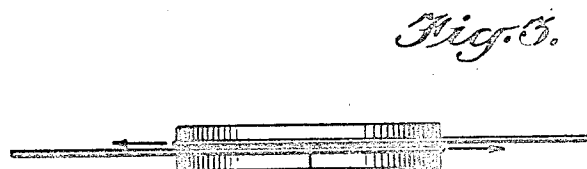
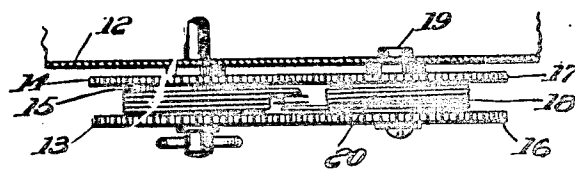
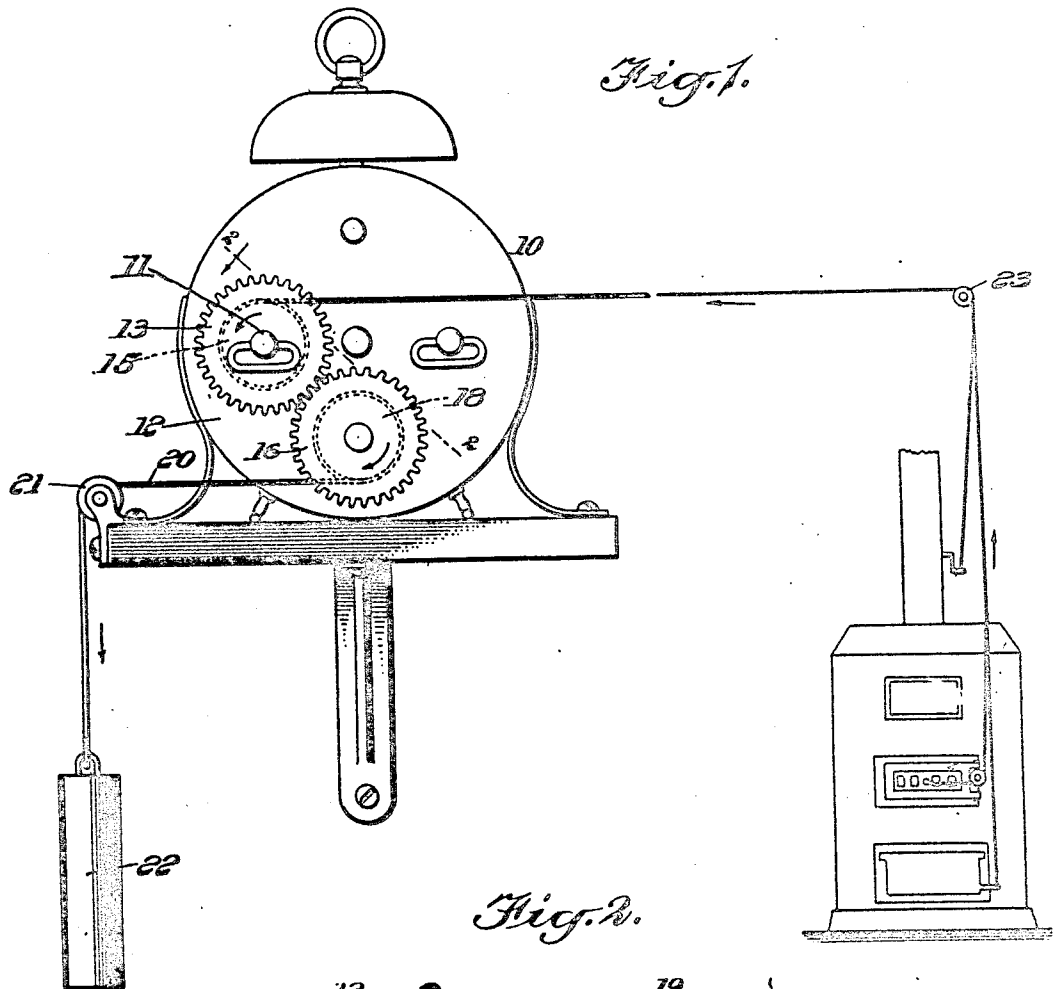


A. C. STREITWOLF.
TIME CONTROLLED MECHANISM.
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1,065,984.

Patented July 1, 1913.



Witnesses:
W. H. Robb
Thomas J. Byrne

August C. Streitwolf
Inventor
By *Kerr & Co.* Attorneys
Kerr & Co.

UNITED STATES PATENT OFFICE.

AUGUST C. STREITWOLF, OF NEW BRUNSWICK, NEW JERSEY.

TIME-CONTROLLED MECHANISM.

1,065,984.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST C. STREITWOLF, a citizen of the United States, residing at New Brunswick, county of Middlesex, and State of New Jersey, have invented certain new and useful Improvements in Time-Controlled Mechanism, of which the following is a full, clear, and exact description.

My invention relates to a time controlled mechanism for operating various devices.

In the present embodiment I show my improved mechanism applied to a furnace damper, but it is to be understood that it is applicable to many other purposes such as providing the means for closing an electric circuit at a certain time.

My invention relates to a mechanism which can be attached to the alarm winding key of an ordinary alarm clock without any substantial alterations in the structure of the clock.

One of the difficulties of previous devices of this sort is that a great amount of strain has been transmitted to the alarm key arbor. In alarm clocks the supports for this arbor are made quite light and a slight strain will cause such a deflection of the arbor inside the clock that the escapement will bind and the whole device will be rendered inoperative.

To the elimination of these defects and to other ends my invention consists in the form and construction shown in the appended drawings and more particularly pointed out in the appended claims.

In the drawings Figure 1 shows a rear view of the device with the alarm clock attached. Fig. 2 shows a top view of the drums and cooperating gears. Fig. 3 shows an unbalanced couple which would result if a single drum were used.

In Fig. 1, 10 is the alarm clock case. 11 is the alarm arbor, with winding key attached. 12 is a plate which is adapted to be placed over the rear of the clock to support my device. The device consists essentially of the gears 13 and 14 mounted upon opposite sides of a drum 15. This drum and the attached gears are fastened to the alarm key arbor in any suitable manner, either by keys or by pinioning the shaft to the drum and gears. A second pair of gears 16 and 17 meshed with the aforesaid gears 13 and 14 and carry between them a drum 18. These gears 16 and 17 and the drum 18 are rotatably mounted upon the shaft 19. The

shaft 19 is fixed in the plate 12. Wound around the drum 18 is a wire or cord 20 which has an end extending away from the drum 18 in a horizontal direction. 21 is a pulley over which the wire so passes. A weight 22 is placed on the end of the wire or cord 20. A second wire entirely separate from the first wire 20 is fastened to and wound around the drum 15. One end extends from this drum horizontally over the pulley 22 thence to the dampers or other mechanism to be operated. Fig. 1 shows the cord as attached to dampers. The double gears 13 and 14 and 16 and 17 are so located that a line passing through their axes makes an angle of substantially 45° with the horizontal. This angle has been determined by experiment to be the most suitable angle to eliminate the strain upon the shaft. If a single drum were used the strain resulting from the two cords pulling in opposite directions upon the drum would tend to rotate the drum about a vertical axis. This is due to the fact that the thickness of the cord makes the pull on one side at a point farther out from the point of support than the pull from the other cord. This produces an unbalanced couple upon the drum (if the forces on both cords are considered equal) which tends to rotate the drum about a vertical axis. This tendency of the drum to rotate causes the alarm key arbor to bind and so causes the device to become inoperative.

Fig. 3 will show the unbalanced couple which would result if a single drum were used. By using the double drum and double gear construction this rotation of the drum on the alarm key arbor shaft is done away with. The strain is transmitted through the gears to the other shaft, 19, and deflection of the arbor shaft is prevented.

I claim:—

1. In a time controlled mechanism in combination, an arbor operable upon the release of an escapement, a drum fastened to said arbor, a pair of gears on said drum on the opposite sides thereof, a second drum, a pair of gears fastened on the opposite sides of the drum and meshing with the first-mentioned pair of gears, a flexible member having one end attached to the drum and the other to the device to be operated, a second flexible member attached at one end to the other drum having its other end fastened to a weight.

2. In a time controlled mechanism, in com-

5 bination, a time controlled arbor, a drum thereon, a pair of gears on said drum, a second drum, a pair of gears thereon, said gears meshing with the aforesaid gears, and means to connect one drum with the device to be operated, and gravity means associated with the other drum to balance the load.

In testimony whereof I affix my signature in the presence of two subscribing witnesses.

AUGUST C. STREITWOLF.

Witnesses:

M. LAWSON DYER,
WM. BOHLEBER.