No. 728,726. PATENTED MAY 19, 1903.

W. J. KENDERDINE.

CHECK PUNCH.

APPLICATION FILED FEB. 20, 1903.

NO MODEL.

Fig. 1

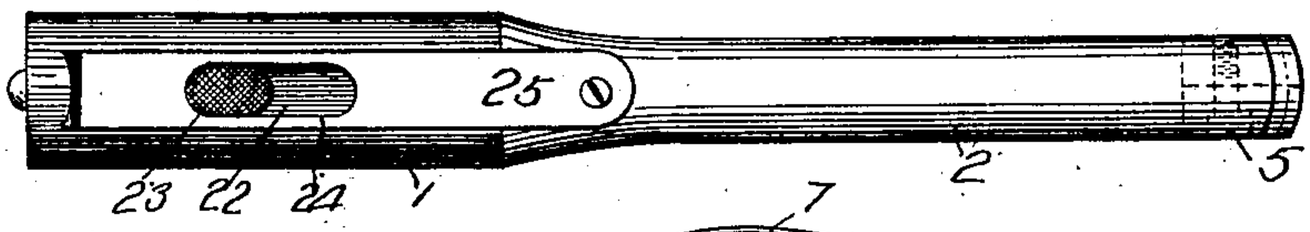


Fig. 2

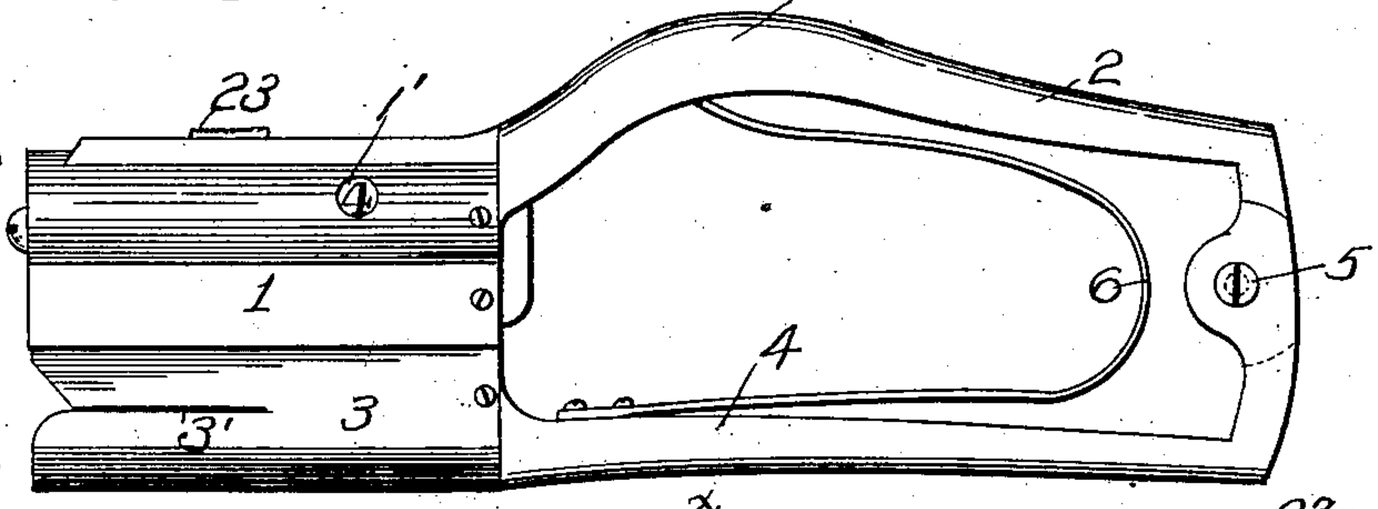


Fig. 3

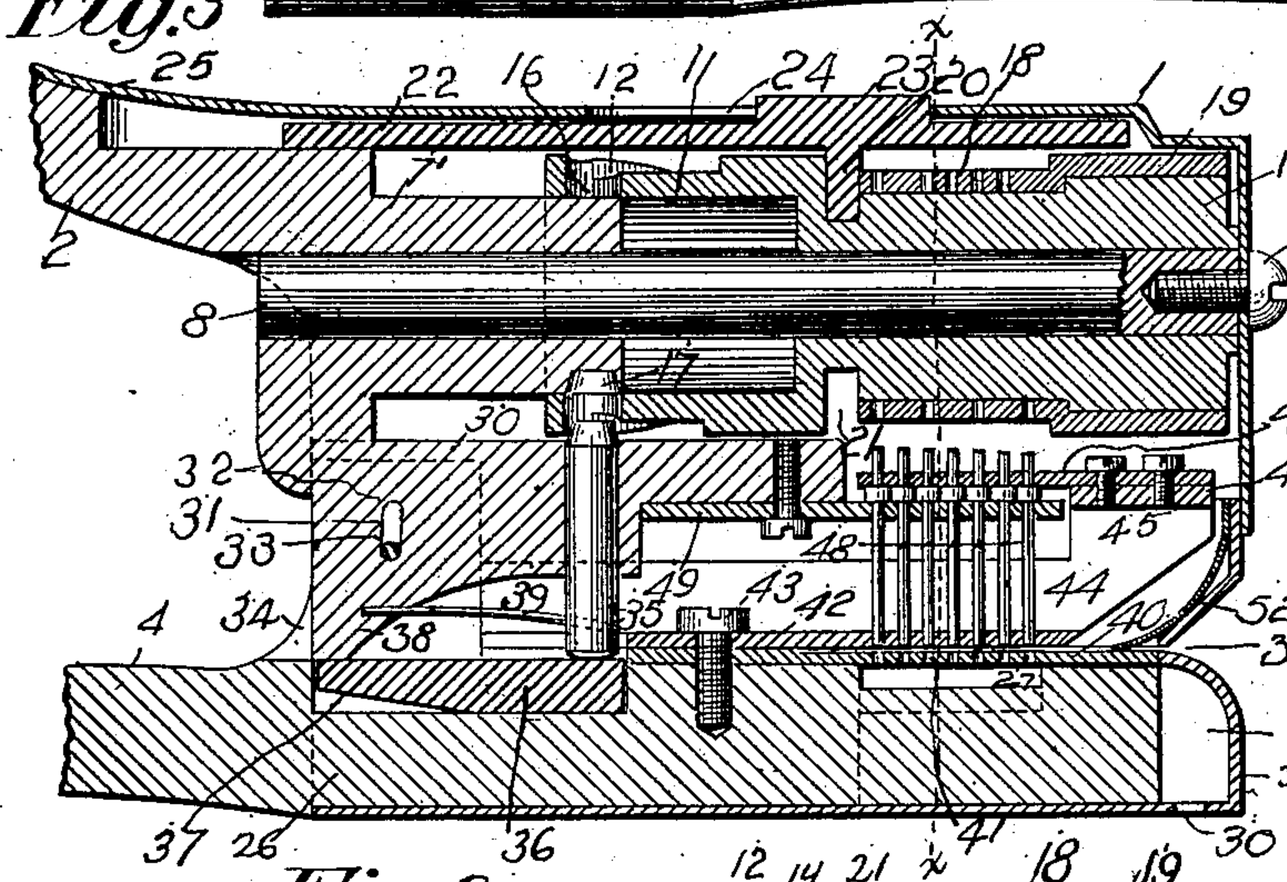


Fig. 4

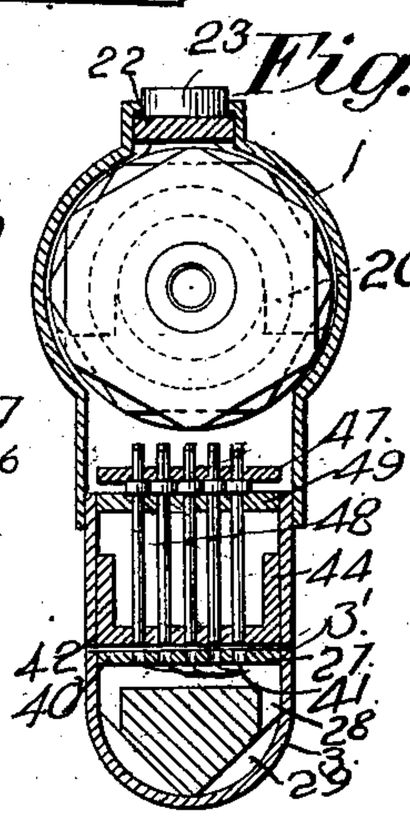


Fig. 6

Fig. 5

Fig. 7

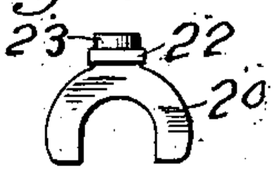
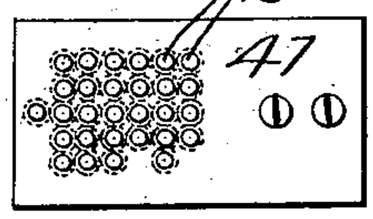


Fig. 8



Witnesses:
Geo. B. Rowley.
E. E. Potter.

Inventor;
W. J. KENDERDINE
By H. C. Curtis
Attorney.

No. 728,726. Patented May 19, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM J. KENDERDINE, OF PHILADELPHIA, PENNSYLVANIA.

CHECK-PUNCH.

SPECIFICATION forming part of Letters Patent No. 728,726, dated May 19, 1903.

Application filed February 20, 1903. Serial No. 144,196. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. KENDERDINE, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Check-Punches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in check-punches, such as used for perforating of bank-checks and other commercial papers, and has for its primary object to construct a check-punch of this character which may be advantageously held in the hand for use, and when not in use may be carried in the pocket in the same manner as the ordinary ticket-punches.

The invention contemplates improvements on the punch for which Letters Patent were granted to me January 20, 1903, No. 718,848; and the present invention relates particularly to improvements in the platen-wheel and the manner of operating the same to properly position the said wheel to punch the desired numeral or character; and the invention further aims to simplify the construction of the device shown in said Letters Patent, whereby to make the operation of the platen-wheel more easy and rapid.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a top plan view of my improved check-punch. Fig. 2 is a side elevation of the same. Fig. 3 is an enlarged longitudinal sectional view with the handles partly broken away. Fig. 4 is a transverse vertical sectional view on the line *x x* of Fig. 3. Fig. 5 is a detached enlarged detail view of one of the perforating-pins. Fig. 6 is a detached developed detail plan view of the blank of the platen-wheel. Fig. 7 is an end view of the actuating-yoke. Fig. 8 is a detached enlarged detail plan view of the guide-plate for the perforating-pins.

The mechanism involved in my improved check-punch is inclosed within a casing made in two sections or members, one attached to the upper handle member and the other attached to the lower handle member. The upper section or member 1 of this casing is attached to the upper handle member 2, and the lower section or member 3 of the casing is attached to the lower handle member 4. The handle members are pivoted together at their outer ends, as at 5, and are under the tension of a suitable spring 6. The upper handle member 2 is preferably provided with a swell 7, so located on the handle member as to be engaged by the hand just back of the thumb, whereby to permit the operator to apply greater pressure during the perforating operation.

The handle member 2 is provided at its inner end with a bushing or barrel 7′, in the bore of which is mounted the platen-depressing shaft 8, and this shaft is supported at its forward end by a screw 9, passed into the end of the shaft through the front end of the casing 1. The platen or figure wheel is mounted on this shaft and on the bushing or barrel 7′ to rotate thereon and is actuated by a yoke, which is reciprocated longitudinally by means of a thumb-piece projecting through a slot in the upper casing-section 1. This platen or figure wheel is herein shown as embodying a body portion on which a blank is placed, though in construction it is preferable that a solid body-piece be employed and be machined to cut the zigzag grooves therein and the die-faces for engagement with the perforating-pins. The body 10 is rotatably mounted on the shaft 8 and is provided with a barrel or sleeve end 11, which slides over the barrel or bushing 7′. This barrel or sleeve end 11 is provided with a peripheral zigzag groove 12, forming the inclined faces 14 to be engaged by the combined rotating and locking pin, to be presently described more fully. On the triangular portions 15, formed on the barrel or sleeve end 11 by cutting the zigzag groove in the periphery thereof, the different numerals and characters are placed by any suitable method. The barrel or sleeve end is provided with openings 16,

two rows of which are employed, since the numerals and characters are placed or arranged around the wheel in two rows. Consequently one of these apertures must be employed whereby to receive the locking-pin between each two adjacent numerals of each row. The barrel or bushing 7′ is provided with a seat or recess 17 to receive the end of the locking and actuating pin for holding the platen-wheel against rotation after having been properly set.

The die-faces 18 19 are also arranged in two rows around the wheel, each die-face being provided with a plurality of perforations, whereby when the device is actuated the perforating-pins not moved into action enter the holes in the die-faces, while the pins which are engaged by the blank spaces in said die-faces are forced into punching action with the paper to be perforated. The two rows of die-faces are arranged at angles to each other, whereby the die-faces in one row come directly opposite to the numerals in one row and the die-faces of the opposite row come opposite to the numerals of the other row. The platen-wheel is rotatable on the shaft 8 and is also reciprocated along this shaft, whereby to bring the desired die-face over the perforating-pins by means of a yoke 20, engaging in a circumferential groove 21 in the platen-wheel, this yoke being carried on the actuating-slide 22, mounted within the casing 1, over the platen-wheel and having a suitable thumb-piece 23, which projects through a slot 24, provided therefor in the top of the casing 1. This casing 1 preferably carries a top strap 25, which is carried back onto the handle member 2 and secured thereto. The lower handle member 4 has a forwardly-extending body portion 26 lying underneath the punch mechanism and inclosed by the lower section 3 of the casing. This body portion is provided in its upper face with a cut-away portion 27, extending down the sides of the body, as seen at 28, Fig. 4, and said sides at the forward end of the body being angled off to form a receptable or chamber 29, leading to the discharge-opening 30, through which the perforated portions of the check or other paper are discharged. The handle member 2 carries an extension 31, provided with a slot 32, in which works a pin 33, carried by the upwardly-extending lugs 34, carried by the body 26. Disposed vertically in the extension 30 is the combined locking and actuating pin 35, resting at its lower end upon an actuating-block 36, which is mounted in a recess in the upper face of the body 26, at the rear end thereof. The rear half of the lower face of this actuating-block 36 is inclined, as at 37, whereby the rear end of the block may be depressed and the forward end thereof elevated to actuate the locking and actuating pin 35, the said block being actuated by means of a heel 38, carried by the extension 30. The locking and actuating pin 35 is held normally retracted by means of a spring 39, carried by the heel 38 and engaging the pin. Mounted on the upper face of the body 26 is a die-plate 40, provided with a plurality of perforations 41, which are directly over the cut-away portion 27 of said body. A lower guide-plate 42 is mounted on top of the die-plate 40 and may be secured by the same screw 43 as fastens the die-plate to the body, as shown. This lower guide-plate is provided with perforations to receive the perforating-pins and is provided with side walls 44, having upwardly-extending forward ends 45, connected across by a bar 46, which forms a support for the upper guide-plate 47, which is perforated to receive the upper ends of the perforating-pins. The perforating-pins 48 are mounted in a stripper-plate 49, each of said pins being provided near its upper end with a collar 50, and to facilitate the punching said pins at their lower ends are preferably made concave, as shown at 51, Fig. 5. The stripper-plate 49 is carried by the extension 30 of the handle member 2. The lower section or member 3 of the casing is provided with a slot 3′ to permit the insertion of the paper between lower guide-plate 42 and die-plate 40, and to prevent accidental movement of the paper while being punched I employ a spring 52. The numerals on the die-platen or wheel are observed through sight-opening 1′, provided therefor in the upper member 1 of the casing.

In operation the check or other commercial paper that is to be perforated is slid into the slot 3′ under the perforating-pins 48. The slide-bar 22 is reciprocated by means of the thumb-piece 23 backward and forward, each movement forward and each backward movement imparting a partial rotation to the platen-wheel. This partial rotation of the platen-wheel on each movement of the thumb-piece is due to the engagement of the tapered upper end of the combined locking and actuating pin with the inclined walls 14 of the zigzag groove 12. Each actuation, therefore, of the slide-bar brings a different numeral in view through the sight-opening 1′, and when the desired numeral or character has been brought into position at the sight-opening the operator presses down on the upper handle member to depress the die-face 18 or 19 into engagement with the upper ends of the perforating-pins 48. The perforating-pins which engage with the blank portions of the die-face will be depressed, while the pins which are in registry with the openings in the die-face will enter said die-faces and remain stationary. The die-face which has been brought into action corresponds with the numeral or character appearing through the sight-opening 1′, and the pins which produce this numeral or character are forced down through the paper into the die-plate 40. As the handle member 2 is depressed the heel 38 presses down on the rear end of block 36, elevating the forward end of said block, so as to raise pin 35 and engage the same in the

recess 17 in the barrel or sleeve 7 to hold the platen-wheel against rotation during the punching operation. As soon as pressure on the handle members is relieved the spring 6 forces the same outwardly, elevating the platen-wheel, and the slide 22 is reciprocated to bring the next desired numeral or character into position. The elevating of the platen-wheel also disengages locking-pin 35, which is drawn down by its spring 39, and platen-wheel is again free to be actuated by the slide. It is to be noted that the slide is so positioned as to permit the placing of the thumb upon the thumb-piece 23 for actuating the slide without the changing of the position of the punch in the hand, so that the operation of the platen-wheel to bring the desired die-face thereof into position for action may be accomplished easily as well as rapidly. When the platen-wheel has returned to its normal position, the stripper-plate 49, which has followed the downward movement of the pins 48, will raise said pins by engagement with the collars 50 thereon, thereby releasing the same from the paper, whereby the latter may be removed from the punch or shifted over to position for the punching of another numeral or character.

It is to be noted that the perforating-pins are arranged in rows, and I preferably construct these pins of gradually-decreased length from the rear row to the front row thereof, whereby the platen-wheel when depressed will not engage all of the pins of the particular numeral or character to be produced at the same time, but will successively engage with the said pins, due to the differential length of the pins, and consequently make the punching operation considerably easier, as practically only one pin will be forced through the paper at one time. The manner of actuating the pins is shown in Figs. 3 and 4 of the drawings.

While I have herein shown and described a preferable embodiment of my invention as it is practiced by me, yet it will be observed that in the construction various slight changes may be made without departing from the spirit of the invention.

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

1. In a check-punch, the combination of a pair of handle members pivoted together, a barrel or sleeve carried by the upper handle member, a stationary shaft mounted in said barrel or sleeve, a platen-wheel mounted for rotation and reciprocation on said shaft and comprising a plurality of die-faces and a numeral-bearing portion having a peripheral zigzag groove, an upper and a lower guide-plate, a stripper-plate carried by the upper handle section or member, a plurality of perforating-pins carried in said guide-plates and stripper-plate, a die-plate underneath the lower guide-plate, an operating-slide for the platen-wheel, and a combined actuating and locking pin for engagement with the platen-wheel, substantially as described.

2. In a check-punch, the combination of two spring-pressed handle members, a stationary shaft carried by the upper of said handle members, a platen-wheel rotatable and slidably mounted on the shaft, a reciprocating slide having a yoke engaging said wheel, a plurality of perforating-pins carried underneath the platen-wheel and adapted to be engaged by die-faces on said wheel, and a combined locking and actuating pin to rotate the platen-wheel as it is reciprocated and lock the same on the completion of each partial rotation of the wheel, substantially as described.

3. In a check-punch, the combination of two spring-pressed handle members, a stationary shaft carried by one of the handle members, a rotatable and reciprocatory platen-wheel mounted on said shaft and provided with die-faces and a numeral and character bearing portion, said numeral and character bearing portion provided with a peripheral zigzag groove, a reciprocatory slide having a yoke engaging the platen-wheel, a die-plate, a stripper-plate, perforating-pins carried by the stripper-plate, guide-plates for said pins, and a combined locking and actuating pin adapted when the slide is reciprocated to partially rotate the platen-wheel, and to lock said wheel against rotation when the wheel is depressed, substantially as described.

4. In a check-punch, the combination with a pair of spring-pressed handle members, of a rotatable and reciprocatory platen-wheel carried by one of the handle members, a reciprocatory slide engaging said wheel for reciprocating the same, a combined locking and actuating pin for partially rotating the wheel on each reciprocation and for locking the same when the wheel is depressed, a plurality of perforating-pins adapted to be engaged by the platen-wheel when the latter is depressed, and a die-plate to receive said pins, substantially as described.

5. In a check-punch, a pair of handle members pivoted together, a depressible reciprocatory and rotatable platen-wheel carried by one of said handle members, an actuating-slide having a yoke engaging the platen-wheel to reciprocate the same, a locking and actuating pin adapted to engage the inclined walls of a zigzag groove provided in said wheel whereby the latter is partially rotated with each reciprocation thereof, a plurality of perforating-pins provided with concave punching points or ends, a stripper-plate carrying said pins, guide-plates for said pins, and a die-plate to receive the pins when depressed by the platen-wheel, substantially as described.

6. In a check-punch, the combination with a pair of spring-pressed handle members, of a rotatable and reciprocatory platen-wheel carried by one of the handle members, a re-

ciprocatory slide engaging said platen-wheel for reciprocating the same, a combined locking and actuating pin for partially rotating the wheel on each reciprocation, and for locking the same when the wheel is depressed, a plurality of perforating-pins of differential lengths adapted to be engaged by the platen-wheel when the latter is depressed, and a die-plate to receive said pins, substantially as described.

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

WILLIAM J. KENDERDINE.

Witnesses:

HANS WENIGER,

ALEXANDER WALTER.