conceding that the action of tea, if used in large quantities, is more or less injurious to the nervous system for the reason, which is the organic basis of tea, is a potent derivate and many cannot use it without injury to themselves. Numbers of people are dyspeptic and nervous from the continued use of tea."

Dr. Edward Smith, of Indiana, says: "In reference to nutrition, tea increases waste, since it promotes the transformation of food, without supplying nutriment, and increases the loss of heat without supplying food," therefore, he thinks, tea should only be taken after a full meal. There is no doubt that the action of tea is stimulating in its effect. It increases the action of the heart and arteries, and furnishes a transient increase of vital energy; but it is not nutritive, and the very fact that among the poorer classes the addition of a cup of tea to an otherwise meager diet, makes it palatable, is misleading, for while it allows one to live on less food for a time, the result, sooner or later, must be injurious."

A Human-Faced Clock.  
An ingenious watchmaker in St. Petersburg has just finished an extraordinary specimen of his art and has put it on exhibition. It is a human-



face clock, with the hands pivoted on the nose. Any messages spoken into the ears of the clock are repeated by a phonograph through its mouth.

American Clothespins.  
Whenever the wash is hung out to dry, all the world over, it more than likely to be pinned on the line with American clothespins. Americans sell clothespins practically everywhere—all over Europe, in South Africa, South America, Australia and elsewhere. Some clothespins are made for the supply of local markets in Sweden and in Scotland, but they are big and clumsy pins, twice the size of the American, and whittled out by hand, and American pins are sold in both these countries in competition with the home production. Clothespins are made chiefly of beech and of maple; some are made of tupelo wood. They are made entirely by machinery, counted into boxes containing 720 each by machinery, and the boxes are packed up by machinery. It might almost be said that blocks of wood fed to machines one end come out boxed clothespins at the other. They are made and sold wonderfully cheap. There are two grades of clothespins, first and second. First-grade pins can be bought for thirty-two cents a box. The production of clothespins is enormous—millions of boxes annually. The consumption in this country keeps pace with the growth of the population, and great numbers are exported. Even people in the trade wonder what becomes of all the clothespins.

Academy of Women in Paris.  
There is some talk of instituting an Academie des Femmes in Paris and the idea is, of course, attributed to the march of the nineteenth century. This is by no means the case. Nearly 200 years ago Mme. de Maintenon wrote: "At Mme. la Duchesse de Bourgogne's all devote themselves to saying clever things and the duchess is delighted with the conversations that take place—logic, rhetoric, physics are all discussed and examined into. It is proposed to form an Academie de Femmes, composed of forty members. There are already twenty on the list." So it seems probable that had the project of the Duchesse de Bourgogne not been cut short by death we might now have had an Academie de Femmes of two centuries' standing. But who were the twenty "immortelles" already on the list? Mme. de Sevigne, whose letters were not yet published, died in 1696; Mlle. Soudry, "the tenth muse," in 1701; and Mme. de Genlis was not born. In this century the twenty would be more easily found and would certainly include the names of Mme. de Staël, Mme. Swetchine, Mme. de Segur, George Sand, Mme. de Girardin and Mme. Crayven. Much of the literary talent of earlier days was devoted to the writing of private letters—now, alas! thanks to telegrams, post cards and the "pace" necessary to keep up with this flying century, almost a lost art.

Trick Photograph.  
A correspondent sends a very remarkable photograph. If held upright it looks exactly as if a man were standing on the side of the house, and viewed in the ordinary way it appears as if he were projecting from the wall of the house, without any visible means of support, as the police say about the tramps. It might even do for an "animal magnetism" photograph. The explanation is quite startlingly simple. The young man is merely lying on a scaffold pole stuck through the wall.

Paper Floors.  
Now we have paper floors. An important advantage of paper floors consists in the absence of joints or seams, whereby an accumulation of dust, vermin and fungi is done away with. These new paper floors are bad conductors of heat or sound, and have a soft feeling to the foot. The costs are considerably lower than of hardwood floors, the paper mass is shipped in bags in powder form, with a small addition of cement as a binder. It is stirred into a stiff paste, spread out on the floor, pressed down by means of rollers, and painted the oak-wood or mahogany color, after drying.

Told Out of Court.  
"What was the heaviest fee you ever got?" asked the pert young lawyer of the Nestor of the bar.  
"A yearling calf and a load of pumpkins; aggregate weight a ton and a quarter."

## ABOUT BALLOONING.

SOME CURIOUS FACTS RELATED BY AN OLD AERONAUT.

Men Who Pierce the Skies Fearlessly Gaze Look Over the Edge of an Ordinary Building Without Terror—Trouble Due to Self-Consciousness.

"Few men or women who fall up to the skies in balloons with entire fearlessness could stand on the ledge of a third story window without experiencing that faintness and nausea which terror inspires or feeling an almost irresistible desire to fling themselves headlong to the pavement below," said the old aeronaut.

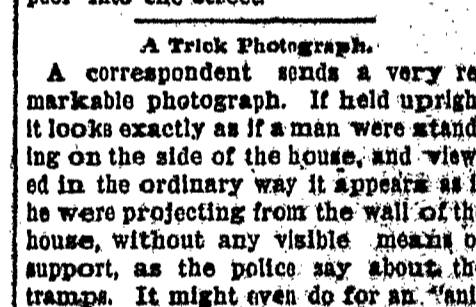
"Why is it thus?" I asked in surprise.

"It is, I think," returned he, "due entirely to the fact of self-consciousness. Balloonists are all more or less self-conscious. It is that way with every person who is favored with constant public notice or with super-sensitive, highly cultivated or intellectual folk. In close proximity to their fellow men and things of earth their sensibility to surroundings is invariably acute. There are few of such persons who could walk along the edge of a tall building or who could peer down from the brink of a precipice without suffering vertigo and that strange hysterical impulse to jump off. This is because they are too thoroughly aware of their own personalities, or, in other words, because they are always thinking of themselves.

"Now, a person who is not self-conscious may parade up and down on the tops of cliffs, climb steeples or cling to the ridge of a skyscraper building without the slightest degree of fear or inconvenience. His sensibilities are blunted; he is not sufficiently imbued with the idea of his own personal worth to heed the perils and discomforts of a lofty position. But put that same individual into a balloon and send him up into the sky for a couple of miles and, most paradoxically, he at once becomes nervous, restless and eventually evinces the liveliest fear. He is liable to become sick and faint, and manifests all those disorders common to the self-conscious man at an eminence of a hundred feet or so.

"The latter, however, the moment you get him a thousand feet above the earth, the moment all familiar objects begin to recede from his view, loses all fear and tendency to vertiginous disturbances. A strange exhilaration possesses him, and likewise an impulse to dare and do. If there be a trap attached to the balloon he wants to climb down and swing in it.

"That is why professional aeronauts ascend to great heights and swoop down to earth by means of the parachute. They have lost all consciousness of themselves among the clouds, and holdy trust themselves to the hypothetical safety of the big umbrellas without a tremor of fear. Yet I venture to say not one of these professionals would trust himself to leap from a building 150 feet high with a parachute. I doubt if many of them at such a height could be persuaded even to venture close enough to the edge to peer into the street."



THE TRICK PHOTOGRAPH.  
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