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PATENTED MAR. 31, 1903.

F. E. MISTROT.
WINDING INDICATOR FOR WATCHES.
APPLICATION FILED SEPT. 11, 1902.

NO MODEL.

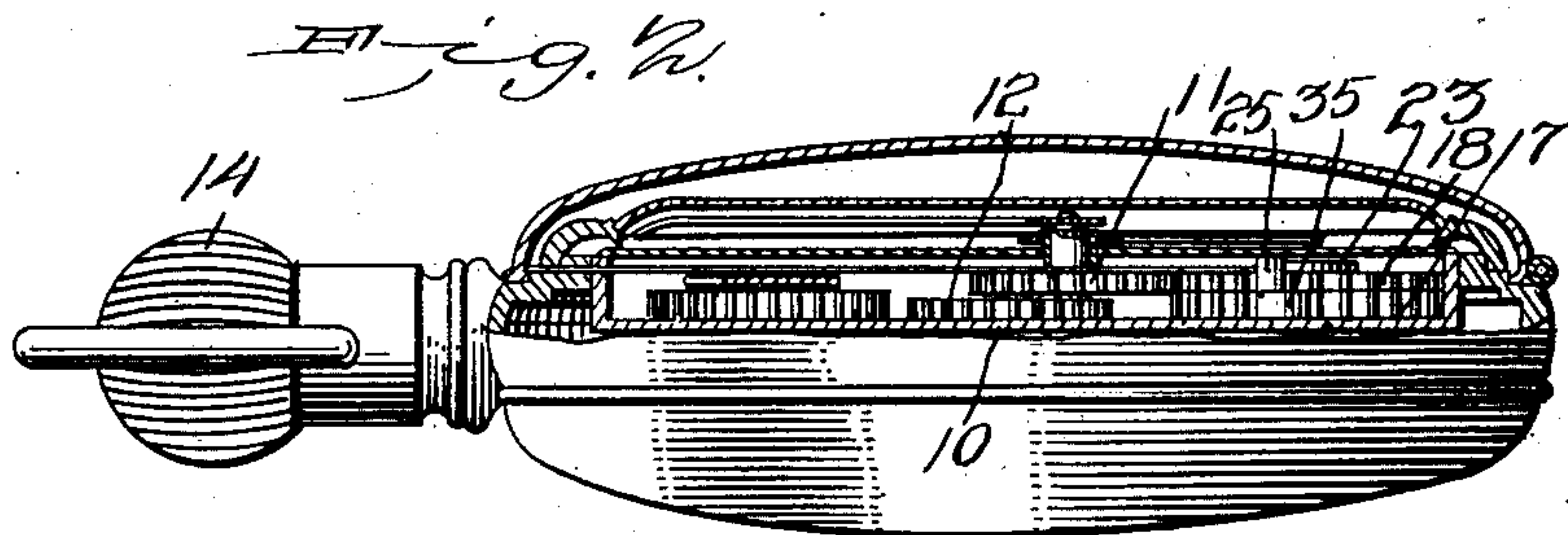
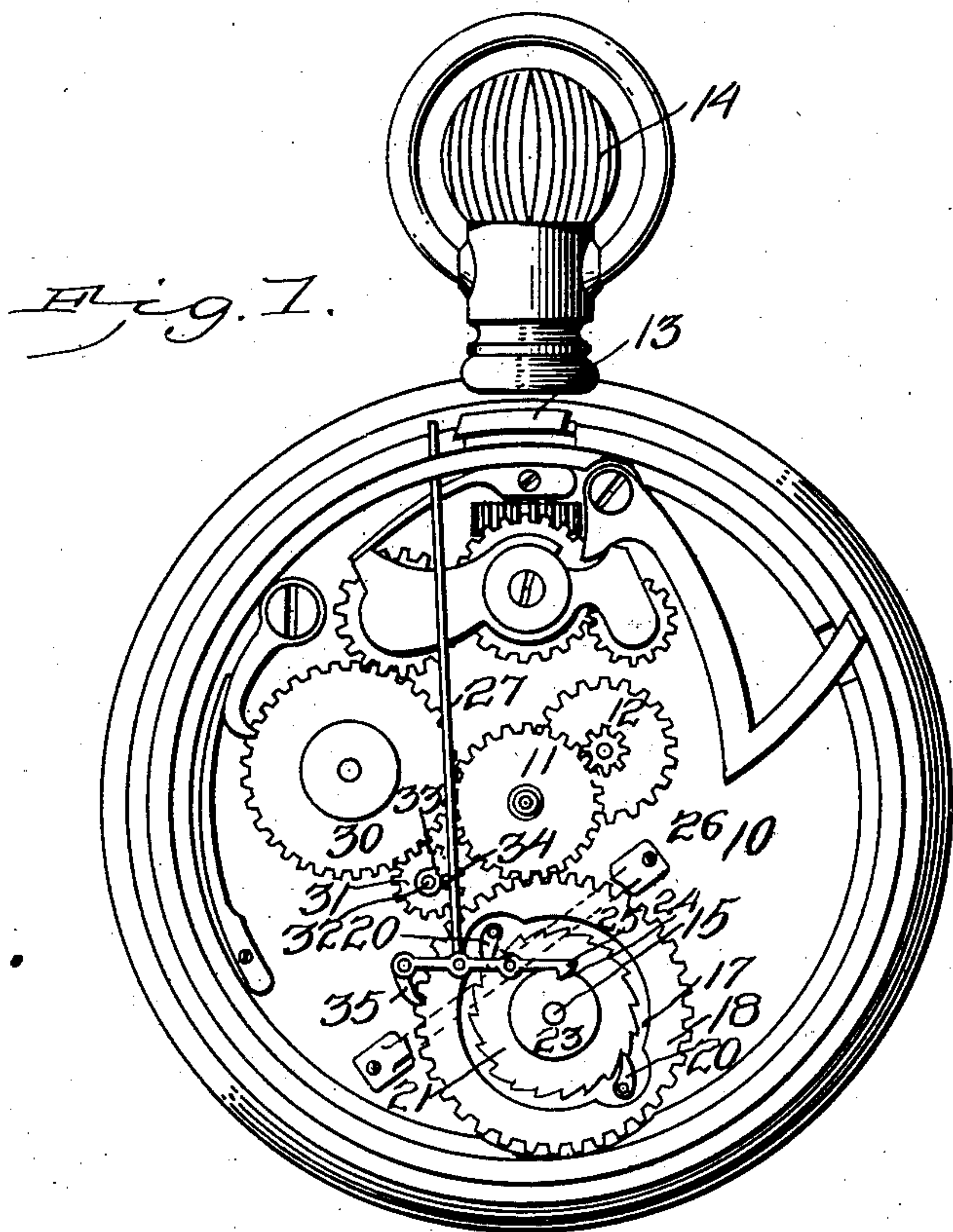


Fig. 3.

Witnesses

E. H. Howard
John E. Parker

F. E. Mistrot, Inventor.

by

C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

FELIX EMILE MISTROT, OF GALVESTON, TEXAS.

WINDING-INDICATOR FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 724,028, dated March 31, 1903.

Application filed September 11, 1902. Serial No. 122,999. (No model.)

To all whom it may concern:

Be it known that I, FELIX EMILE MISTROT, a citizen of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented a new and useful Watch, of which the following is a specification.

This invention relates to certain improvements in watches and clocks, and has for its principal object to provide a mechanism for locking the case in closed position once during each twenty-four hours or other desired period of time in order that the owner's attention may be directed to the fact that winding is necessary.

In carrying out the invention I provide a catch for engaging with the undercut rim or bezel of the watch-lid and effect the locking movement of said catch by the mechanism employed to rotate the hands, the catch being released during the operation of winding in order to permit the opening of the lid in the usual manner.

In the accompanying drawings, Figure 1 is an elevation of a portion of a watch, the dial being removed in order to more clearly show the locking device forming the subject of the present invention. Fig. 2 is a transverse sectional elevation of the same on the line 2 2 of Fig. 1. Fig. 3 is a sectional elevation illustrating a detailed construction.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the drawings, 10 designates the base-plate of the watch-movement, having the usual hour and minute wheels 11 and 12 and provided with setting mechanism of any desired character. The lid of the watch is adapted to be held in closed position by a catch 13, of ordinary construction, said catch being connected to the stem 14, so that when the latter is pressed inward the catch will be moved from engagement with the inwardly-turned rim or bezel of the lid and the latter opened by the usual case-spring. At a point below the hour-wheel the base-plate is provided with a fixed stud 15, on which is mounted a gear-wheel 17, of a diameter double the diameter of the hour-wheel 11, and on the upper surface of said auxiliary gear is mounted a toothed ring 18, of similar diameter, and

adapted to engage with the hour-wheel 11, the ring receiving one complete revolution during each twenty-four hours and serving to impart such movement through its pawls 20 and the ratchet-wheel 21 to the lower gear-wheel 17, the wheel and ring being capable of independent movement in one direction, but being locked together by the pawls and ratchet-wheel when moved in the opposite direction. Secured to or forming part of the ratchet-wheel is a disk 23, having a notch 24 for the reception of one end of a detent 25, pivoted intermediate of its length to a cross-bar 26, carried by the base-plate and extending over a portion of the gear wheel and ring, the arrangement being such that at the end of each twenty-four hours the detent will be engaged in the recess. Pivoted to the detent 25 at a point on that side of the detent-fulcrum opposite to the notched disk is the inner end of a locking-bar 27. The opposite end of the locking-bar is guided in a slot or opening at the flanged peripheral portion of the base-plate and is adapted to be projected for a sufficient distance to engage the bezel of the watchcase-lid and hold the latter securely locked until the winding mechanism is operated.

On the winding-post is arranged the usual locking-wheel 30, and intermeshing therewith is a pinion 31, mounted on a stud 32, carried by the base-plate of the movement, said pinion being provided with a cam 33, which may engage a projecting shoulder 34, carried by the locking-rod, to cause a downward and releasing movement of said rod as soon as the watch-spring is partially wound. This inward movement of the locking-rod serves to elevate the engaging end of the detent from the notch or recess in the disk 23 as soon as the contact arm or cam comes into engagement with the locking-rod. If no provision were made for moving the notched disk immediately after the movement of the rod, the detent would reënter the locking-notch as soon as the winding-stem was released, and to guard against this I provide a small pawl 35 at the outer end of the detent, said pawl engaging in the teeth of the wheel 17 and serving on the downward movement of the locking-rod to effect a rotative movement of the notched locking-disk to move the notch

portion from a position under the engaging end of the detent. When the wheel 17 is turned, the ratchet-wheel slips around past the pawl carried by the toothed ring 18 and does not impart any movement to the hour-wheel which would tend to change the position of the hands of the watch.

The device may be applied to watches, traveling-clocks, and the like where opaque lids or cases are used, and while the construction herein described and illustrated in the accompanying drawings is the preferred form of the device it is obvious that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim is—

1. The combination with a time-indicating mechanism, of a lid or cover forming a part of the casing, an auxiliary catch for engaging said lid, means operable by the time-indicating mechanism for moving the catch to engaging position at the end of a predetermined period of time, and means operable by the winding mechanism for moving said catch to releasing position.

2. The combination with a watch, of the lid forming a part of the watchcasing, an auxiliary catch, means operable by the watch-

movement for moving said catch to lid-engaging position at the end of a predetermined period of time, and means for moving said catch to releasing position.

3. The combination with a watch, of the lid forming a part of the watchcasing, a watch-movement, an auxiliary gear-wheel supported by the base-plate of the movement, a ratchet-wheel and a notched disk carried by said gear-wheel, a toothed ring supported on the gear-wheel and intermeshing with the hour-wheel of the movement, pawls carried by the ring and engaging said ratchet-wheel, a pivoted detent-lever adapted to engage in the notched disk, a pawl carried by the detent-lever and adapted to engage the teeth of the gear-wheel, a locking-rod connected to the detent-lever and adapted to engage the bezel of the watch-lid, a pinion intermeshing with the locking or ratchet wheel of the winding-post, a cam carried by said pinion, and a lug or shoulder projecting from the locking-rod and adapted to be engaged by said cam.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FELIX EMILE MISTROT.

Witnesses:

J. R. WALKER,
R. HANDY.