

MARKING THE FLIGHT OF TIME.



A Natural Sundial—Primitive Man's First Timepiece

TIME-RECORDING has undergone its first revolutionary advance in over six centuries, with the invention of a clock that does not run down. An American is the inventor—the first American to contribute anything fundamental to the science of "telling time."

Time is a miraculous thing—something elemental, baffling. The springs or weights of an ordinary clock were never worthy of its dignity. Now another baffling element has been made to run in the same harness. Electricity, imprisoned in a clock, will "mark time."

There had been until now, roughly, four classes of timepieces, the sundial, the clepsydra, the candle clock and the mechanical clock of springs or weights. The sand glass was but a modified clepsydra, and the burning rope or punk of the Chinese but another type of candle clock.

The electric clock is something new under the sun.

What Time Is It?
History does not record Eve's first remark to Adam—presumably Eve spoke first—but it is probable that she said, "What time is it?" People have been asking it ever since. It is the most popular and important question in the world even now.

No sooner had man appeared on the earth than time began to be important to him.



The Clepsydra, or water clock of ancient Greece and Rome, was used to time the speeches of orators. Water dripping into funnel (1) passed to cylinder (2) slowly filling the cylinder and raising float. Raising with float a rod with teeth (3) turned the hand of the clock.

Then came the trouble over the first "date."

This early chap—call him Tarzan or Ahaz or anything you will—probably wanted to meet Miss Malsie Nutmeg at the corner of Mastodon avenue and Dinosaur street on the following morning, to go on a saber-tooth gathering expedition. "Meet me here," he said cavalierly, "when the sun is three hands high."

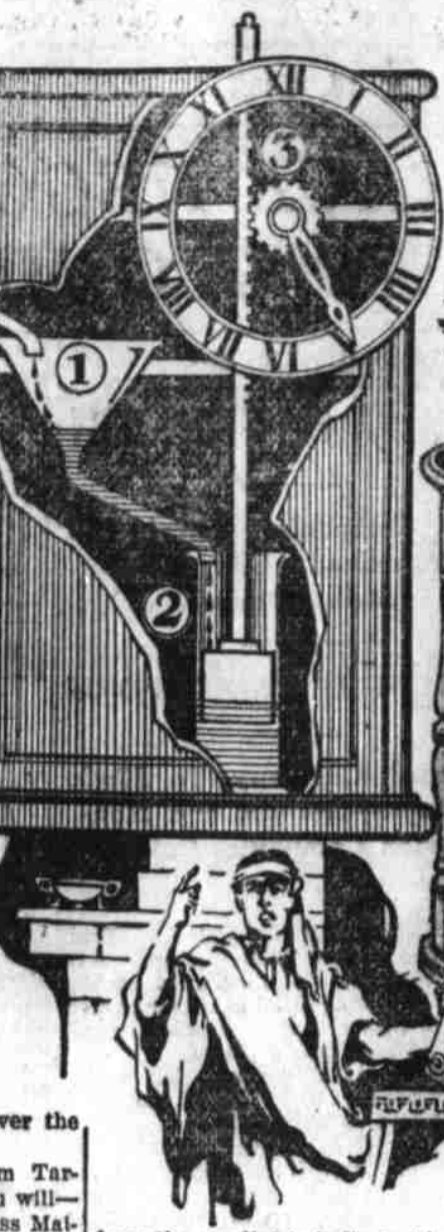
Tarzan Has a Hunch
"But," objected Malsie—she was a very intelligent girl—"my hands aren't as broad as yours, and that makes a difference."

Tarzan scratched his bear-greased pompadour uncertainly and grunted. Then he had an important idea.

"I'll tell you," he said, "meet me when the shadow from the mountain just touches the river."

History was made right there, though Tarzan didn't know it. The sundial was invented. It was only a small step from the discovery that shadows moved with the sun to the placing of an upright pole and the location of marks around it at intervals of space to measure periods of time.

When ancient Israel took its time



Palpit Hour Glass used by old New England ministers to time a two-hour sermon.

from the sundial is indicated by the record of the miracle in Isaiah, 38:8.

"Behold, I will bring again the shadow of the degrees, which is gone down in the sundial of Ahaz, ten degrees backward. So the sun returned ten degrees, by which degrees it was gone down."

"I count none but the sunny hours," says the inscription on the sundial at Paul's Cross, London. And it was this cheerful fact that put the sundial out of business.

It did very well as long as Tarzans were making deals with Malsie Nutmegs, but the gay community of Babylon discovered the fascinations of night life and right away the sundial wouldn't do.

Night Life in Babylon
The Babylonians had to know when it was midnight or run the risk of tardiness at the Midnight Follies. So the Babylonians invented the clepsydra about 2,700 years ago.

Clepsydra means "thief of water." By regulating the flow of



Historic Sundial of Sir Isaac Newton.



A Willard Grandfather Clock. One of the earliest of America's fine time keepers.

water through a tiny opening from one vessel to another they found they could measure time.

A Long Drink in Rome
Pompey, the Roman, was a business man, and had the business man's contempt for wordiness; so he set up a clepsydra in the Roman Law Court to limit speeches. When an eloquent lawyer talked a quart—or the time it took some such amount of water to run through the clepsydra—he had to stop. Martial, the poet, tells about a wagg who heckled a particularly tiresome speaker. This speaker had a habit of moistening his mouth periodically from the Court drinking glass.

"It would be a greater relief to the rest of us if you drank from the clepsydra," shouted the wag.

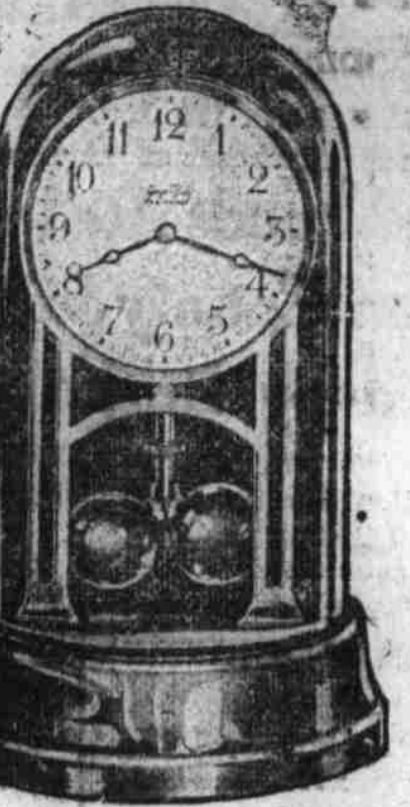
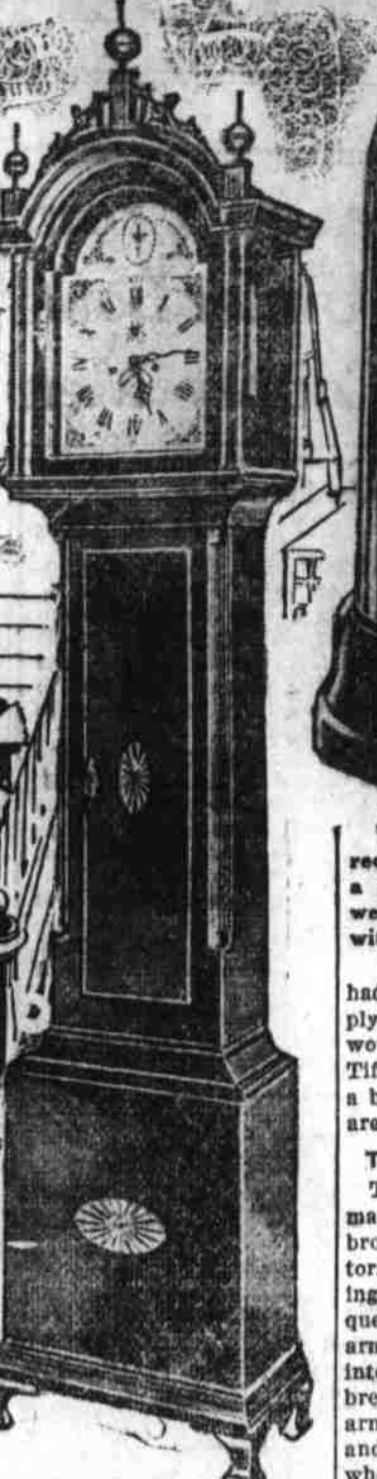
Some of the slyster lawyers used to bribe the attendants to put muddy water into the clepsydra, so that "time ran more slowly," and they made longer speeches. Any man who has fished for sand in a car-buretor can appreciate what the same substance would do to a clepsydra.

Alfred the Great is reputed to have invented the candle clock, or candle which burned a given distance in a given time. The Romans had preceded him with the lamp clock, however, and the Chinese had the same idea ahead of the Romans, burning a rope of uniform texture. Any boy can tell time the Chinese way by lighting a twine string and noting by clock how long it takes to consume the first inch. After that—as long as the string lasts—he can dispense with the clock.

King Henry's Poker Session
The origin of the mechanical clock is, like that of so many things, shrouded in mystery. A mechanical clock was installed in St. Paul's, London, in 1285. Westminster Abbey was so accommodated in 1293, and the Cathedral of Canterbury in 1292. The Westminster clock not only kept time but chimed the hours. King Henry VIII, who was a financial as well as a matrimonial plunger, garbled

the chimes away. He probably would have lost the Abbey, too, if his opponent could have taken it home.

Ell Terry was the first American clockmaker, but the most famous early American clockmakers were the Willards. All were New Englanders. The clock which embodies the latest—is it possible to say the last—word in time-recording is the work of George S. Tiffany of Summit, N. J., an inventor of international reputation. He has been working on electrical clocks since a boy, and in 1900 hit on the principle around which he built the clock, without weights or springs, which runs a year or more without attention. Other "electric" clocks



The most modern device for recording time's flight operates on a small battery. It has neither weights nor springs and runs without winding.

had been built, but these were simply old fashioned clocks which were wound up at intervals by batteries. Tiffany's clock is actually run by a battery—a small dry cell such as are used in flashlights.

The Clock That is Never Wound

The circuit through an electromagnet is alternately closed and broken by a contact needle on a torsional pendulum. With the closing of the circuit, and the consequent energizing of the magnet, an armature is attracted and lifted into contact with the magnet. The breaking of the circuit allows the armature to drop, under gravity, and this drop revolves a ratchet wheel which is connected with the hands of the clock, a short distance. The pendulum does no mechanical work, acting only as a regulator, and is kept in motion by the opening and closing of the circuit. The current consumption is from one and a half to one and three-quarters ampere hours a year. One of these clocks has run two and a half years on one battery. A clock in Mr. Tiffany's home has kept perfect time since 1900.

The first crude clock built by Mr. Tiffany in 1902 is still in existence. It is likely that it will some time have a place in the Smithsonian Institute, along with Howe's sewing machine, Whitney's cotton gin and Langley's airplane, as another revolutionary product of American inventive genius.

NOTICE OF RESALE.

In the District Court of the United States for the Western District of North Carolina.
In the matter of W. L. Ormand, Bankrupt.
Under and by virtue of an order made in the above-entitled proceedings, the undersigned trustee will, on the Second Day of August, 1922, at 11 o'clock, a. m. expose for resale to the highest bidder for cash, at the Court House door in Gastonia, N. C., the reversionary interest of W. L. Ormand, bankrupt, in a certain tract or parcel of land situated in Crowders Mountain Township, Gaston County, State of North Carolina, and described as follows, to-wit: Beginning at a stake on the old line; thence North 63 East 43 poles to a stake; thence North 2 West 113 poles to stake in old line; thence South 38 1/2 East 36 poles to a stake; thence South 38 East 66 poles to a stake; thence South 38 1/2 East 19 poles to a stake; thence South 2 West 25 1/2; thence South 82 West 27 poles to the beginning, containing 25 acres, being the homestead appraised and allotted to W. L. Ormand, May 18, 1917; and registered in the office of the Register of Deeds for Gaston County in Deed Book 122 on page 383. The purpose of this sale is to resell the reversionary interest in the said 25 acres which is subject to the homestead rights of the said W. L. Ormand, bankrupt. The sale will start with a

bid of \$101.00, the original bid of \$1.00 having been advanced \$100.00 within ten days from the date of the first sale.
This the 17th, day of July, 1922.
JAY BIVENS, Trustee.
Tp-18-25-2.

DELEGATION TO DISCUSS FUNDING BRITISH DEBT

LONDON, July 17.—A special delegation will arrive in the United States early in September in connection with the negotiations for funding the British debt to America, it was announced by Prime Minister Lloyd George in the House of Commons this afternoon.

NEW THOUGHT ALLIANCE

ATLANTA, Ga., July 17.—The ninth annual congress of the International New Thought Alliance was expected to get under full way today with the arrival of several international leaders. Delegates from virtually all countries of Europe and every state of the Union are here for the congress which will continue through the week.

At the Majestic Theater tonight downward's Roseland Maids present "Mrs. Vandergeld's Reception," a musical comedy in two acts. Special vaudeville features.

HARDING BELIEVES IN FUTURE OF FLYING

Expects Amazing Development in Air Travel—Wants United States to Lead in Commercial Aviation.

NEW YORK, July 16.—President Harding has again given evidence of his belief in the future of flying. The chief executive expects amazing developments in air travel, and declares that each stage of development demands approved means of transport; he wants the United States to lead the world in commercial aviation. He has expressed these views in a letter to the Aeronautical Chamber of Commerce of America, in that of which follows:

"The White House, Washington.

"Gentlemen:
I find pleasure in adding a word expressive of my interest in aerial transport, and in the presentation of the subject which is being made by the Aeronautical Chamber of Commerce. The history of civilization is largely the history of communication. Each stage of progress seems to demand and develop improved means of transport. The steamship, the railroad and the motor car have been devised and utilized. Now we enter a new phase. It is a real distinction to America to be known as the birthplace of the airplane; it should be our concern in this art shall not languish, but that in its practical application we shall lead the world. An amazing development will take place in the near future in the utilization of the air as a medium of transport and communication. As a government, we are aiming to provide this art with necessary guarantees of law, and with such facilities as may be possible through the encouragement of airways and terminals. But for air transport quickly to achieve the important place it is destined to occupy, it must have public interest and support. I hope your efforts in this behalf may be productive of most gratifying results.
Very truly yours,
WARREN G. HARDING."

The Aeronautical Chamber of Commerce was organized this year to "foster, advance, promulgate and promote aeronautics, and generally to do every act and thing which may be necessary and proper for the advancement of meritorious aviation." Starting with Orville Wright and Glenn H. Curtiss, the pioneers, and several other leading aircraft designers and builders, the Chamber now has nearly 200 members located in every state in the Union.

Possibly a score of factories today have their own laboratories in which scientists are working with trained personnel making slight alterations in ma-

chines or motors, the chamber says in a statement given out in this city. These men are not seeking to produce something radical, but rather to improve the types which have justified the basic principles on which they were built.

Approximately 500 civilians are taking lessons in flying at civilian aviation fields this summer. The Chamber estimates that there are 1,200 civilian owned and operated aircraft in the country today.

The average charge per passenger a year and a half ago was 65 cents a mile. Last year it was 55 cents, and it is believed that the average this year will be about 50 cents. There has been slight increase in terminal facilities so far this year. The administration is encouraging local landing fields and national airways wherever practical.

We doubt if anything can look so badly battered up as a speeding flier after a telephone pole has hit it in its defense.—New Orleans States.

KNOW NORTH CAROLINA—CAROLINA'S FOREIGN TRADE.

It may sound mechanical to repeat that North Carolina business men should take more interest in the development of foreign trade. But our principal money-crops, cotton and tobacco, are exported in large quantities; while there are a number of concerns in allied industries that enjoy a large foreign patronage. Of our raw cotton over sixty percent is shipped abroad. North Carolina tobacco is used in many foreign blends of the finished product and the quality is so much appreciated that the fact that Carolina tobacco is used is almost invariably advertised on the outer wrapper. Yet this demand has grown naturally without very much concerted effort on the part of our business interests. Our place in foreign markets has now become so secure, however, that we can look beyond New York as the larger financial centers and begin vigorously to establish

direct-marketing arrangements between grower and foreign merchant.

To this end, North Carolina banks in time should be able to take care of the local grower or dealer who wants to export his product at a cost commensurate with sound business practices. In the same way too, local growers should organize for the protection and furtherance of their interests. Foreign trade—its possibilities, dangers and eccentricities—should be studied as thoroughly as our home markets. Expert advice, rigid organization, and development of a growing sentiment conducive to export activities, are all factors that contribute to foreign exploitation. And in doing all this we should try to look not always to Federal aid, but to local individual initiative for our needs. In this way, we are not only promoting a sturdier foreign business but we are also contributing to our own domestic well-being. More than that we are helping to restore what is now so greatly needed—economic equilibrium throughout the world.—A. W. McLean.



TIRES & TUBES
As good on your automobile as they were on your bicycle

MT. HOLLY GARAGE,
Mt. Holly

At picnics and home parties, drink

Bottled
Coca-Cola
Delicious and Refreshing

Telephone your grocer for a case



5¢

The Gastonia Coca Cola Bottling Co., Inc.
Gastonia, N. C. Phone No. 139

"STANDARD"
REG. U. S. PAT. OFF.



THE POWERFUL CLEAN BURNING GASOLINE

STANDARD OIL COMPANY (NEW JERSEY)