A. A. ANDERSON.

RECORDING APPARATUS.

No. 180,516. Patented Aug. 1, 1876.

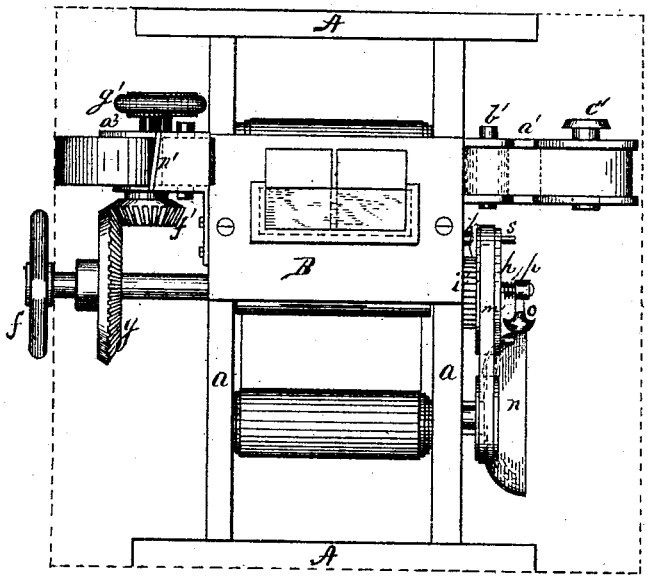

Fig. 1.

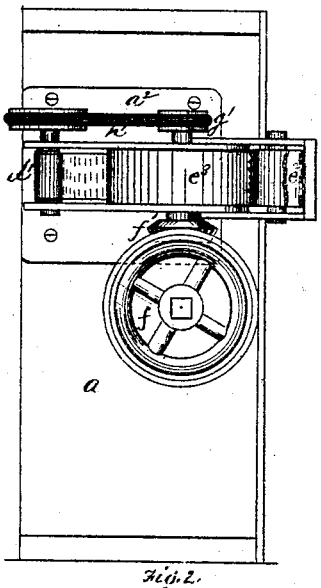

Fig. 2.

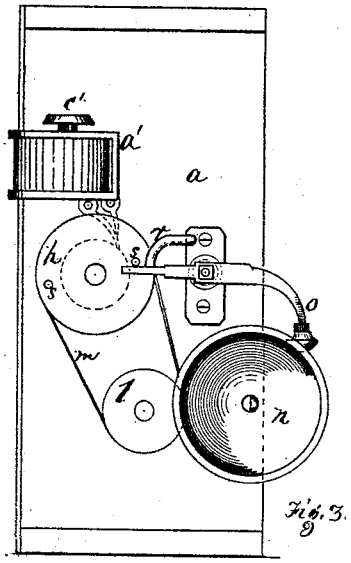

Fig. 3.

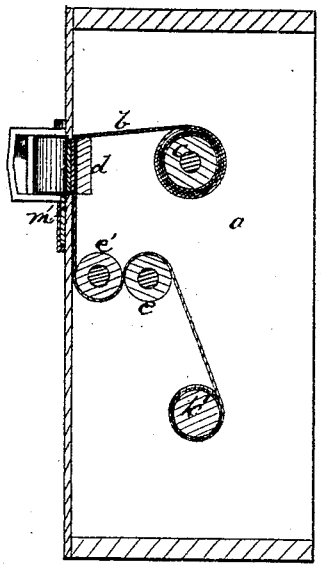

Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

ANDREW A. ANDERSON, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN RECORDING APPARATUS.

Specification forming part of Letters Patent No. 180,516, dated August 1, 1876; application filed June 16, 1876.

To all whom it may concern:

Be it known that I, ANDREW A. ANDERSON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Registering Devices for Recording Sales, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is an elevation of the face of the register. Fig. 2 is an elevation of one side, showing the mechanism for feeding the transfer-ribbon and check-strip. Fig. 3 is an elevation of the opposite side, showing the alarm mechanism. Fig. 4 is a vertical section on the line *y y*, Fig. 1, showing the arrangement of rolls for carrying the record-strip.

Like letters refer to like parts wherever they occur.

My invention relates to that class of registering devices employed for recording sales, registering shipments of goods, and for like purposes, and is especially adapted for use where it is desirable to guard against fraud upon the part of employés.

I will now proceed to describe my invention, as illustrated in the accompanying drawing, so that others skilled in the art may apply the same.

A indicates the frame sustaining the mechanism. It is composed of two uprights, *a a*, in which are journaled the rollers of the record-strip. *b* is the record-strip, which is wound upon primary or dispensing roller *c*, and passes thence over a slot or bar, *d*, secured to the uprights *a a* at a convenient height, and opposite a suitable opening in the inclosing-case. *e* e^1 are a pair of feed-rollers, which receive the record-strip after it has passed over bar *d*, and are preferably covered with rubber, as shown, but may be plain wooden or metal rollers. The roller *e* has upon one end of its shaft a hand-wheel, *f*, or crank, by means of which it is turned, and a beveled pinion, *g*, for communicating power to the check-strip mechanism, and upon the opposite end of its shaft is a pulley, *h*, for driving the final or receiving roll of the record-strip, and a ratchet-wheel, *i*, with which a dog, *k*, engages, so as to prevent any reverse movement of roller *e*. The roller e^1 is driven by friction. *k'* represents the final roll of the series, and is the one which receives the record-strip *b* after it has passed the feed-rolls. As this roll must be driven at a gradually-decreasing speed on account of its gradual increase in diameter, I secure to the shaft a pulley, *l*, and drive the roll by means of a belt, *m*, so that when the tension of the record-strip becomes too great the belt *m* may slip, and thus obviate the tearing of the strip. The same result may, if preferred, be accomplished by friction-pulleys.

On one of uprights *a* I secure a gong, *n*, and hammer *o*, the latter provided with a spring, *p*, and stop *r*, and actuated by pins *s* upon pulley *h*. The arrangement and number of pins *s* will be regulated by the circumference of roll *e* and the space through which the record-strip is to move. For instance, in the drawing I have shown two pins because the circumference of the feed-roll *e* is such that one half-revolution feeds the record-strip the required distance; consequently the pins *s* are arranged to actuate the hammer and sound an alarm at each half-revolution of the feed-roll. This can of course be regulated and varied at pleasure by increasing the circumference of the feed-rolls and number of pins. By thus interposing a pair of feed-rolls between the receiving and dispensing rollers of the record-strip, and connecting the ratchet and alarm mechanism thereto, the strip is fed in regulated quantity, and the alarm sounds as each specified space is fed forward. The entries on the strips will occur at regular intervals.

Secured to the uprights *a*, on a line with the bar or slat *d* and the registering-opening of the case, are two brackets, a^1 a^2, for supporting the rollers and feed mechanism of the check-strip and transfer-ribbon. In the bracket a^1 are journaled the dispensing-rollers *b'* *c'* of the check-strip and transfer-ribbon, and in the bracket a^2 is journaled the receiving-roller *d'* of the ribbon and the feed-rollers e^2 e^3 of the check-strip. The roller e^2 is driven by friction; but the shaft of roller e^3 is provided at one end with a bevel-pinion, *f'*, which gears with pinion *g*, and at the opposite end with a pulley, *g'*, which, by means of belt *h'*, drives the receiving-roller of the inking-ribbon.

By means of the mechanism thus described the check-strip and ribbon are drawn across the face of the record-strip, thus avoiding all tendency of the strip or ribbon to buckle or fold.

As the transfer-ribbon requires to travel but slowly I may, and probably shall, employ a worm-gear for transmitting power from the shaft of roller e^3, instead of a belt and pulley. m' are slotted guide-plates for the transfer-ribbon and check-strip, and n' is a blade or edge formed on the bracket to facilitate the tearing off of that portion of the check-strip which bears the entry. B represents a portion of the inclosing-case, or so much thereof as is requisite to show the register-openings. The remainder of the case, which may be of any approved pattern, and secured in any of the well-known ways, I have indicated by dotted line. The register-openings are preferably made twice the width of the surface of the record-strip to be exposed, and then partially closed with glass, so that the last entry made upon the strip may be readily seen, though beyond reach of alteration. If desired, the front plate of the case can be made entirely of glass.

The operation of these devices is as follows: The case being placed upon a counter or like place when required, the clerk or salesman will write upon the portion of record-strip opposite the register-openings the amount of sale or articles sold, or both, or the number of packages received or shipped, and then will turn the feed-roll by means of the hand-wheel, so as to bring down a fresh portion of the record-slip, thus carrying the record just made out of reach. One of the pins upon pulley h will at the same time actuate hammer p and sound an alarm, thus indicating that an entry has been made, or if no entry has been made the blank space upon the record-strip will be seen, and must be accounted for.

When a check-slip is used in connection with the record-strip, power will be transmitted from the feed-roller of the record-strip to the feed-roller of the check-strip, causing the check-strip to travel across the face of the record-strip. The clerk will then make the entry upon the face of the check-strip, and the transfer-ribbon being interposed between the record-strip and check-strip, the entry will be reproduced upon the record-strip. When the hand-wheel is next turned to bring down a fresh portion of the record-strip the check-strip will be fed forward, so that the portion bearing the entry will escape from the case, and may be torn off and delivered to the customer, cash-boy, or driver, as the case may be.

It is evident that the record-strip may be used either with or without the check-strip, as preferred; but in the latter case the mechanism pertaining to the check-strip would be omitted.

It is also evident that the travel of the strips or arrangement of the dispensing and receiving rollers might be altered or reversed by any skillful mechanic without departing from the spirit of my invention.

In some cases the record-strip may be provided with the transfer-ribbon, and the check-strip omitted, loose checks being inserted, as required.

The advantages of my devices are, that a constant and accurate record of sales must be kept by the salesman, and that fraudulent alteration of the record-slip is impossible, and that each salesman's or shipper's record becomes a check on the cashier or accountant.

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

1. In combination with a closed case having register-openings, the record-strip, its receiving and dispensing rollers, and the feed-rolls, with the ratchet and alarm mechanism connected thereto, substantially as and for the purpose specified.

2. In a registering device of the class specified, the combination of the record-strip and the check-strip, the feed-rollers of the check-strip being arranged to draw said strip across the face of the record-strip, substantially as and for the purpose specified.

3. The combination of the closed case, having a register-opening, the record-strip, with its dispensing and receiving rollers, and the feed-rolls, having the alarm mechanism connected thereto, the receiving-rolls being driven from the feed-rolls by friction-gearing, substantially as and for the purpose specified.

4. The combination of the closed case, having a register-opening partially closed by glass, the record-strip, with its dispensing and receiving rollers, and the feed-rolls, with the alarm mechanism connected thereto, substantially as and for the purpose specified.

In testimony whereof I, the said ANDREW A. ANDERSON, have hereunto set my hand.

ANDREW A. ANDERSON.

Witnesses:

F. W. RITTER, Jr.,

JAMES I. KAY.