

(No Model.)

J. C. BETTS.
ELECTRIC TIME ALARM.

No. 515,189.

Patented Feb. 20, 1894.

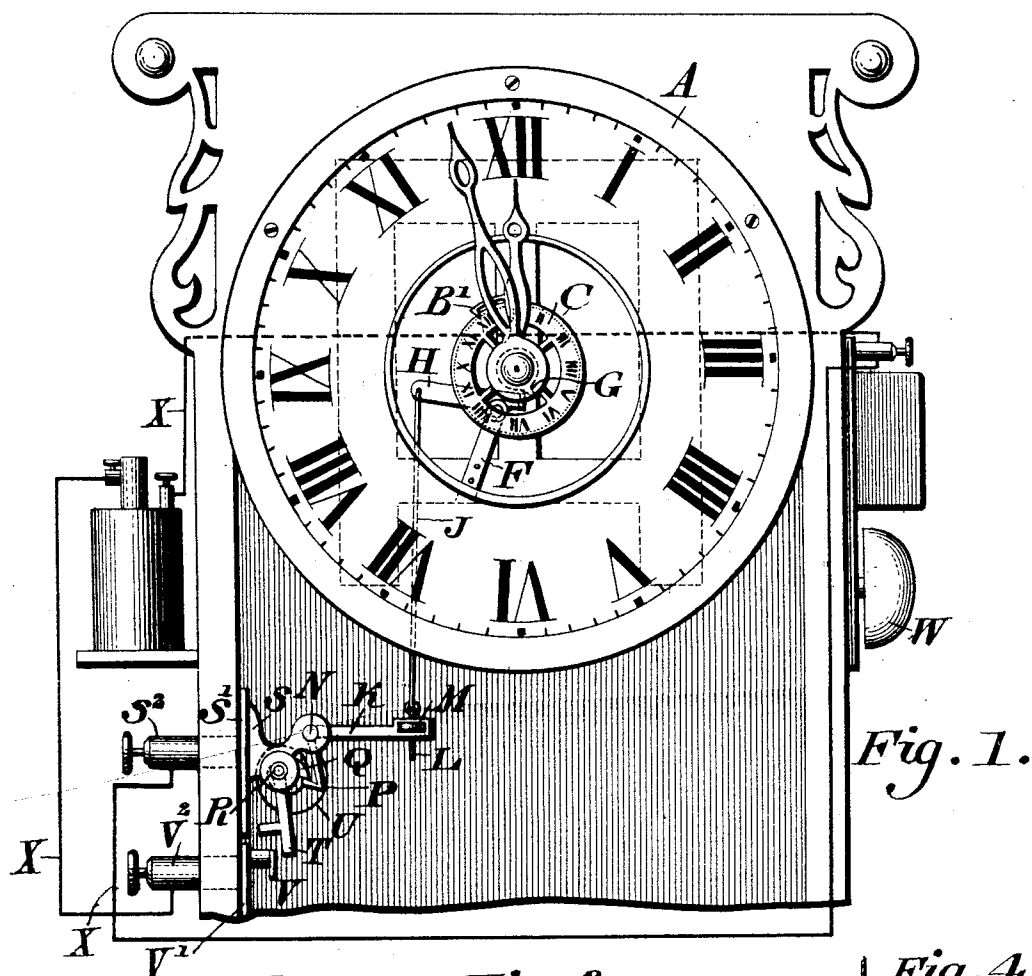
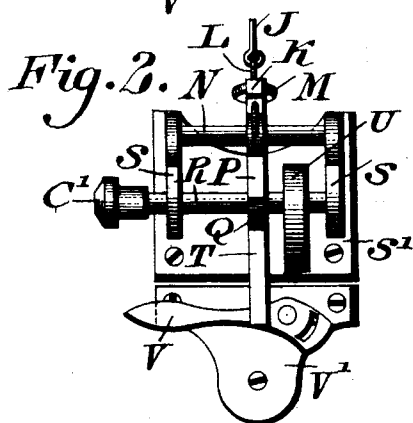


Fig. 1.



WITNESSES:

P. H. Nagler.
W. C. Wiedersheim.

Fig. 3.

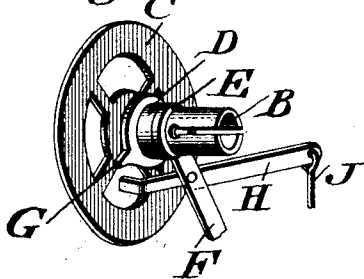
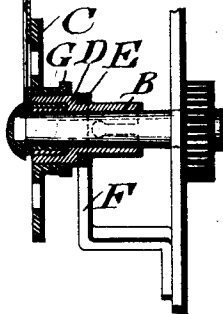


Fig. 4.



INVENTOR
John C. Betts.
BY John Wiedersheim.
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN C. BETTS, OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC TIME-ALARM.

SPECIFICATION forming part of Letters Patent No. 515,189, dated February 20, 1894.

Application filed August 8, 1893. Serial No. 482,642. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BETTS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Electric Alarm Attachments to Clocks, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to an improvement in electric alarm attachments to clocks, and consists of means substantially as described for operating an arm, whereby a circuit is closed and an alarm is sounded.

Figure 1 represents a front elevation of a part of a clock embodying my invention. Figs. 2, 3 and 4, represent enlarged views of detailed parts of my invention.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates a clock, which excepting the parts hereinafter described, is of usual construction.

B designates a split sleeve which is placed on the hour sleeve of the clock, and is adapted to move therewith. On said split sleeve B is placed a dial C, whereby the latter will revolve therewith, or may be turned independently thereon for setting the alarm without disturbing the clock.

The sleeve B has a shoulder D, against which a collar E is adapted to bear, said collar E encircling the said sleeve B, and constitutes part of, or is secured to an arm F, which latter is fastened to any proper part of the frame of the clock. On the said dial C is a cam G, which is adapted to engage with a lever H, whose axis is on said arm F.

J designates a rod which is secured at one end to said lever H, and at the other end to the arm K. Any suitable means may be employed for adjusting the connection of the lever H with the arm K. In the present case I show a screw pin L, which engages with a nut M on said arm K, whereby the distance between said lever and arm may be lengthened or shortened. The arm K is secured to a shaft N, which carries a detent P, the latter being adapted to engage with a shouldered wheel Q, whose shaft R is mounted on brackets S, and carries an arm T, and a spring U,

said arm being adapted to engage with the switch V, the latter being mounted on the plate V', while the brackets S are secured with the plate S', said plates V', S', being attached to the frame of the clock and connected with the binding posts V², S². A bell W is connected with the frame of the clock, but may be located in any room or apartment where an alarm is to be sounded, said bell being in an electric circuit by means of suitable wires X, battery Y, switch V, plates S', V', brackets S and arm T, the proper parts being suitably insulated.

Secured to the hour hand of the clock is a finger B', which is employed for setting the alarm. A knob C' is placed on the shaft R for turning the same, and resetting the detent on the shouldered wheel.

The operation is as follows: The dial C is turned until the finger B' points to the desired hour. As the hand post revolves, and the hour arrives, the cam G raises the lever H, the rod J, and the arm K, and withdraws the detent P from the shouldered wheel Q. The shaft R now turns, owing to the action of the spring U, so that the arm T contacts with the switch V, and thus the electric circuit is closed, the effect of which is the ringing of the bell, which may continue until the switch V is thrown off, thus breaking the circuit. When the swell of the cam G has passed the lever H, the detent may rest on the wheel Q, and the armature held disconnected from the switch V. The collar E assists in retaining the sleeve B and the hand post in position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an alarm attachment to a clock, a setting dial having a split sleeve provided with a shoulder and secured thereto, a collar on said sleeve bearing against said shoulder, an arm secured to said collar, and a cam on said dial, said parts being combined substantially as described.

2. A setting dial with a split sleeve having a shoulder thereon, a collar on said sleeve having an arm, a lever pivoted on said arm, a cam on the sleeve adapted to come in contact with said lever, an electric circuit with an alarm, and a circuit-closing arm connected

by intermediate mechanism substantially as described with said lever, said parts being combined as stated.

3. A split sleeve on the hour sleeve of a
5 clock, a dial on said sleeve, a cam on said dial,
a lever on the clock adapted to be engaged
by said cam, an arm connected with said lever,
a detent carried by the said arm, a should-
10 ered wheel engaged by said detent, a circuit
closing arm carried by said wheel, and a switch
with which said arm is adapted to contact, the
supports of said wheel and switch being elec-
trically connected with an alarm, and the
15 parts operating substantially as described.
4. An attachment to an alarm clock formed
of a split sleeve mounted on the hour sleeve
of said clock, and having a shoulder, a dial
on said sleeve, an arm secured to the frame
of said clock, and having a collar encircling
20 said sleeve and bearing against said shoulder,

a cam on said dial, a lever pivoted on said arm, and adapted to be engaged by said cam, and means for closing a circuit, substantially as described.

5. An attachment to an alarm clock formed 25
of a split sleeve mounted on the hour sleeve
thereof, a dial on said sleeve, an arm secured
to the frame of said clock and having a lever
pivoted thereto, a cam on said dial, and a rod
secured to said lever, an arm connected with 30
said rod, an adjusting device for said lever
and arm, said arm being adapted to release
a circuit closing arm, whereby an electric cir-
cuit may be closed, and an alarm sounded,
substantially as described.

JOHN C. BETTS.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.