# Correct Time— A New Central-Station Service

Experience of the Philadelphia Electric Company in Merchandising Secondary Telechron Clocks as a Correct-Time Service — Other Apparatus Now Perfected for Use on the System — More Companies Entering the Field

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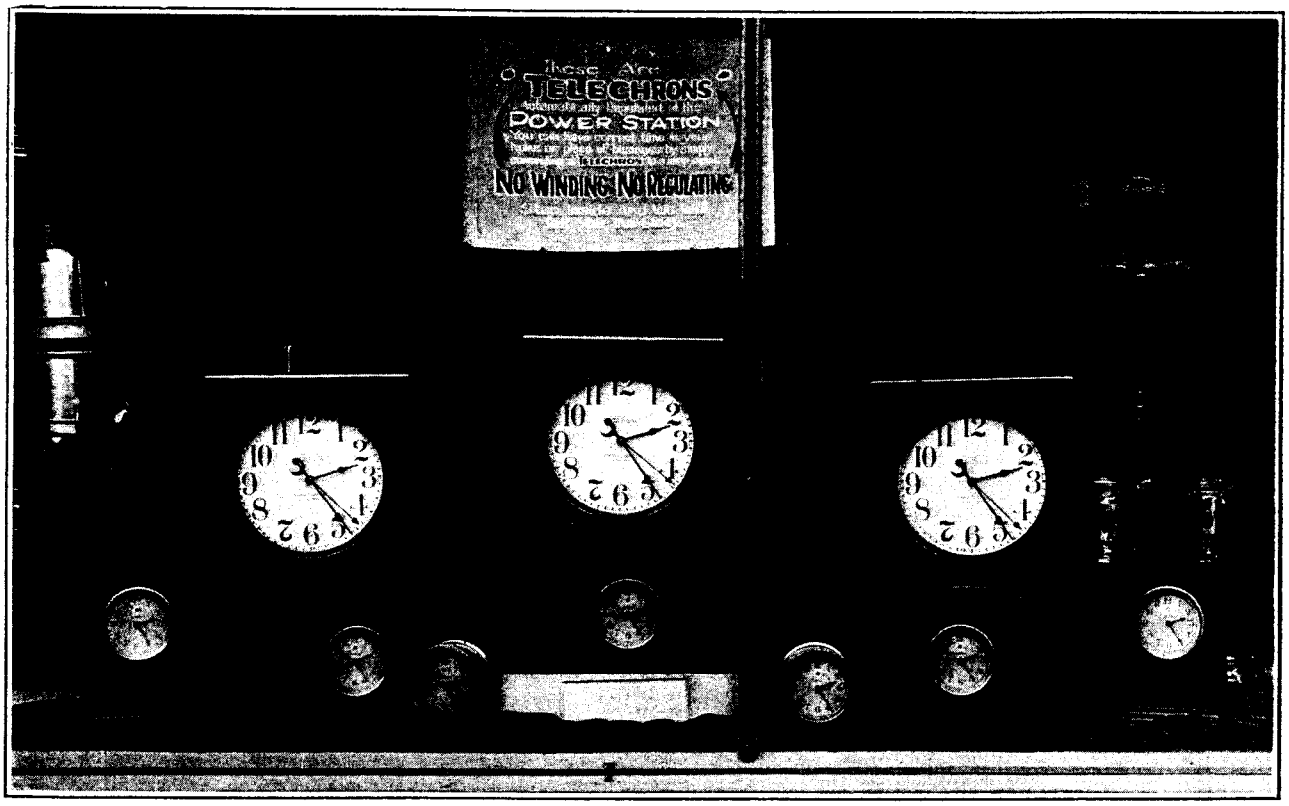


DISPLAY OF GENERAL SERVICE CLOCKS OPERATING ON CENTRAL-STATION FREQUENCY

THE city of Philadelphia has recently witnessed something new under the sun—a central-station company inaugurating the first campaign for the sale of correct time—and many householders of that so-called conservative old community are buying clocks from the electric power company to plug into a handy receptacle or socket and end forevermore all doubt as to whether or not it is time for the breadwinner to start out in pursuit of more bread, or for the children to set out for school, or for the woman of the house to call a taxi and go to the party. The Philadelphia Electric Company about a year ago installed in its power houses the Telechron master clock method of frequency regulation, manufactured by the Warren Clock Company of Ashland, Mass., and became very much interested in the practical opportunity it offered for developing the use of Telechron secondary clocks in the homes, offices, stores and factories of its customers and thus adding a service of correct time to the other benefits of electric service that have grouped themselves under the three heads of light, heat and power.

The value of such service is obvious, for the use of clocks is universal. Every man, woman and child must consult the clock on numerous occasions every day. The catching of trains and the keeping of engagements are dependent upon a knowledge of correct time. Yet there is no absolutely reliable source of time available. Watches and clocks run fast and slow, and now that it is no longer possible to call the telephone operator and ask for the correct time, confidence in clocks in maintained only by perpetual vigilance and continual comparison of watches with Western Union clocks and then checking the watch with the clock at home. For the central station to offer a service of correct time, therefore, is an extremely popular innovation that satisfies a very practical household need and should be of very great value to the central station from the standpoint of public relations, without regard to the income for current consumption or the merchandising profit that the clocks may bring.

The master clock was installed on the Philadelphia Electric Company's system in June, 1920. In May,

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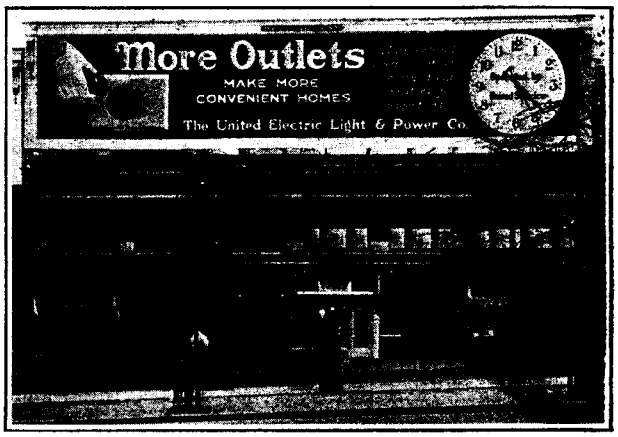
1925, a few secondary clocks were put on display in the company sales room and a display of Telechrons was featured in one of the show windows. A number of clocks with sweep second hands were arranged so that the big second hands swept slowly around the dials in perfect harmony. The novelty of a lot of clocks absolutely alike to the second and these sweep hands revolving absolutely together proved a strong attraction. Crowds stood and watched and for two weeks this display brought an average of 200 persons into the electric shop daily to ask about them. In June, 1925, part of the company's regular appliance advertising broadside was devoted to these clocks. About 63 per cent of those who came into the store to ask about them and those who responded to the broadside have bought clocks.




ADVERTISING USE OF A TELECHRON

## New Developments

It is astonishing how very few central-station executives realize the extent to which the idea of utilizing central-station current for time-keeping purposes has been developed. In 1917 and 1918, when the master-clock method of regulating frequency was introduced, the impression was general that its chief importance was from a meter standpoint; that it was a device to eliminate complaints from customers because of poor frequency regulation. During the next four or five years the manufacturer was kept busy supplying the demands for synchronous motor movements for use in recording instruments of various types, and there are many thousands of motors now used for this purpose because they give an absolutely synchronized record and winding, regulating, oiling and cleaning are entirely eliminated. Within the past two or three years, however, there has been a marked change, and the demand for the Telechron is now chiefly for use in secondary clocks and other devices outside of recording instruments; these clocks and devices are used not by the central station but by central-station customers. During this time a number of other very interesting and important developments have been made. Chief among these has been the development of the secondary clocks, thousands of which are now used by homes, offices, schools, factories and hotels.

SIDEWALK CLOCK OPERATED ON SYSTEM FREQUENCY

The importance of these clocks from the point of view of energy sales is not impressive when a single clock is considered, but when figured on the basis of the need for correct time and the profitable extent of the eventual market, the idea offers something extremely worth while.

The current consumption of the individual clock is very low, but the annual consumption amounts to a significant item from a load standpoint. The clocks, as they have been previously built, are rated at 2 watts, hence the annual consumption amounts to 17½ kw.-hr. This, compared with the average annual consumption of some other well-known appliances, is very favorable. The National Electric Light Association has found the average annual consumption of a washing machine is 12.9 kw.-hr., for a toaster 30 kw.-hr., for a curling iron 1 kw.-hr. In cities like Boston, where several thousand secondary clocks are connected to the central-station system, it is evident that there is an appreciable revenue from this source. The load is also of a very desirable character, because it is even and continuous throughout the 24-hour period and approximately 80 per cent to 85 per cent is off-peak. Moreover, this is not the maximum load that may be expected.

This winter or early in the spring there will be placed in production a new type of Telechron by which central-station energy will also be used to illuminate the dial of the clock. This will be accomplished by means of a small lamp placed behind the dial from which the light is reflected around the outside of the dial, giving it very even and very satisfactory illumination. The clock can be easily read from a distance of 18 or 20 ft. by the average person, which compares with a few feet at which a radium dial is visible. Furthermore, the light is not strong enough to be objectionable in a bedroom. This clock will consume about 50 kw.-hr. per annum, and it is believed it will prove to be an appealing unit after it is placed in production.

## Time Switch for Signs

Another important development is an automatic time switch. In this switch the synchronous motor has replaced the familiar spring movement. The application of the motor to the time switch means that a great many outdoor signs, store windows and the like, which it has previously been impractical to illuminate, can now be lighted, with considerable increase in revenue to the

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central stations. The motor-driven time switch, because of its no-winding characteristics, can be installed in out-of-the-way places along boulevards, railroads, etc., to illuminate billboards, where the necessity of winding old-style time switches prohibited the use of illumination at night. In addition, the fact that the motor movement has many times the power of a spring movement, together with the fact that there are no delicate escapements to contend with, means that practically all the attention required for maintenance has been eliminated. The switch is inclosed in a moisture-proof, dust-proof case, so that it is admirable for this purpose.

It is readily apparent, therefore, that although the switch itself is not a great load-building factor, indirectly it can benefit the central station to a very large extent by increasing the outside illumination. On the Arrow Collar sign in Times Square, New York, where a large sign and secondary clock have been combined, the annual consumption amounts to 175,800 kw.-hr. for 2,200 5-watt lamps.

The list of central stations where Telechron master clocks are in control is a long one and numbers a great many of the most prominent utility companies in the country. It is an interesting fact also that a number of systems are supplied with Telechron regulation through interconnection, even though no master clock is installed in their own plants. One large superpower system in the Southeast, comprising 1,500 miles of 110,000-volt transmission lines, is said to be all regulated from one master clock.

In the beginning it was natural that some companies should fear that the use of secondary clocks in the homes of consumers would involve complaints either because there would be interruptions in current or because the frequency would not be maintained at all times due to conditions beyond the control of the central station. However, reports from companies on the line of which many Telechron secondary clocks are operating show that this is not so. The following letter from Miss S. M. Sheridan, sales manager of the Detroit Edison Company, is a good example. Miss Sheridan writes:

"We have no way of knowing how many of these Telechrons are on our lines, but we think we have a hundred at least, and we have never had any complaint. The fact is that our continuity of service is very high and I doubt that the customers would have any occasion to make such complaints. When inquiry is made of us regarding the use of the clock we do, however, warn the prospective user that the service is liable to interruption and he will have to remember to adjust his clock when he notices the signal up or when he knows the service has been interrupted. From my personal experience with the clock, I believe that it would be a factor in building good will."*

The sale of secondary clocks by companies where systems are regulated by Telechron master clocks has not as yet been extensive. There apparently has been a disposition to try out the system for some time before going to the public with this new service of correct time. Five important companies are said to be now planning to go ahead, however, and are preparing to organize selling campaigns this winter.

*It has been ascertained that at the present time the number of Telechron secondary clocks in use in Detroit has increased to about 2,000.—EDITOR.

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