

E. E. COURTIN.  
ADVERTISEMENT APPARATUS.  
APPLICATION FILED NOV. 13, 1911.

1,035,861.

Patented Aug. 20, 1912.

3 SHEETS—SHEET 1.

Fig. 1.

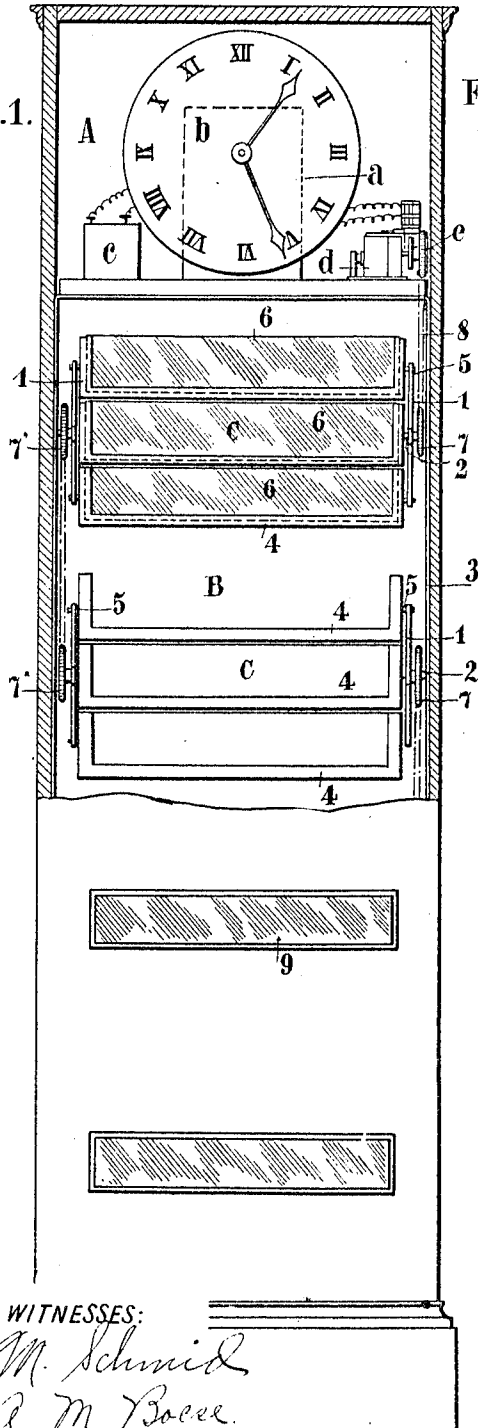
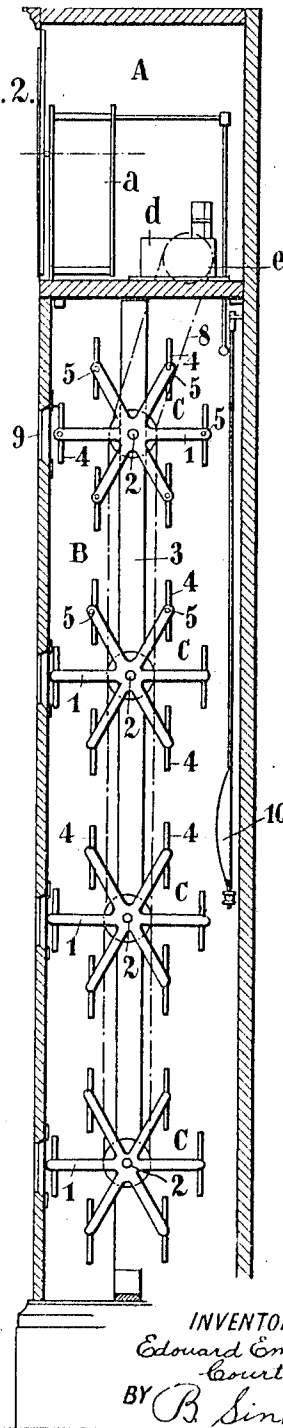


Fig. 2.



WITNESSES:  
*M. Schmid*  
*A. M. Boee*

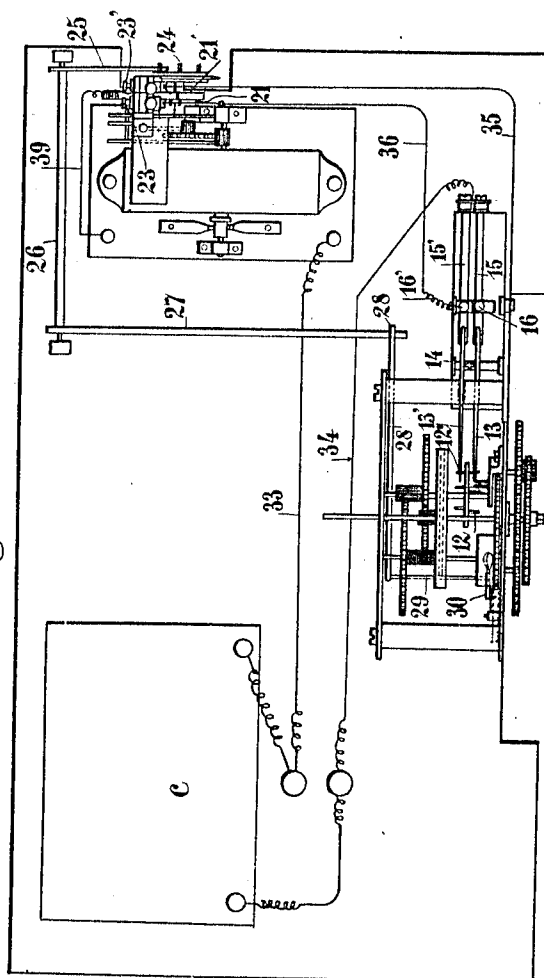
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3 SHEETS—SHEET 2.

Fig. 3.



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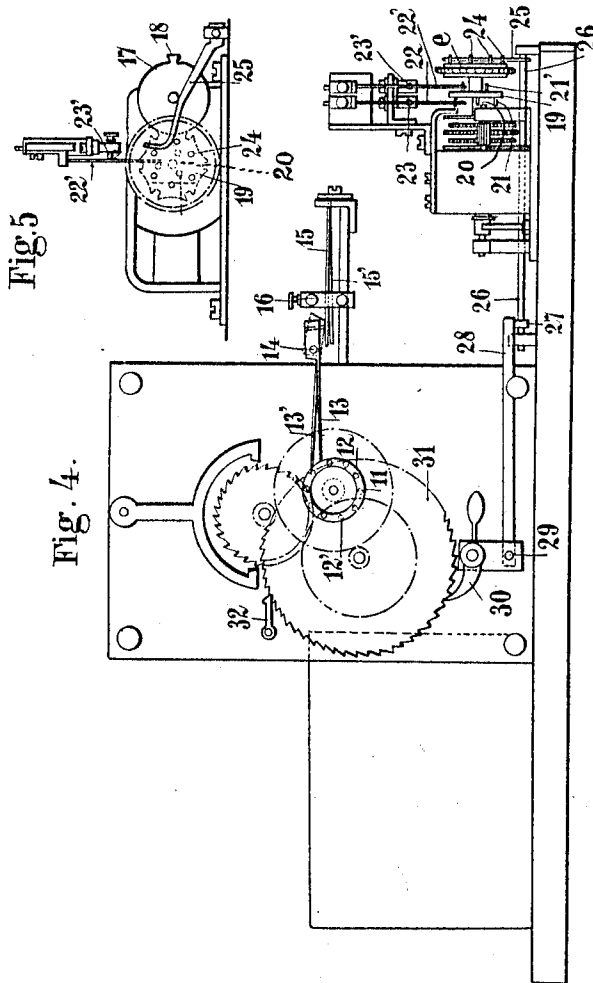
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

EDOUARD EMILE COURTIN, OF PARIS, FRANCE.

## ADVERTISEMENT APPARATUS.

1,035,861.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed November 13, 1911. Serial No. 660,111.

*To all whom it may concern:*

Be it known that I, EDOUARD EMILE COURTIN, 4 Rue Des Filles du Calvaire, Paris, Seine, France, have invented new and useful Improvements in or Relating to Advertisement Apparatus, which improvements are fully set forth in the following specification.

This invention relates to an advertising apparatus with changing advertisements operated by an electric motor controlled by a regulating clock-work which is automatically wound by the electric motor.

In order to make the explanation as clear as possible, a clock with changing advertisements according to this invention is illustrated by way of example in the accompanying drawing.

Figure 1 is a front view of the whole apparatus, half in elevation and half in section. Fig. 2 is a side elevation with the corresponding wall removed. Figs. 3-5 show the driving mechanism, Fig. 3 being a plan, Fig. 4 a front elevation and Fig. 5 a partial side elevation of the same mechanism.

The whole of the device is mounted in a box or cabinet of a suitable shape, generally of wood, which can be provided with any suitable ornaments. In the upper portion A is arranged the clock-work *a* comprising a dial *b*, or without it. The clock-work *a* is connected on the one hand to a source of electric energy *c*, and on the other hand to an electric motor *d* operating as will be described a chain wheel *e*. The part B of the cabinet, or the bottom part in the example illustrated, is reserved for the advertising apparatus proper. The latter apparatus comprises several similar devices C, the number of which varies according to the height of the box or cabinet B, or the dimensions of the said devices.

Each of the devices C comprises a frame constituted by two star wheels 1—in the example shown in Fig. 2 with six arms—keyed to a spindle 2 pivoted at each end in a metal frame 3 secured to the walls of the cabinet B. The star wheels 1 correspond to each other, and at the end of each of the branches of the said wheels are arranged frames 4 pivoted at 5. These frames 4 are open at the top and comprise on the three other sides an inner groove through which can be introduced sheets or plates 6 of paper, cardboard, metal, glass or other suitable material, on which are printed or painted the advertise-

ments or announcements to be shown. The frames 4 are eccentrically weighted so that they always remain vertical during the rotation of the drums comprising movable sides or faces formed by the wheels 1 and the frames 4. To the spindles 2 of the said drums are keyed at each end chain wheels 7 7'. The wheel *e* of the electric motor *d* is connected by a chain 8 to the wheel 7 of the first device C, the wheel 7' of which is connected, also by a chain to wheel 7' of the second device C, and so on, so as to make all the devices C participate in the rotation of the wheel *e*.

The face of the cabinet B is provided on a level with each of the devices C, with openings 9 with or without glass panes, and enable the printed or painted advertisements on the plates 6 to be read as the latter pass the openings in question. The rear face of the cabinet B can be provided with similar openings to enable the plates 6, printed or painted for the purpose on both of their faces, to be read on the back. In that case the clock 10 obviously would be arranged in any suitable manner on one of the sides of the cabinet, so as to leave the two faces entirely free.

The chain wheel *e* is controlled by an electric motor *d* automatically started and stopped by the clock work *a*. To the spindle of one of the wheels of the clock work, is keyed a wheel 11 provided on each face with pins 12 and 12' which can raise alternately during the rotation two levers 13 and 13' pivoted about a pin 14, the end of which lever comes into contact with two plates 15 and 15' which establish an electric contact with the two screws or terminals 16 16'.

The electric motor *d* drives, by means of a reducing gear, an intermittent gear 17 the tooth 18 of which can engage with a coacting intermittent gear 19 having a plurality of recesses for the reception of the tooth 18. This gear 19 is mounted loosely on a pin 20 and secured to the chain wheel *e*. This intermittent gear 19 is provided on each of its faces with pins 21 21' which, during the rotation, act on flexible blades 22 and 22', and establish an electric contact with the two terminals 23 23'. The chain wheel *e* secured to the gear 19, is provided on its outer face with pins 24 acting as cam means on a lever 25 secured to a pin 26 driving in its turn a right angle arm 27. The end of the said arm engages under the lever 28 secured to a pin

29. At the end of the pin 29 is mounted a pawl 30 acting on the ratchet wheel 31 secured to the spring controlling the clockwork, and held against return movement by a locking pawl 32.

5 A suitable source *e* of electric energy, such as a battery or accumulator, is connected on the one hand, by the wire 33 to the electric motor, and on the other hand, by the wire 34 to the two blades 15 and 15'. The terminal 16 is connected by the wire 35 to the terminal 22', and the terminal 16' by the wire 36 to the terminal 22. On the other hand, the two terminals 23 and 23' are connected by the wire 39 to the motor.

15 The apparatus works in the following manner. When the clock is working, the wheel 11 is rotating, and at a certain moment of this rotation, one of the pins 12 releases the oscillating lever 13. Thus, the plate 15 comes into contact with the screw 16. The arm 13' is at that moment slightly raised, and the contact is not established at 16'. The electric current coming from *e*, passes through the blade 15, the screw 16 and arrives through the wire 35 at the terminal 23'. The latter is electrically connected with the motor through the wire 39. The circuit is thus closed, and the motor starts rotating. By means of the reducing gear, the motor drives the intermittent gear 17, the finger 18 of which drives the intermittent gear 19, and consequently the chain wheel *e* secured to the latter. The chain wheel *e* transmits the movement to the advertising devices *C*, and one of the plates 6 arrives level with the opening 9 of the cabinet. But in the rotation of the gear 19, one of the pins 21' comes into contact with the blade 22' and moves it away from the terminal 23', thus breaking the circuit, whereupon the motor stops. The time of rotation is calculated so as to correspond exactly with the arrival of a frame 4 in front of an opening 9. The clock continuing to go, one of the pins 12' escapes from the lever 13', and the circuit is again closed through the terminal 16', the wire 36, the terminal 23, the blade 22 and the wire 39, the current going to the motor which restarts until the pin 21 moves away the blade 22, whereupon the circuit is again broken, and so on. The arrangement of the pins 12 and 12' on the wheel 11 is such that a stoppage is produced properly calculated to enable the advertisements to be read as they are passing in front of the opening 9. At each rotation of the wheel *e*, one of the pins 24 raises the lever 25 which, by means of the rods 26 and 27, transmits this movement to the arm 28, and producing the rotation of the spindle 29, operates the pawl 30 which in its turn rotates the wheel 31 to the extent of one or more teeth, in the opposite direction to the action of the control spring, so that the

clock is thus automatically wound. Finally, the advertising device with changing advertisement can be made independent of a clock indicating the hour, and can be worked by any motor rotating in an intermittent or in a continuous manner.

The drums with movable faces or sides constituted by the stars 1 and the frames 4, can be replaced, as will be readily understood, by cylindrical drums or with fixed sides, on the cylindrical wall or on the sides of which are fixed direct advertisements or announcements to be shown.

#### Claims:

1. An advertising apparatus comprising in combination, a movable display device, an electric motor, intermittent means for transmitting motion of said motor to said display device, an electric current generator having one pole operatively connected to said motor, spring actuated clockwork, a device operable by said clockwork and having two independent switching members operatively connected to said generator, said clockwork being adapted to alternately open and close the said switching elements, a second device having independent switching elements operatively connected to said motor, and adapted to be alternately opened and closed by said intermittent means, alternatively of each other, electric conducting means operatively connecting said first mentioned switching element and said second mentioned switching element independently of each other to complete the electric current between said generator at predetermined periods, and mechanism operable upon actuation of said intermittent means for rewinding said clockwork.

2. An advertising apparatus comprising in combination, a movable display device, an electric motor, means for transmitting the motion of said motor to said display device, an electric current generator having one pole operatively connected to said motor, spring actuated clock work, means coacting with said clockwork and operatively connected to said generator and motor to make and break an electric current through the latter at predetermined periods, a lever actuated upon movement of said motion transmitting means, a ratchet wheel operatively connected with the spring winding mechanism of said clockwork, a pawl for coaction with said ratchet wheel and an instrumentality operatively connecting said lever and pawl to transmit movement of the former to the latter for rewinding said clock.

3. An advertising apparatus comprising in combination, a movable display device, an electric motor, a clockwork, means disposed in the circuit of said motor and operated by said clockwork to make and break an electric circuit through the same at predetermined periods, a wheel driven by said motor, means

operatively connecting said wheel with said display device to transmit movement of the motor to the latter, cam means carried by said wheel, a lever adapted to be actuated  
5 by said cam means of said wheel, a ratchet wheel operatively connected with the spring winding mechanism of said clockwork, a pawl for coaction with said ratchet wheel,  
10 and an instrumentality operatively connecting said lever and pawl to transmit move-

ment of the former to the latter for rewinding said clock.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDOUARD EMILE COURTIN.

Witnesses:

EMILE LEDRET,  
H. C. COXE.