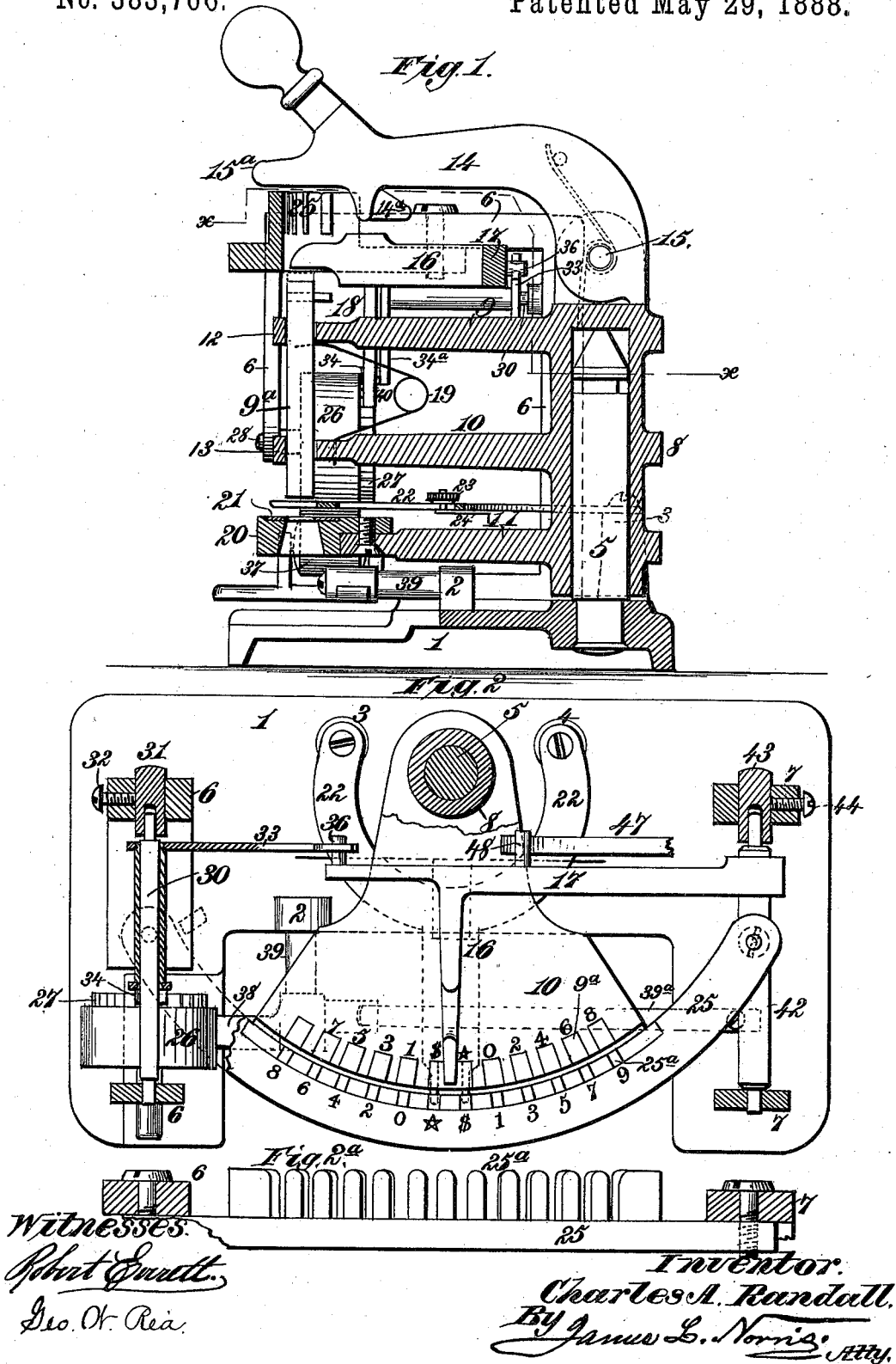


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MACHINE FOR CUTTING OR PUNCHING CHECKS, &c.

No. 383,766.

Patented May 29, 1888.

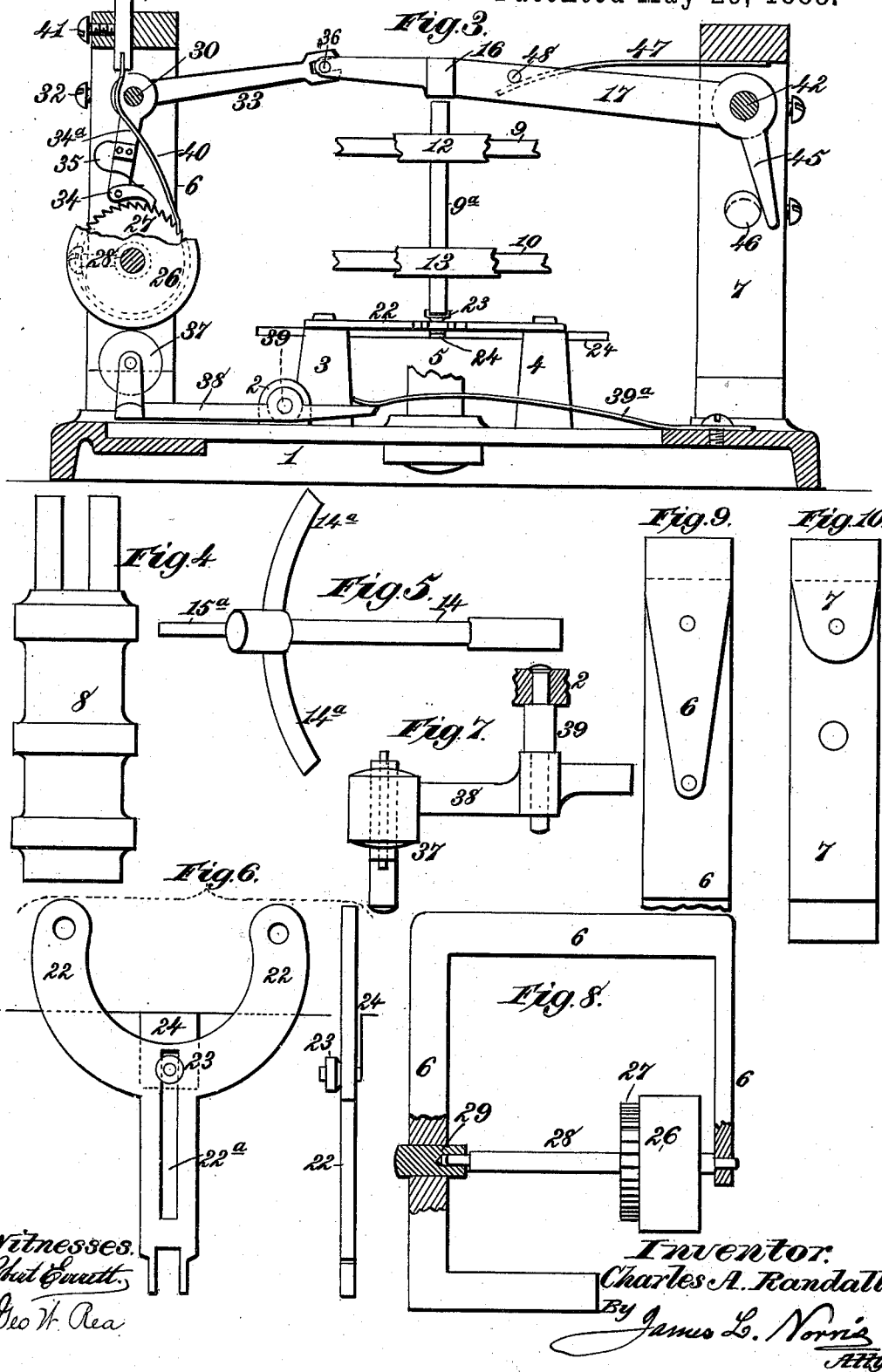


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UNITED STATES PATENT OFFICE.

CHARLES A. RANDALL, OF NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO WILLIAM D. ELGER, OF BROOKLYN, NEW YORK.

MACHINE FOR CUTTING OR PUNCHING CHECKS, &c.

SPECIFICATION forming part of Letters Patent No. 383,766, dated May 29, 1888.

Application filed September 9, 1886. Serial No. 213,123. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. RANDALL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Machines for Cutting or Punching Checks, &c., of which the following is a specification.

This invention has for its object to provide novel mechanism for cutting or punching figures or other characters from bank-checks, drafts, and other papers of value to prevent fraudulent alterations of their value or amount, whereby a single lever is used to select and act upon the cutters or punches, thus simplifying such machines and avoiding the loss of time and inconvenience incident to those machines in which a series of levers are employed to operate the cutters or punches.

The invention consists in the construction and combination of devices, which will be hereinafter fully described, and then set forth in the claims.

In the drawings, Figure 1 is a vertical central sectional elevation of a punching machine embodying my invention. Fig. 2 is a horizontal sectional view taken on the line *x x* of Fig. 1. Fig. 2^a is a front view of the slotted guide-plate for the selecting-lever; Fig. 3, a detail sectional elevation with parts broken away; Fig. 4, a detail rear elevation of the tubular part of the swinging frame, which carries the punches and dies; Fig. 5, a detail top plan view of the punch selecting and depressing lever; Fig. 6, detail, plan, and edge views of the stripper and of the adjuster or gage for determining the distance the paper is inserted into the machine rearwardly; Figs. 7, 8, 9, and 10, detail views, hereinafter explained.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the accompanying drawings, wherein—

The numeral 1 indicates the base-plate, cast or otherwise provided with upwardly-projecting studs 2, 3, and 4 and vertical overhanging standards or frames 6 and 7, and having centrally between its ends at the rear the vertical cylindrical post 5, on which is loosely mounted the tubular hub 8 of a swinging frame compris-

ing horizontal arms 9, 10, and 11, located one above the other, the general form of such frame being the segment of a circle mounted on the post as a central pivot. The cutters 9^a are arranged to slide vertically in suitable guide-ways at the outer ends of the horizontal arms 9 and 10, and are retained in place by bands 12 and 13, or otherwise, said cutters being acted on by suitable springs, 19, to restore them to their raised or normal position, and being limited in their depression by pins 18 coming in contact with the upper arm, 9, of the swinging frame. The lower arm, 11, of the swinging frame is provided with an attached segmental metal piece, 20, carrying the female dies or matrices 21, which correspond in position to the lower ends of the cutters.

Directly above the dies is arranged a stripper composed, as here shown, of a forked arm, 22, which may be secured to the studs 3 and 4, said arm having a slot, as at 22^a, in which is movable a set-screw, 23, carrying a gage-plate or adjuster, 24, so that the latter can be set and secured in the desired position to determine the insertion between the cutters and dies of the paper to be cut or punched, thus accurately placing the paper for the correct cutting or punching of the figures or other characters on the cutters or punches.

In front of and slightly above the swinging frame is arranged a segmental guide-plate, 25, having vertical slots 25^a, which guide-plate may be secured in its fixed position by attaching its ends to the top or overhanging portions of the standards or frames 6 and 7. This guide-plate constitutes a guide for selecting and depressing the punches, and for this purpose it is furnished with figures or other characters, Fig. 2. The position of the lever 14 is determined by bringing it over the slot in the guide which corresponds to the desired character to be punched, and then depressing the lever to advance the punch, which is effected by the lever or its arms 14^a acting directly upon the arm 16 of a feed-operating lever, 17, mounted on a rock-shaft, 42, journaled in the standard or frame 7, said lever having the forwardly-projecting arm 16, to act directly upon the punch which is selected.

The figures or characters on the guide 25 are

arranged the reverse of the figures or characters on the punches. Thus, if numerals are used, the even numbers on the punches are to the right of a central line and the uneven numbers to the left of such line, while upon the guide the order is the reverse thereof. Whatever the arrangement of the figures or characters on the punches may be, the designating-characters on the guide must be such that when the selecting-lever is brought over a slot in the guide the punch having the corresponding character upon it must have been brought to a common center.

The paper feeding or spacing mechanism consists of a wheel, 26, having at one side a ratchet-wheel, 27, and mounted on a shaft, 28, supported by the standard or frame 6. The inner end of the shaft 28 is journaled in a longitudinally-adjustable bearing, 29, Fig. 8, seated in the frame 6 and secured by a set-screw. (Not shown.) It may be stated that this screw is applied in the same manner and for the same purpose as the screws 32 and 44.

In the frame 6, above the feed-wheel, is mounted a rock-shaft, 30, having its inner end supported in a longitudinally-adjustable bearing, 31, seated in said frame and secured by a set-screw, 32, in the same manner as the bearing for the shaft 28, and to the said rock-shaft is attached a pendent arm, 34^a, carrying a pawl, 34, engaging the ratchet-wheel 27 and acted on by a spring, 35. A backward movement of the feed-wheel is prevented by the lower end of a spring or click, 40, engaging the ratchet-wheel 27, Fig. 3, the upper end of the spring or click being carried by an adjustable rod secured by a set-screw, 41, in the frame 6. An arm, 33, secured to the rock-shaft 30, is provided with a forked or slotted extremity engaging a lateral pin, 36, on the end of the lever 17, in such manner that when said lever is depressed by the punch-selecting lever the pawl is set in position to advance the ratchet-wheel one step upon the return of the lever 17 and arm 33 to normal position, thereby partially revolving the feed-wheel. A friction-roller, 37, beneath the feed-wheel, is mounted in bearings on a plate, 38, fulcrumed between its ends on a pin, 39, projecting from the stud 2, one end of the plate being acted on by a suitable spring, 39^a, to press the roller toward the feed-wheel, so that the step-by-step movement or intermittent rotation of the latter will advance the paper as required to produce the space between the figures or characters.

The upper end of the punch producing the numeral 1 (one) extends above the upper ends of the other punches, as shown in Fig. 1, so that the arm 16 of the feed-operating lever 17 acts more quickly on such punch, and the extent of movement of the lever is lessened, so that the feed-roller moves a less distance than when the remaining punches are operated, thereby regulating the paper-feeding devices and producing uniform spacing of the figures or characters.

The rock-shaft 42 of the feed-operating lever

17 is mounted at its inner end in an adjustable bearing, 43, seated in the frame 7, and secured by a set-screw, 44, in the same manner as the shaft of the feed-wheel, and said lever 17 is provided with a tail-piece, 45, which abuts a suitable adjustable cam-stop or set-screw, 46, to limit its upward movement.

The punches, as shown, are provided, respectively, with the ten digits, the dollar-sign, and an asterisk, and the designating-characters of the guide-plate correspond therewith, except as to their reverse order or arrangement, as before explained.

In the use of the machine the gage or adjuster 24 serves to regulate the distance a check or draft may be inserted into the machine, and when it is properly set determines the place upon the check relative to its width where the characters are to be cut or punched. The friction-roller 37 is depressed, and the check or other paper is placed between it and the feed-wheel and between the stripper and the dies, after which the lever 14 is moved to the right or left over the slot in the guide corresponding to the character to be cut. In such movement of the lever the swinging frame is turned in a horizontal plane and the selected punch thereby brought to a common center or directly under the arm 16 of the feed-operating lever 17. The punch-selecting lever is then quickly depressed into the slot in the guide and immediately removed and carried over the slot corresponding to the next character to be cut or punched, and the operation repeated until all the characters are punched or cut in the check or other paper, the amount for which the check is drawn being designated by cut or punched characters—as, for example, thus: \$50,125*78*—that is, fifty thousand one hundred and twenty-five dollars and seventy-eight cents. The lever 14 when depressed acts upon the arm 16 of the lever 17, depressing the latter, and consequently the cutter or punch, while at the same time said lever 17 moves the arm 33 downward, causing the pawl or feed-dog 34 to be set so that it will advance the ratchet-wheel and turn the feed-wheel to feed the paper the proper distance for spacing purposes upon its return to its normal position.

The lever 17 is restored to its upper or normal position by a spring, 47, secured to the frame 7, and acting against a pin, 48, on said lever, which movement also returns the arm 33. As but a single lever is used for selecting and depressing the punches, it need not be released by the hand until all the characters have been punched or cut, thereby avoiding the loss of time and inconvenience incident to those machines where a series of punch-operating levers are employed, each of which must be alternately selected, brought to a common center, used, released, and another selected and used in the same manner.

The extreme movement of the single lever is but the fraction of a circle, and the movement of the lever for each punch is to the left

or to the right, and not both to the left and to the right for each punch, thereby saving time in use and avoiding much labor.

In machines of this class it is important to have the dollar-mark and the dividing-sign, usually an asterisk, so placed that they may be used with least labor and loss of time, as they are used more frequently than the other characters. It is also important to have all of the characters arranged in such manner that there shall be the least possible delay in selecting them for use. I have therefore arranged centrally the dollar-mark and the dividing-line or asterisk, with the even numbers on one side and the uneven numbers on the other side of the same. An operator will quickly become accustomed to the arrangement, and become expert in selecting the punches, this arrangement thus facilitating the use of the machine and rendering it very speedy in operation.

Having thus described my invention, what I claim is—

1. The combination of a movable frame, the cutters or punches and dies carried by the same, a single selecting and actuating lever mounted upon and moving with the movable frame, and a single lever interposed between

the punches or cutters and the single selecting and actuating lever, substantially as and for the purpose set forth.

2. The combination of a movable frame carrying the punches and dies, a punch selecting and actuating lever mounted on and moving with the frame, paper-feed devices, and a swinging lever for operating the feed devices, interposed between the punches and the punch-selecting lever and depressed by the latter to operate the punches, substantially as described.

3. The combination of a movable frame carrying the punches and dies, a punch selecting and depressing lever mounted on and carried by the swinging frame, a movable lever having an arm projecting forward beneath the punch-selecting lever, the rock-shaft carrying the pawl and connected with the armed lever, the feed-wheel, the ratchet-wheel, and the yielding friction-roller, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. RANDALL.

Witnesses:

GEO. H. TAMLYN,
JANDINE LYNG.