No. 819,705. PATENTED MAY 1, 1906.

C. S. CARRIER.

CHECK PROTECTOR.

APPLICATION FILED SEPT. 16, 1905.

2 SHEETS—SHEET 1.

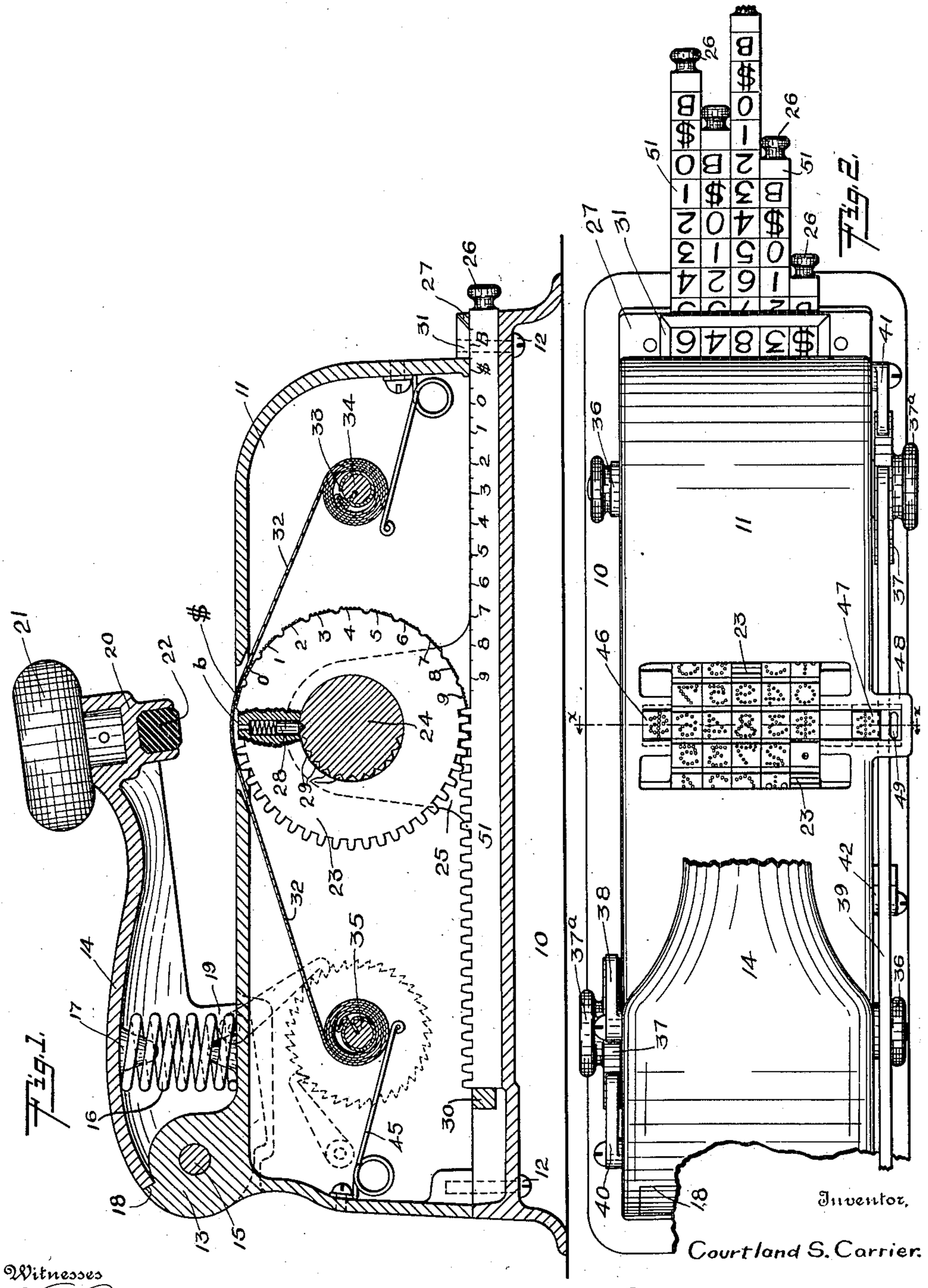

Fig. 1.

Fig. 2.

Witnesses

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Fig. 3.

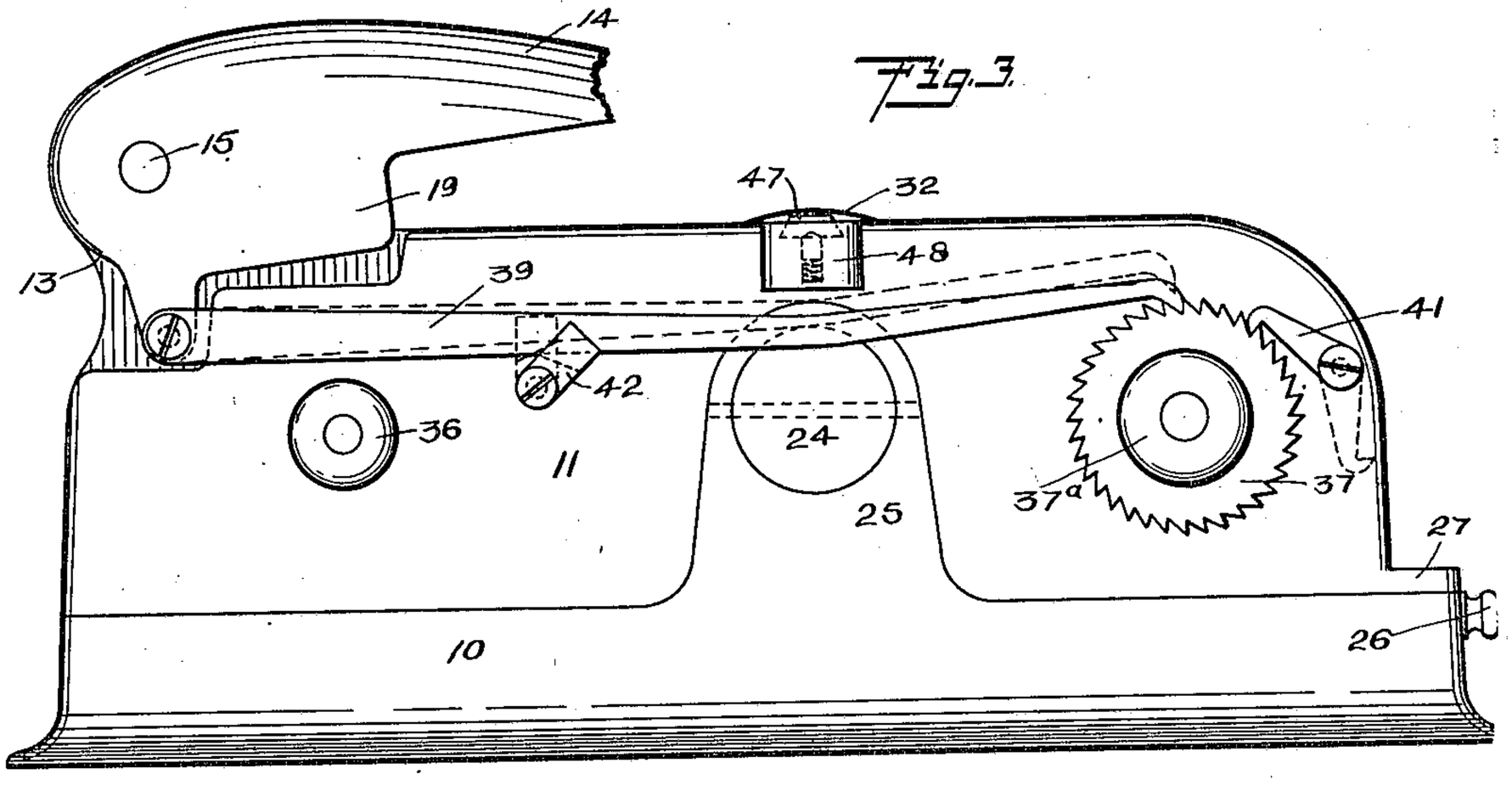


Fig. 4.

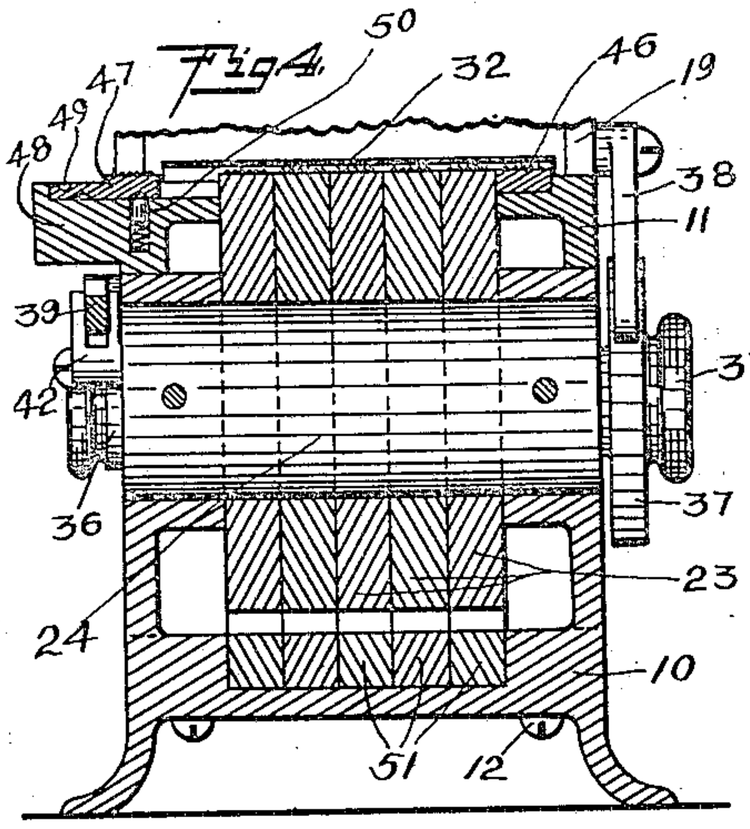
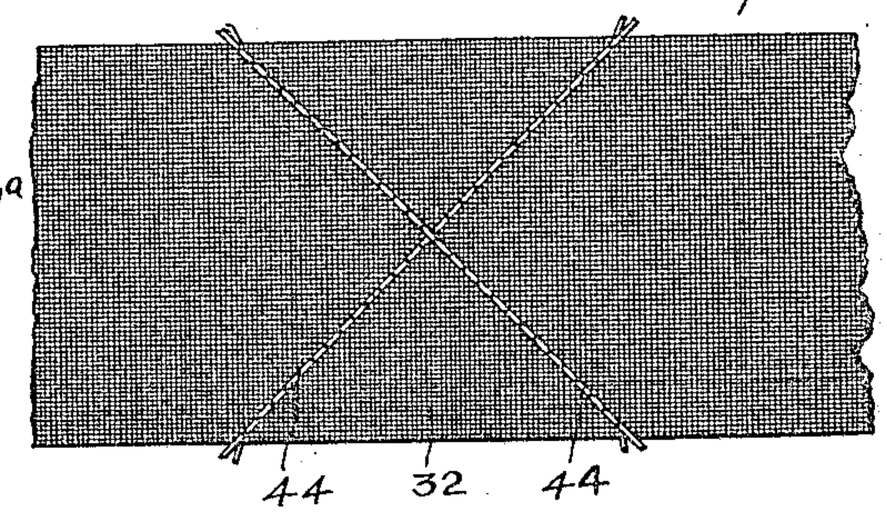


Fig. 5.



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CHECK-PROTECTOR.

No. 819,705. Specification of Letters Patent. Patented May 1, 1906.

Application filed September 16, 1905. Serial No. 278,815.

To all whom it may concern:

Be it known that I, COURTLAND S. CARRIER, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Check-Protectors, of which the following is a specification.

My invention relates to check-protecting machines; and it is the object thereof to provide a simple, convenient, and effective device for use in protecting from alteration checks, money-orders, and the like by marking on the same the amount thereof in such manner that the marking cannot without detection be changed to increase the apparent value of the paper.

My invention consists in the provision, in combination with a suitable platen, of type-wheels having characters thereon of a form adapted to produce an indented or embossed impression, partly breaking the fiber of the paper with which they engage, means for rotating the type-wheels to place in operative position any of the various characters thereon, means for indicating at a convenient location and in their proper order all the characters placed in operative position, an inked ribbon for impregnating with coloring-matter the broken fibers of paper at the indentation or embosture produced by type characters, reversible feeding means for automatically advancing the ribbon at each operation of the platen, means on the ribbon for indicating to the operator of the machine the contiguity of the end of the ribbon to the type-wheels, a reversible resilient platen-block, and certain other novel constructions and arrangements of parts, as will appear more fully hereinafter, and as shown in the accompanying drawings, forming a part hereof.

In the said drawings, Figure 1 represents a longitudinal section of a machine embodying my invention. Fig. 2 is a plan view of the same with parts broken away. Fig. 3 is a side elevation of the same. Fig. 4 is a transverse section on line *x x* of Fig. 2, and Fig. 5 is a detail of a portion of the inked ribbon adjacent one end thereof and showing the means employed for indicating to the operator contiguity of the end of the ribbon to the type-wheels.

In the construction shown I provide a subbase 10, to which the main base 11 is secured by screws 12. At the rear end of the main base is an upwardly-extending lug 13, with which the platen-arm 14 is pivotally connected by the pin 15. A coil-spring 16 is retained in position by the rounded projections 17 on the base and platen-arm, said spring normally holding the said arm in raised position and in engagement with the stop-shoulder 18 on the lug 13, as shown. The said spring is partly concealed by the cheek-pieces 19 of the platen-arm, said pieces extending down over the sides of the base, which are offset to receive the same.

At the front end of the platen-arm is a head 20, to which the knob 21 is secured by a pin passing through the shank thereof, as shown. In the head 20 is a transversely-extending slot in which is held the resilient platen-block 22, the said block being of octagonal section and having one face extending below the head, as shown. The block may be withdrawn from the slot endwise and turned so as to present for use any one of its four principal faces.

In the base immediately below the platen-block are placed the type-wheels 23, which are arranged to project slightly above the upper surface of the base through a suitable opening therein, a suitable number of said wheels being revolubly mounted side by side on the core-pin 24, which is fixedly held in the side lugs 25 on the subbase 10. On approximately one-half of the periphery of each of the type-wheels are flat tangential faces, on all but one of which characters are formed by a series of rounded semispherical projections. The remainder of the periphery of each of the wheels is in the form of a toothed gear which meshes with the teeth on one of the rack-bars 51, one of which bars is provided for each of the type-wheels. The said rack-bars are slidably held side by side in a suitable bearing formed in the subbase 10 and extend through the front of the same below the flange 27 on the main base 11, terminating in the rounded buttons 26, as shown. The length of the toothed portion of the said rack-bars is made equal to the length of the pitch-line of the gear portion of the type-wheels, and the length of the bars in front of the toothed portion is slightly greater than the length of the toothed portion.

In each of the type-wheels is a radial recess containing a spring-impressed stop-pin 28, the inner pointed end of which normally enters one of the longitudinally-extending grooves 29 in the core-pin 24, as shown in Fig. 1. One of said grooves is provided for each of the tangential faces on the wheels, and the

relation of the same is such that when the stop-pin is in engagement with one of the grooves one of the said faces will be properly alined in operative position at the top of the wheel below the platen-block 22. The radial recesses containing the stop-pins are preferably arranged below the depressed blank faces *b* of the type-wheels, and the relative arrangement of the rack-bars and gear portion of the wheels is preferably such that when the rack-bars are pushed inwardly against the stop-bar 30 in the subbase said depressed blank faces will be at the top of the wheels, as shown in Fig. 1. In the flange 27 on the main base is a rectangular opening 31, through which a portion of the upper surface of each of the rack-bars may be seen. On that portion of said surfaces visible through said opening when the bars are in position shown in Fig. 1 is marked the letter "B," the same serving to indicate that the blank faces *b* are then at the top of the wheels. By reference to Fig. 1 it will be apparent that as each of the tangential faces of one of the type-wheels is brought to the top of the wheel a fixed and definite portion of the rack-bar engaging said wheel will be exposed to view through said opening 31, so that by marking on the rack-bars at suitable intervals characters corresponding to those on the faces of the type-wheels the characters on the bars exposed to view through said opening will indicate those characters on the wheels which are at the top thereof and in operative position. The characters employed in the construction shown and the arrangement thereof, starting from the blank face *b*, are respectively "$," "0," "1," "2," "3," "4," "5," "6," "7," "8," and "9," as is clearly shown in Fig. 2, and in Fig. 1 the respective faces of the type-wheels and spaces on the rack-bars are for reference indicated by the same characters.

To prevent the rack-bars from being pulled forwardly so far as to disengage them from the wheels, the said bars are so proportioned that when they are pulled out far enough to place the last face, 9, in operative position at the top of the wheel the first tooth of the rack will engage the inside of the base adjacent the flange 27 and prevent further forward movement of the bar.

Passing over the top of the type-wheels is the inked ribbon 32, the ends of which are rolled upon and attached to the sheet-metal core-sleeves 33, said sleeves having inwardly-extending edges forming keys adapted to engage longitudinal grooves in the ribbon-roll shafts 34 and 35. Said shafts are passed through and journaled in the sides of the base at the positions shown, being removably retained therein by nuts 36, screwed onto one end thereof. On the opposite ends of the said shafts are the ratchets 37, having the turning-knobs 37[a] integral therewith. Suitable pawl-arms 38 and 39, connected with the platen-arm, as shown, are engageable with the said ratchets to advance the same one tooth for each upward stroke of the platen-arm, check-pawls 40 and 41 being provided to prevent backward movement of the ratchets during the downward movements of the press-arm. The pawl-arm 38 and both the check-pawls may be disengaged from the ratchets by swinging the same around to a position similar to that of the check-pawl 41. (Shown in dotted lines in Fig. 3.) The pawl-arm 39 may be disengaged from the ratchet by raising the same by means of the guide-block 42, as disclosed in dotted lines in said Fig. 3. Thus either of the ribbon-roll shafts may be actuated at will and the ribbon fed alternately back and forth in each direction until it is worn out.

As a convenient means for indicating to the operator of the machine that the ribbon is nearing its end when traveling in a given direction and that the direction of feed should be reversed one or more lines of stitches 44 of thread colored differently from the ribbon are run diagonally across the same, as shown in Fig. 5, at suitable points contiguous to the ends thereof. To prevent overrunning of the ribbon-rolls and place a slight tension thereon, the wire springs 45 are provided, the same being attached to the base at suitable positions and the ends thereof resting on the ribbon-rolls, as shown.

To permit the use of all of the type-wheels for marking of numeral characters and when so used to enable the dollar-sign ($) to be used at each side of the numeral characters to prevent additions thereto, I provide the following: In the top of the base at each side of the opening through which the type-wheels extend are dovetail slots in which are held the type-slugs 46 and 47, each having the dollar-sign ($) thereon. The slug 46 at the right of the wheels is fixed in position and used constantly at the right of the numeral characters. The slot holding the slug 47 is made longer than the slug, a boss 48 being formed on the side of the base to permit same, so that in marking a number containing fewer numeral characters than the number of type-wheels said slug may be withdrawn from beneath the platen-block, which is of a length equal to the width of the ribbon. (Shown in Fig. 4.) To facillitate the moving of the said slug 47, a thumb-nail notch 49 is formed therein, as shown, and to retain the slug in either position to which it is moved a pointed spring-impressed stop-pin 50 is placed in a suitable opening in the base beneath the same, the pointed end of the stop-pin normally engaging one of two depressions in the under side of the slug, as shown in Fig. 4.

As an example of the operation of the machine, assume that the rack-bars are all in normal position—that is, pushed inwardly as

far as permitted by the stop-bar 30—so that the blank faces *b* of the type-wheels are at the top thereof, and it is desired to mark on a check the following: "3846." The button 26 on the right-hand rack-bar is grasped and the bar pulled out until the number "6" shows through the opening 27. Similarly, the second, third, fourth, and fifth bars are pulled out until the characters "4," "8," "3," and "$," respectively, are in view through the opening 27, the setting of the die then being as shown in Fig. 2. The dollar-sign at the right of the numerals being marked by the fixed slug 46 need not be taken into account in setting the die. The check is then placed face down over the die formed by the type-wheels and slugs, the inked ribbon of course lying between the check and die. The platen-block is then by a blow upon the knob 21 brought forcibly down upon the check and die, so that the rounded projections forming the characters on the die indent or emboss their impression in the paper, partly breaking the fiber thereof, and the coloring-matter from the ribbon impregnates the broken fibers so as to make alteration of the marking practically impossible.

It will be obvious that the machine may be provided with type-wheels and slugs for marking any characters desired and that various minor variations may be made from the exact construction shown without departing from the spirit of my invention.

Now, having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a machine of the class described, the combination with a suitable platen of type-wheels each having suitable characters on a portion of the peripheral face thereof and gear-teeth on the remainder of said face, a base inclosing said wheels, a subbase, a shaft carried thereby on which the type-wheels are revolubly mounted, interengaging means on the shaft and wheels for retaining the wheels in various predetermined positions, and rack-bars slidably held in the subbase, the said rack-bars having teeth engaging the teeth on the type-wheels whereby longitudinal movement of the rack-bars will rotate the type-wheels.

2. In a machine of the class described, the combination with a suitable platen of a plurality of type-wheels each having suitable characters formed on a portion of the peripheral face thereof and gear-teeth formed on the remainder of said face, a base inclosing the said wheels, a subbase, a shaft carried thereby on which the wheels are revolubly mounted, interengaging means on the shaft and the wheels for retaining the wheels in predetermined positions, rack-bars slidably held in said subbase, said rack-bars having teeth engaging the teeth on the type-wheels, and characters marked on the rack-bars, said characters corresponding to the characters on the respective type-wheels engaged by the bars, there being in the base an opening through which is exposed one of the characters on each of the rack-bars, and the arrangement being such that the characters so exposed will indicate the characters in operative position on the respective wheels engaged by the bars.

3. In a machine of the class described, a platen, a printing member comprising a plurality of type-wheels each having characters formed on a portion of the face thereof and gear-teeth on the remainder of said face, a base inclosing said printing member, a subbase, a shaft carried thereby on which the type-wheels are revolubly mounted, rack-bars slidably held in the subbase and having teeth thereon engaging the teeth on the type-wheels, and an inked ribbon carried by the base and passing between the printing member and the platen, the base carrying the ribbon and platen being removable from the subbase without disturbing the arrangement of the printing member and rack-bars.

4. In a machine of the class described, a base, a die carried thereby, a platen-arm pivotally connected therewith, and a resilient platen-block held by said arm adjacent the die, the said platen-block being in the form of a polygonal prism so that by reversing the same with relation to the platen-arm more than one of its faces may be presented to the die.

5. In a machine of the class described, the combination with a suitable platen of a printing member comprising a plurality of type-wheels, and type-slugs held adjacent said wheels, one of said type-slugs being movable parallel with the axis of the type-wheels, and the type wheels and slugs having characters thereon formed by series of rounded projections adapted to indent or emboss paper pressed thereon.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

COURTLAND S. CARRIER.

Witnesses:
D. O. BARNELL,
S. WEAVER.