

Bellefonte, Pa., September 3, 1909.

It Is Flashed Out Over Nearly a Million Miles of Telegraph Wires Every Day In the Year-The Finely Adjusted Instruments That Are Used.

A few minutes before 12 o'clock noon every day in the year a young man walks into a certain room of the main building at the naval observatory, which is set up on a hill in the northwestern part of the District of Columbia. He glances at the various clocks in the room and then goes over to a table which is covered with electric apparatus

He watches the clocks to his left closely and waits for the hands to reach 11:55. As the second hand approaches the 60 on the dial he prepares to shift a switch. The clock is so finely adjusted that when the second hand points to 60 it exactly marks the beginning of a new minute.

As it touches the 60 the switches are thrown on. That starts a signal that goes out instantaneously over 900,000 miles of telegraph lines. In Washington, New York, Buffalo, Cleveland, Newport, Baltimore, Newport News, Norfolk, Savannah, New Orleans, Key West, Galveston, Chicago and elsewhere the time balls go up on their poles. People know that it is five minutes to noon, Washington time.

The clock which keeps the time in the observatory ticks on. With each tick there is a contact of electric points. A circuit is closed, and an instrument on the table similar in appearance to a telegraph sounder ticks away loudly.

It goes on to the twenty-ninth second, then skips one tick, then resumes its steady sounding until the last five seconds; then there is another gap. These gaps are for the purpose of giving listeners at the other ends of the great system of wires a chance to know what part of the minute the clock is on. So it goes up to the last

At the twenty-ninth second there is again the skipping of one second. Finally the clock gets around to the fiftieth second. Then the circuit remains open for ten seconds. There is

silence all along the telegraph wires. At the other end, where there are time balls or merely train operators, the long pause indicates that noon is almost there. The second hand makes on toward 60 and finally reaches the mark. Then there is another click; in about a second the sounder is down, and that tells hundreds of thousands of people that it is noon in Washing-

It is a wonderful operation, this getting the time, and highly technical. Finely adjusted clocks, chronographs and other instruments of great value are used, and the taking and recording of the time have reached a point where the human equation is practically elim

inated. The results obtained are of great value, particularly to mariners. The time is not only flashed to hundreds of points in the United States, but it is sent far out to sea by wireless. A cable carries the flash to Havana; another to Panama and Callao, Peru.

The observatory here does not send the time much farther west than the Rockies, but they have an observatory at the Mare Island navy yard, and from there the time is sent up and down the Pacific coast, just as it is from here to the eastern part of the United States. In the cities where the central time is used the flash marks 11 o'clock. An hour later local operators drop the time balls.

The mean time is determined by astronomical observations. When certain stars pass the seventy-fifth meridian, called the meridian of Washington, it is a certain time. The operator watches for the stars through a telescope, the field of which is covered with fine wires.

As the stars reach a certain point in transit the operator presses a key in his hand. A contact is made and recorded on a chronograph. The chronograph consists of a cylinder covered with paper. A fountain pen rests on the paper. It is held by an arm attached to the mechanism. The cylinder revolves once a minute, and the pen moves along the surface of the paper, making a spiral line.

A sidereal clock of the finest make is running in a vault underneath the observatory. With each tick of the clock there is a contact of two points. These two points are attached to wires that lead to an electro-magnet attached to the arm that holds the pen of the chronograph. The clock is so adjusted that each minute the pen jumps to one side. Consequently there

is a break in the line. There are other breaks, too, when the observer watches the stars cross the lines in the field of the telescope. The mean time thus recorded for each star, after being corrected for errors, is the clock time of the star's transit. Whatever difference there is between the clock time and the sidereal time marked by the transit of the stars is the error of the clock. From these astronomical observations the sidereal time is obtained. The error amounts to but little, rarely being more than from five one-hundredths to ten one-hun-

dredths of a second. The time of sending a flash over the wires is practically nothing. A flash has reached Greenwich, England, in three-tenths of a second.-Washington Cor. Chicago Inter Ocean.

There never was a day that did not bring its own opportunity for doing good that never could have been done before and never can be again.-W. H.

THE DUTCH KITCHEN.

Largest Room In the House and Has a

Bed In the Corner. Holland, of all countries, is a memorial to the unceasing labor of man's hands. It exists not because the sea. higher than its green stretches, suffers it to, but because man by the labor of his hands and of his brain has kept the water back. The Dutch people have not only earned their land-they have made it.

"When have they found time to do it all?" you ask yourself. But you are to know more of the work which in Holland never ceases. Of the work which goes on within those houses you know nothing until at Delft you make your first acquaintance with a Dutch

The kitchen is properly a large room as compared with the other rooms in the house, for it is the gathering place at all times for the family. The table is round and stands not quite in the center of the room, but so that the mistress, sitting at one side, can reach her hand out to the stove without ris-

In one corner of the kitchen is such a bed as you have never seen before. The stiffly starched white muslin curtains make it look like a blind window, but the grandson pulls the curtains back, and in the recess formed by the closet on one side and the corner of the room on the other you see the place where your hostess sleeps. There are a high feather bed and many cover-

The stove is a brick one, set in a deep old fireplace. The old mantel is piled with brass vesseis, which the old woman uses as though they were common tin. On one side is a china statue of the Virgin. On the other side under a glass globe is a waxen statue of Queen Wilhelmina in her wedding gown.-New Idea Magazine.

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No 6 No 4 No 2. a. m. p. m. p. m. Lve. Ar. p. m. p. m. a. m
†7 05 6 55 2 20 BELLEFONTE 9 10 5 05 9 40

7 15 7 06 2 32 Nigh. 8 57 4 52 9 27

7 29 17 11 2 37 Zion. 18 51 4 47 fg 21

7 27 7 18 2 45 HECLA PARK 8 45 4 41 9 15

7 29 2 47 Dun kles. 8 43 4 38 9 13

7 33 f7 23 2 55 Hublersburg 18 39 4 34 19 09

7 37 7 28 2 55 Supdertown. 8 36 4 29 9 05

7 40 f7 30 2 58 Nittany. f8 31 4 27 fg 02

7 42 f7 33 3 05 Lamar. f8 24 42 fg 00

7 46 7 38 3 05 Clamondale. 18 26 4 18 18 54

7 52 7 44 3 12 Krider's Siding. 8 22 4 14 8 50

7 56 f7 49 3 16 Mackeyville. f8 18 4 09 f8 48

8 02 7 54 3 22 Cedar Spring. 8 12 4 03 8 43

8 05 7 57 3 25 Salona. 8 10 4 01 8 41

8 10 8 02 3 30 MILL HALL. 8 50 5 3 56 8 36

(N. Y. Central & Hudson River R. R.) (N. Y. Central & Hudson River R. R.)

...NEW YORK ... 9 00 10 10 9 00 p. m. a. m. Arr.

tWeek Days
WALLA H. GEPHART,
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