

(No Model.)

M. L. MORGAN.
CASH RECORDER.

No. 467,425.

Patented Jan. 19, 1892.

Fig. 1.

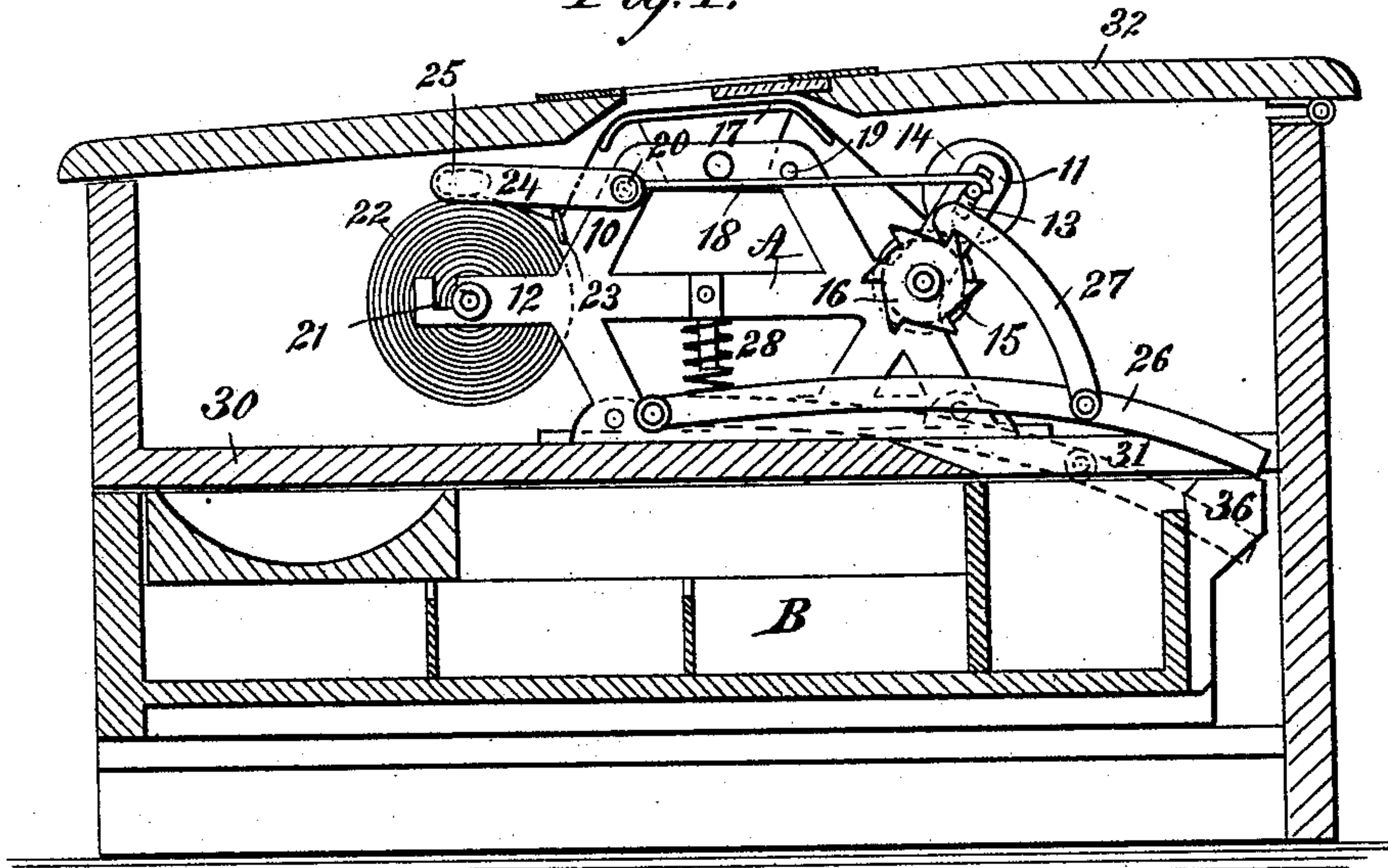


Fig. 2.

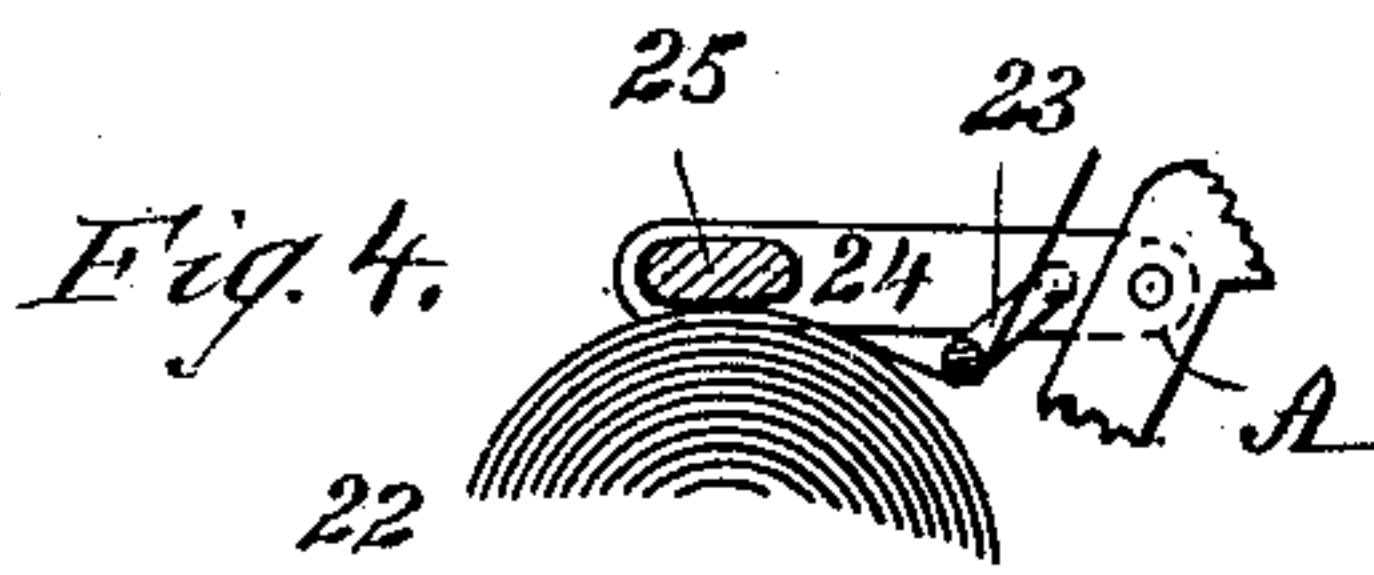
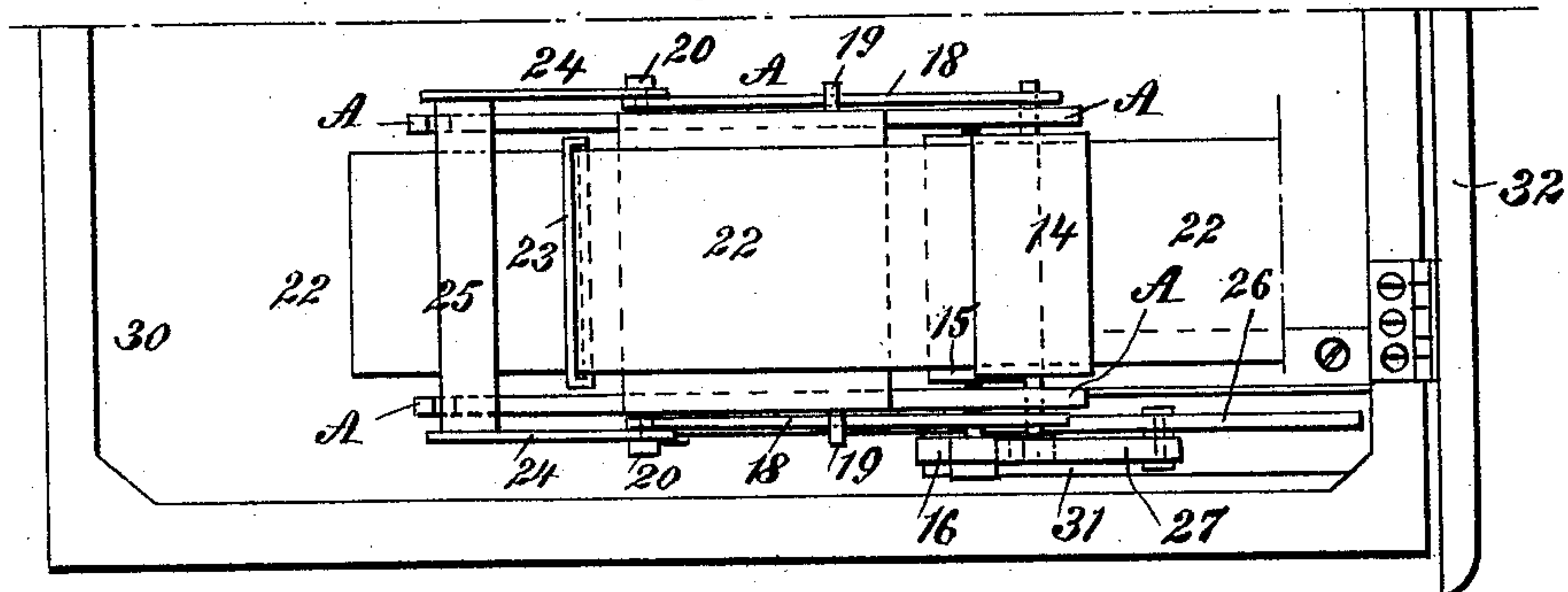


Fig. 3.

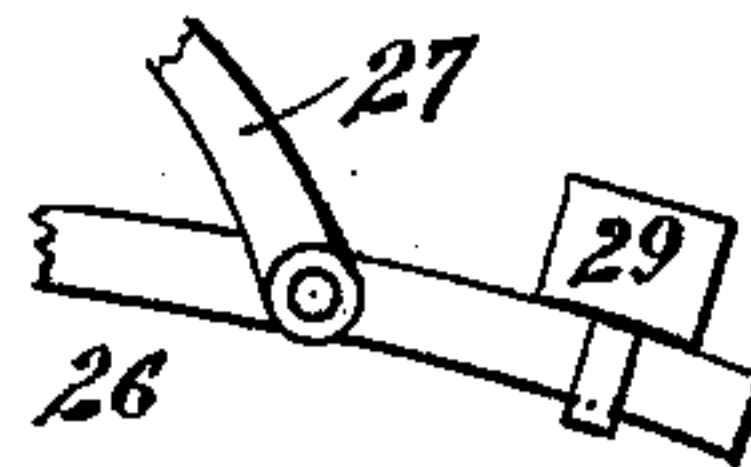
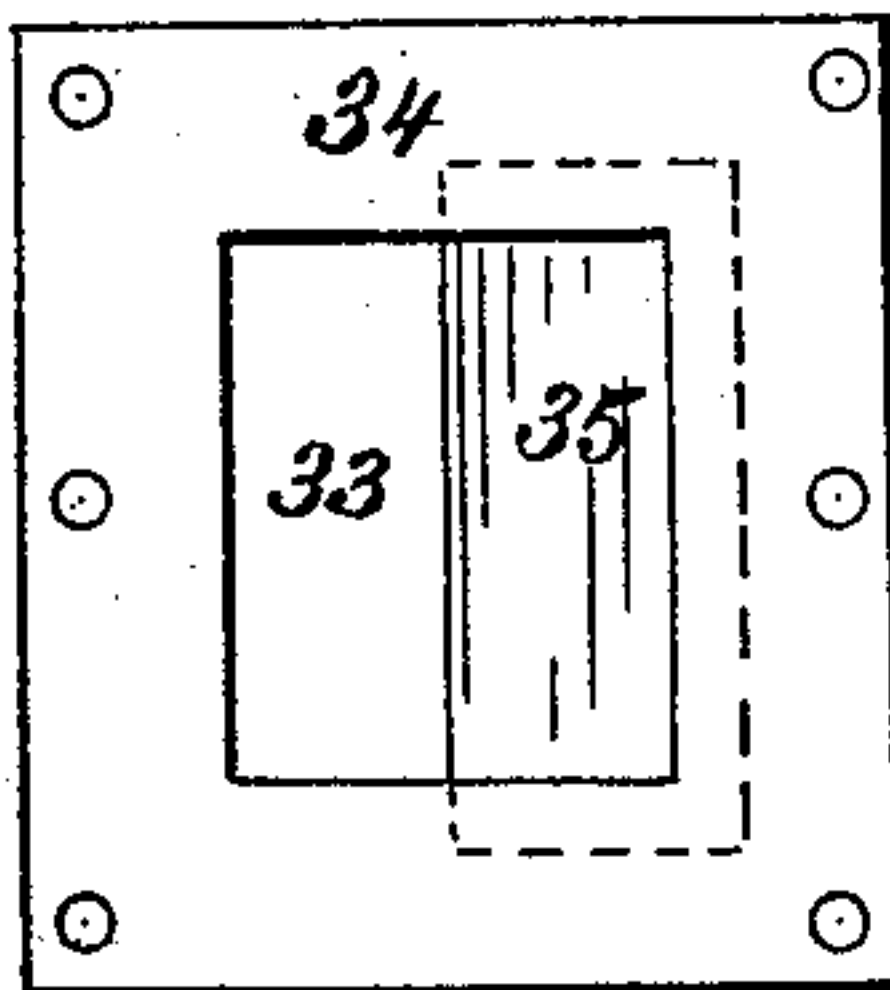


Fig. 5.

WITNESSES:
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UNITED STATES PATENT OFFICE.

MILO L. MORGAN, OF NEW YORK, N. Y., ASSIGNOR TO HARRY GUY MORGAN, OF SAME PLACE.

CASH-RECORDER.

SPECIFICATION forming part of Letters Patent No. 467,425, dated January 19, 1892.

Application filed August 28, 1891. Serial No. 403,957. (No model.)

To all whom it may concern:

Be it known that I, MILO L. MORGAN, of New York city, in the county and State of New York, have invented a new and useful Improvement in Cash-Recorders, of which the following is a full, clear, and exact description.

My invention relates to an improvement in cash-recorders, and has for its object to provide a device of this character of exceedingly simple and durable construction, and to so form the device that a table will be provided for the paper upon which the entries are to be made capable of being adjusted so as to incline in direction of its ends or to be held horizontal, as occasion may demand.

A further object of the invention is to provide a simple and economic tension device for maintaining the paper at all times well stretched over the table, thus effectually preventing said paper from buckling up or wrinkling.

Another object of the device is to so construct the device that the position of the paper will be shifted only when a drawer located beneath it is opened.

It is another object of the invention to provide a tension device for the roll of paper, and in connection therewith feed-wheels and a rigid connection between the trip-lever actuated by the drawer and the feed-wheel.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a central vertical section of a desk having the invention applied thereto and illustrating the connection between the device and the cash-drawer and top of the desk. Fig. 2 is a partial plan view of the desk with its top open and a full plan view of the device. Fig. 3 is a plan view showing the opening at which the entries are made. Fig. 4 is a detail view illustrating a modification in the tension device applicable to the paper upon passing over the table, and Fig. 5 is a

detail view illustrating a modified form of the trip-lever.

The frame of the device consists of two side pieces A, which are preferably connected by a suitable base, or the sides may be attached directly to any desired platform or like support. Each side piece is provided with a central elevated section 10, preferably made somewhat triangular in general contour, but the top is ordinarily flat. At the back of each side piece an upwardly and rearwardly extending arm 11 is located, and a horizontal arm 12 is formed upon the front of each side piece, as is best shown in Fig. 1.

The rear inclined arms 11 of the frame are provided near their upper ends with elongated openings 13, and in said openings the trunnions of a feed-roll 14 are journaled, a second feed-roll 15 being journaled in the said arms below the upper roll in such manner that the peripheral faces of the two rolls will be virtually in engagement. Preferably upon one trunnion of the lower feed-roll outside of the frame a ratchet-wheel 16 is secured, and between the central extensions 10 of the side pieces of the frame a table 17 is pivoted, which table may be made to assume at its upper face a horizontal position or be inclined in direction of either end of the frame, as occasion may demand, the adjustment being preferably effected by using screws as fulcrums for the table, or equivalent construction may be employed. The top of the table is flat and its front and rear edges are curved downward, as is likewise best shown in Fig. 1. A proper tension is exerted upon the upper feed-roll 14 by spring-rods 18, one rod being located at each side of the frame and having bearings at their rear ends upon the trunnions of the upper feed-rolls, engaging about centrally with the under sides of pins 19, located upon the central portion of the frame and having a bearing at their forward ends upon pins 20, located forward of the pivot-pins of the table.

The outer ends of the forward arms 12 are preferably provided with essentially L-shaped recesses 21, adapted to receive the trunnions of a reel upon which paper tape 22, or the equivalent thereof, is wound. The paper

tape is carried from the reel over the table, and from thence between the feed-rollers 14 and 15. In order that the tape of paper, which is held at one end by the feed-rolls, may
5 be held at all times in a smooth engagement with the upper surface of the table 17, a tension device 23 is employed, engaging with and bearing upon the paper tape immediately back of the roll and in front of the table.

10 The construction of the tension device may be varied—as, for instance, as illustrated in Figs. 1 and 2, the tension device may consist of a link through which the paper is passed before it is carried over the table, the link
15 being unattached to the frame and supported only by the tape of paper; or, as shown in Fig. 4, the tension device may be of yoke form, being pivotally attached to a portion of the device in a manner to cause the bow mem-
20 ber to have a bearing against the top of the tape. When this latter form of the tension device is employed, it is pivoted upon the inner face of arms 24, which arms are at their rear ends fulcrumed upon the pins 20 in the
25 frame and heretofore alluded to, and the arms 24 have attached between their forward or outer ends a bar 25, which rests upon the upper face of the roll of paper tape. As the roll decreases in circumference, the bar ac-
30 commodates itself to the reduction of the roll.

By producing the L-shaped recesses in the arms 12 of the frame the reel may be readily removed when all the paper has been un-
wound therefrom, and a complete roll may
35 be inserted in its place.

Upon one side of the frame near the base and preferably near the forward end one ex-
tremity of a trip-lever 26 is fulcrumed. This lever extends rearwardly beyond the back
40 end of the frame, and is preferably curved downward at its rear extremity, and near the rear extremity the lower end of a dog 27 is pivoted, which dog engages at all times with the teeth of the ratchet-wheel 16. The rear
45 end of the trip-lever 26 is normally forced to assume a decidedly downward inclination, as shown in dotted lines, Fig. 1, through the medium of a spring 28, also shown in Fig. 1, or the spring may be dispensed with and the
50 rear or free extremity of the lever be provided with an attached weight 29, as shown in Fig. 5.

The device is adapted for use in connection with a cash-drawer B or the equivalent there-
55 of, which drawer may be located in a casing adapted to be removably placed upon a counter, or the drawer may form a portion of a desk, as illustrated in the drawings.

In the horizontal partition 30 of the desk or
60 casing, immediately above the drawer and in the rear portion of the said partition, a slot 31 is produced, through which slot the rear end of the trip-lever extends downwardly, the device being secured upon the upper face of the partition 30 in a position to admit of this
65 result. The top or cover 32 of the casing or desk is provided immediately over the table

with an opening 33, the said opening being preferably surrounded upon the upper face of the cover or lid by a suitable frame 34, as
70 shown in Fig. 3, and a portion of the cover-opening is provided with a transparent plate 35, glass being preferably employed for this purpose, as is illustrated in the same figure. The walls of the opening 33 are preferably
75 beveled downward and in direction of the the sides and ends of the casing, as shown in Fig. 1.

The drawer B is provided at its rear end or at any suitable point with a bracket 36 or its
80 equivalent, which bracket engages with the lower end of the trip-lever when the drawer is closed and forces that end of the lever upward to the position shown in positive lines in Fig. 1.
85

In the operation of the device, the paper having been carried from the reel through the tension device 23 over the table and between the feed-rollers, when a sale is made the sales-
man writes an account of the sale upon the
90 paper which is upon the table, the entry being made at the uncovered portion of the opening 33. The drawer B is then drawn outward to make change, or if no change is to be made the drawer is still drawn outward, and upon
95 the outward movement of the drawer the lower end of the trip-lever will be forced downward by the spring 28 or its weight 29, and the attached dog 27 will revolve the lower feed-roll by engagement with its ratchet-
100 wheel 16, and the lower feed-roll revolving will carry the paper rearward a sufficient distance to carry that portion containing the entry beneath the glass 35, and a blank portion of the paper will be presented to the uncov-
105 ered portion of the opening 33, ready to receive another entry.

I desire it to be distinctly understood that if a drawer is not employed in connection with the device a pull-rod may be substituted, and
110 in that event the bracket 36 will be carried by the rod and the functions of the rod will be the same as those of the drawer with respect to the operation of the device. When the drawer is closed, the lower end of the trip-
115 lever is again carried upward, and the dog 27 is carried in a like direction and engages with one of the upper teeth of the ratchet-wheel in readiness to revolve said wheel at the next downward movement of the trip-lever.
120

It is obvious that as the table may be tilted to assume various positions the device may be accommodated to casings or desks having different-shaped tops, and that the paper will be constantly kept smooth upon the table
125 through the medium of the tension device 23, and the tension-bar 25 will prevent the paper from feeding too rapidly from the reel. It is further evident that at the end of a business day, for instance, an account may be readily
130 made up, as the tape bearing the entries will be in the shape of a continuous piece located within the chamber between the partition and the top of the casing or desk, and that no ex-

tra receptacle to receive the tape need be employed. It may be further observed that the tape will not be liable to become entangled.

The device is exceedingly simple, economic, and durable, and is especially well adapted for the purpose intended.

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

10 1. In a cash-recorder, the combination, with a frame, paper-rolls mounted in the frame, and a ratchet-wheel on one of the said rolls, of the trip-lever 26, pivoted to the forward part of the frame and having its rear end curved
15 downward and extending beyond the frame, the dog 27, pivoted near the rear end of the trip-lever, projecting up over the ratchet-wheel and engaging the same, the spring 28, arranged between the frame and trip-lever to
20 depress the said lever and cause the dog to operate the ratchet-wheel, and the drawer B, provided with bracket 36 for engaging the trip-lever to raise and return it to its normal position, substantially as described.

25 2. In a cash-recorder, the combination, with a frame, feed-rolls located at one end of the frame, a reel located near the opposite end, a table adjustably located between the feed-rolls and the reel, and a ribbon carried by
30 the reel, extending therefrom over the table and between the feed-rollers, of a tension device exerting pressure upon the ribbon between the table and the reel, a trip-lever fulcrumed at one end to the frame, a ratchet-
35 wheel secured to one of the feed-rolls, and a dog pivoted to the lever and engaging with the ratchet-wheel, substantially as shown and described.

3. In a cash-recorder, the combination, with a frame, feed-rollers journaled at one end of 40 the frame, a reel removably located at the opposite end, a table adjustably connected with the frame between the feed-rollers and the reel, and a roll of tape carried by the reel, which tape passes over the table and between 45 the feed-rollers, of a tension device resting upon the tape between the reel and table, a second tension device having engagement with the upper face of the tape-roll, a third tension device having a bearing upon one of 50 the feed-rolls, a trip-lever fulcrumed at one end to the frame, a ratchet-wheel secured to one feed-roll, and a dog carried by the lever and engaging with the ratchet-wheel, substantially as shown and described. 55

4. In a cash-recorder, the combination, with feed-rolls and a reel of ribbon, of a table over which the ribbon passes, pivoted to tilt upon its pivot, substantially as and for the purpose set forth. 60

5. In a cash-recorder, the combination, with a feeding device and a reel of paper, of a tilting table engaging with the under face of the paper and located between the paper-roll and the feed device, and a tension device bearing 65 upon the paper between the table and the roll, as and for the purpose set forth.

6. In a cash-recorder, the combination, with a roll of paper, of a tension device bearing upon the paper in front of the roll between 70 said roll and its table, as and for the purpose set forth.

MILO L. MORGAN.

Witnesses:

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CHARLES WILSON.