

M. TAIGMAN.
STARTING BOX.

APPLICATION FILED JULY 13, 1914.

1,155,291.

Patented Sept. 28, 1915.

2 SHEETS—SHEET 1.

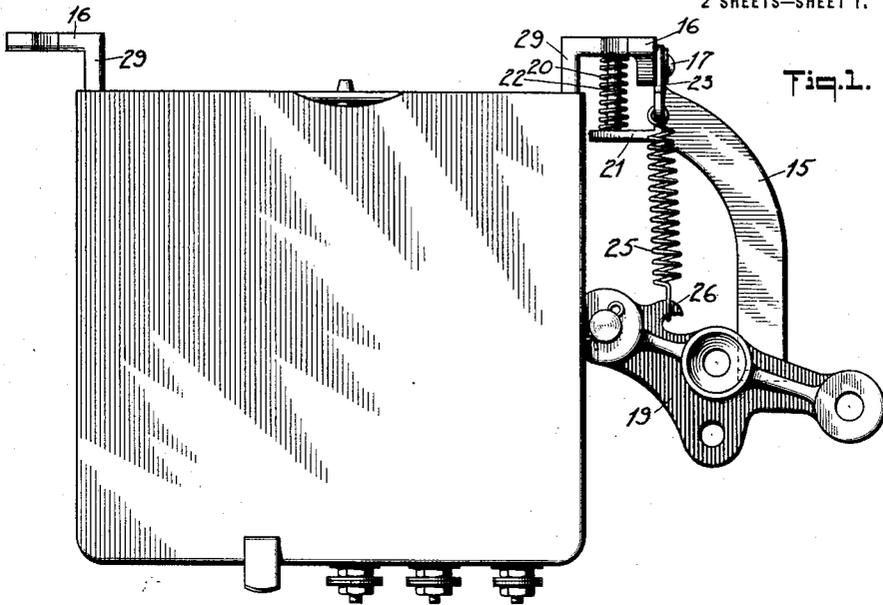


Fig. 1.

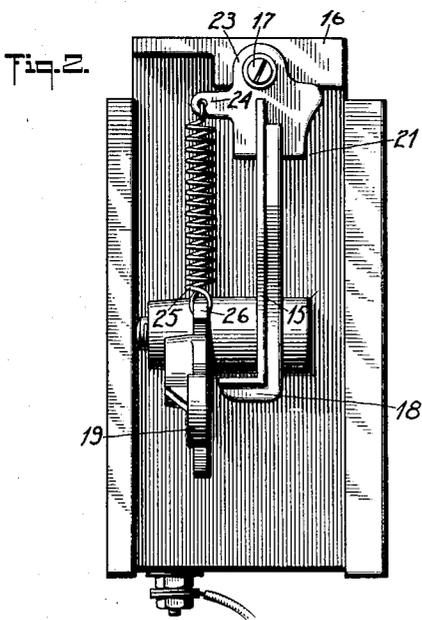


Fig. 2.

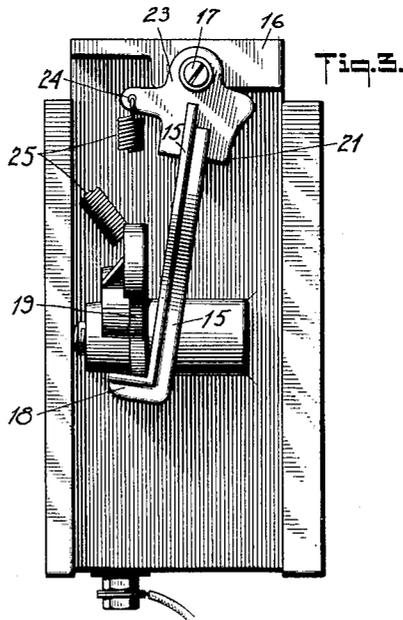


Fig. 3.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 4.

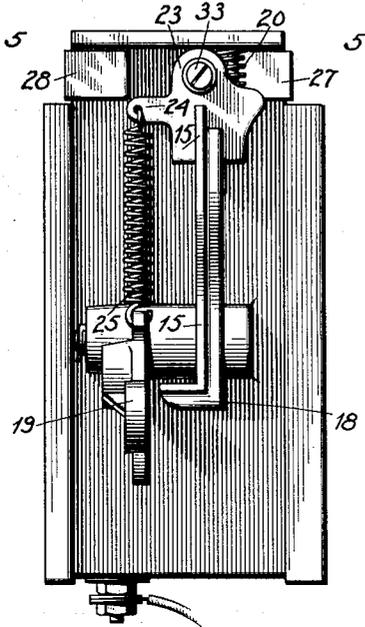


Fig. 5.

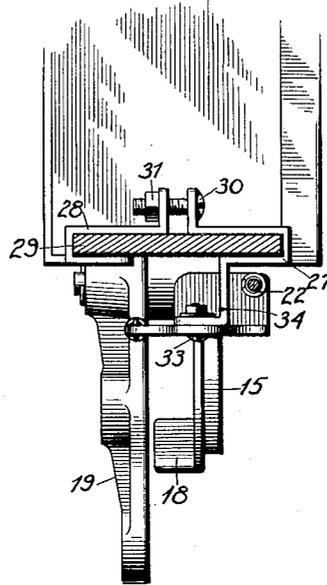


Fig. 6.

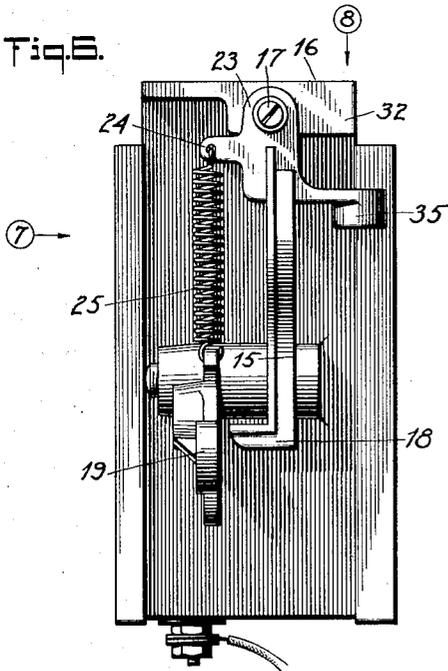


Fig. 7.

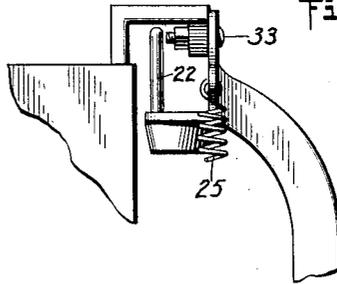
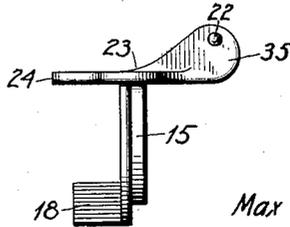


Fig. 8.



WITNESSES

[Handwritten signatures of witnesses]

INVENTOR
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UNITED STATES PATENT OFFICE.

MAX TAIGMAN, OF NEW YORK, N. Y.

STARTING-BOX.

1,155,291.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed July 13, 1914. Serial No. 850,676.

To all whom it may concern:

Be it known that I, MAX TAIGMAN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Starting-Box, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide means for holding the starting lever with which boxes of the character mentioned are provided, on the dead button or inactive position when the retracting mechanism provided for returning the lever to said position, is broken or rendered otherwise inactive; and to provide an attachment which may be mounted on starting boxes already in service.

Drawings.—Figure 1 is a front view of a starting box having an attachment constructed and arranged in accordance with the present invention; Fig. 2 is an end view of a starting box, showing the attachment in normal inactive relation to the switch lever of said box; Fig. 3 shows the same, the attachment being shown in active position; Fig. 4 is a side view of a box, showing an attachment applied thereto, said attachment being constructed and arranged in accordance with a modification of the invention; Fig. 5 is a horizontal section taken on the line 5—5 in Fig. 4; Fig. 6 is an end view of a starting box, showing a modified form of the attachment; Fig. 7 is a detail view, showing a fragment of a modified form of the attachment shown in Fig. 6, the view being taken from the position indicated by the arrow (7); Fig. 8 is a top view of the latch employed in the modified form seen in Figs. 6 and 7, the view being taken from the position indicated by the arrow (8).

Description.—As seen in the drawings, and particularly Figs. 1 to 3 thereof, wherein is shown the preferred form of the invention, a latch arm 15 is pivotally mounted on one of the bracket hangers 16, a screw bolt 17 being employed for that purpose. At the lower end of the latch arm 15, a hook 18 is formed, being extended laterally from the arm 15 to pass under, in the path of the outer end of, a switch lever 19, as shown best in Fig. 3 of the drawings.

The arm 15 is moved to the position shown in Fig. 3 of the drawings by a spring 20, which extends between and bears upon the

hangers 16 and a foot 21. The foot 21 supports at the rear edge thereof, a pin 22, by which the spring 20 is guided.

The body 23 from which the arm 15 and the foot 21 are extended, is further provided with a bracket arm 24, perforated to receive the hooked end of a spring 25, the lower end of which spring normally engages a hook 26 formed on the lever 19. The spring 25 has strength sufficient to lift the outer end of the lever 19 to its normal or inactive position, and to overcome the pressure of the spring 20. The power exerted by said spring 25 operates at all times to maintain the arm 15 in the position best shown in Fig. 2 of the drawings. The backward swing of the arm 15 is arrested and held in position by the pin 22, which normally bears against the under side of the hanger 16 to which the attachment is pivoted.

When the spring 25 is broken or becomes so relaxed as not to lift the lever 19 to its inactive position, the spring 20 rocks the latch arm 15 to the position substantially as shown in Fig. 3 of the drawings, where it extends below and prevents the depression of the lever 19, thereby notifying the operator of the fact that the spring 25 is not in good operating condition.

It will be understood that when operating starting boxes thus equipped, a foot-treadle mechanism is usually operatively connected with the lever 19. The operator manipulates the treadle to start the motor for which the starting box is provided. If the spring 25 does break or develop its inactive condition, it is when the outer end of the lever 19 is forced down. This is the position to which said lever is moved to deliver current through said box to said motor. Though the operator may not be aware of the breaking of the spring 25, nevertheless, in order to stop the motor it is necessary to move the lever 19 to the position where the outer end of the same is lifted. It is then that the spring 20 rocks the arm 15 to insert the head 18 thereof into the path of said lever, to hold the same immovable thereafter.

In Figs. 4 and 5 of the drawings, a modified form of the invention is shown the modification consisting in employing clamping jaws 27 and 28. These jaws are arranged to pass around the extension body 29 of the hangers 16. The jaws 27 and 28 are drawn tightly to service position by means of a

screw bolt 30 and a nut 31 with which the same is equipped. The clamping jaws 27 and 28 are employed only where the hanger 16 is not provided with the outward flange 5 32, and where convenient means is not afforded to secure the bolt 33 which forms the pivot for the arm 15 and the body 23 thereof. To furnish the required support for the pivot bolt 33, the jaw 27 has an angular 10 bracket extension 34, one of the bends whereof is disposed parallel with the side of the box to which the attachment is applied.

The modification shown in Figs. 6, 7 and 8 consists in employing a counterweight 35, 15 which is substituted for the spring 20. In this form of the construction, the pin 22 operates as a stop member for the backward swing of the arm 15, to regulate the working position of the spring 25. When the 20 spring 25 becomes broken or relaxed, the counterweight 35 overbalances the structure, and rocks the arm 15 to place the hook 18 in the path of the lever 19. This form of the invention offers many advantages over 25 the other forms, one of which is its simplicity of construction, the arm 15, body 23, hook 18, counterweight 35 and pin 22 being integrally cast or formed.

In all of the forms of the construction it 30 is to be seen that when the spring 25 upon which the correct operation of the starting box depends, breaks or becomes relaxed, the counterbalancing springs or weights with which the arm 15 is equipped, rock said arm 35 and the hook 18 thereof into a position to engage and support the outer end of the lever 19.

Claims:

1. A starting box embodying a pivoted 40 switch lever, said lever being movable to off position; a latch arm pivotally mounted adjacent said lever for engaging the same when at said off position when unrestrained; and power means operatively connecting 45 said latch arm and said lever, for normally supporting said lever and arm and for restraining said arm from engaging said lever.

2. In combination, a starting box; a pivoted switch lever, a portion of said lever

being within said box, and a portion of said 50 lever extending outside of said box; a latch arm pivotally mounted on said box for engaging said lever when unrestrained; said arm having a hook at one end thereof and a 55 bracket arm at the other end thereof; and a spring operatively connecting said lever and said bracket arm to rock said latch arm to a position where said hook is removed from the path of said lever.

3. In combination, a starting box; a pivoted 60 switch lever, a portion of said lever being within said box, and a portion of said lever extending outside of said box; a latch arm pivotally mounted on said box for engaging said lever when unrestrained; said 65 arm having a hook at one end thereof and a bracket arm at the other end thereof; a spring operatively connecting said lever and said bracket arm to rock said latch arm to a position where said hook is removed from 70 the path of said lever; and means operatively connected with said latch arm for rocking the same to dispose the hook in the path of said lever.

4. In combination, a starting box; a pivoted 75 switch lever, a portion of said lever being within said box, and a portion of said lever extending outside of said box; a latch arm pivotally mounted on said box for engaging said lever when unrestrained; said 80 arm having a hook at one end thereof and a bracket arm at the other end thereof; a connecting spring operatively connecting said lever and said bracket arm to rock said latch arm to a position where said hook is re- 85 moved from the path of said lever; and an auxiliary spring operatively engaging said latch arm to rock the same, for disposing the hook at the end thereof in the path of said lever when said connecting spring fails 90 to support said lever.

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

MAX TAIGMAN.

Witnesses:

E. F. MURDOCK,
PHILIP D. ROLLHAUS.