

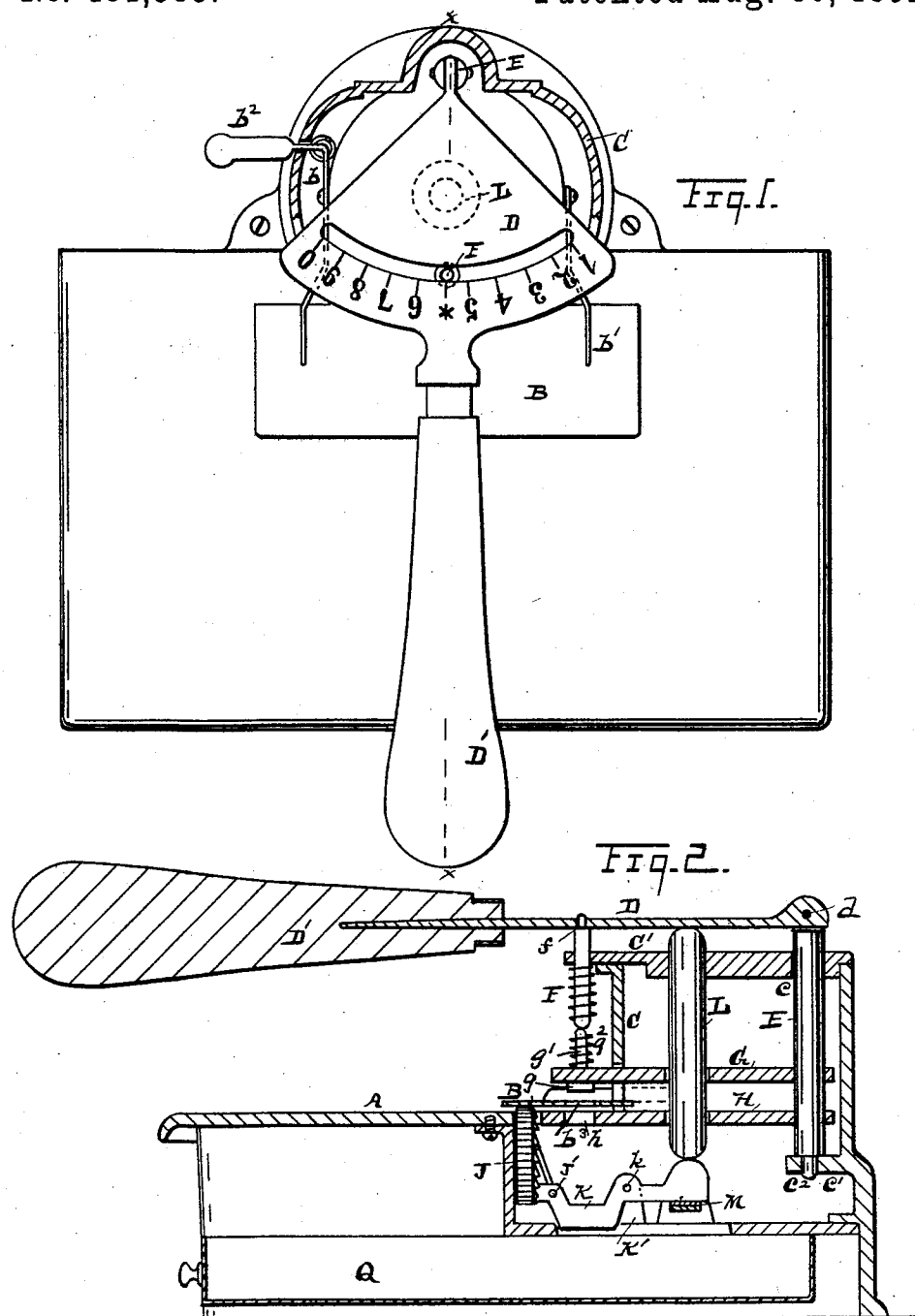
(No Model.)

2 Sheets—Sheet 1.

H. H. NORRINGTON.
PERFORATING PUNCH.

No. 481,583.

Patented Aug. 30, 1892.



Witnesses
John Schuman.
John F. Miller.

Inventor
Henry H. Norrington
By his Attorney
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

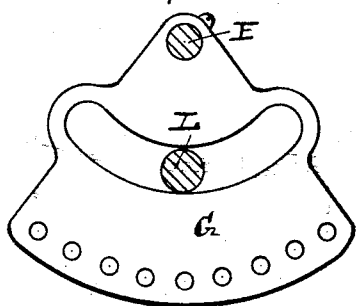


Fig. 4.

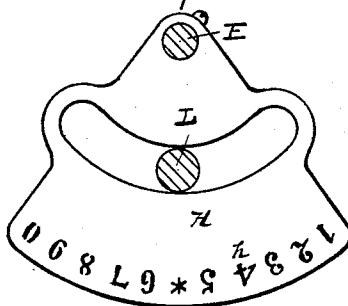
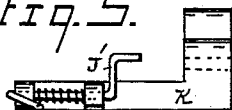


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY H. NORRINGTON, OF WEST BAY CITY, MICHIGAN.

PERFORATING-PUNCH.

SPECIFICATION forming part of Letters Patent No. 481,583, dated August 30, 1892.

Application filed November 25, 1891. Serial No. 413,069. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. NORRINGTON, a citizen of the United States, residing at West Bay City, county of Bay, State of Michigan, have invented a certain new and useful Improvement in Perforating-Punches; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in a perforating-punch, the same being more particularly designed as a check-punch and for analogous uses.

The object of my invention is to provide a punch of superior utility, adaptation, and simplicity of construction and operation.

To these ends my invention consists of the devices and appliances, their construction, combination, and arrangement more fully hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view embodying features of my invention, showing a portion of the case broken away. Fig. 2 is a vertical section on the line xx , Fig. 1. Fig. 3 is a separate view of the male-die plate. Fig. 4 is a separate view of the female-die plate, and Fig. 5 is a separate view of the rocking lever and pawl.

I carry out my invention as follows: A represents a bed-plate upon which the check or analogous article is placed to be punched. B denotes a pressure plate or clamp to hold the check down upon said bed-plate. The clamp is provided with operating-lever arms $b b'$. One of said lever-arms may be provided with a finger-piece b^2 for operating the clamp.

C is the inclosing case to inclose a portion of the device.

D denotes a dial-plate, preferably V-shaped, provided with an operating-handle D' and having a jointed engagement opposite the handle upon a rotatable post E, as shown at d . The post E may freely project through the case C, as shown at c , the lower end of the post having a swiveled engagement on a bracket c' of the case, as shown at c^2 . This dial-plate D is provided with numerals or other suitable characters, as shown in Fig. 1,

arranged on the arc of a circle and suitably spaced from one another. As so constructed it will be seen that the dial-plate may be moved from side to side horizontally and also vertically, as desired, on the arc of a circle.

F denotes a vertical spring-plunger extending freely through the top C' of the case C up beneath and adjacent to the dial-plate D. It will be obvious that the dial-plate D may be moved horizontally, so as to bring any desired numeral or character thereupon directly over the top of said plunger or in radial line therewith, and that when said dial-plate is depressed the plunger will be forced downward thereby.

G denotes a male-die plate, preferably V-shaped, to correspond to the shape of the plate D. This plate G has a fixed engagement upon the rotatable post E, so as to be moved horizontally as the post is rotated by the horizontal movement of the plate D, hinged thereto. This plate G is immovable vertically, but is provided with a series of vertically-movable dies g , said dies being provided with arms g' , projecting through the plate G, and with self-retracting springs g^2 . By providing each of the dies with the heads g , as shown in Fig. 2, to bear against the bottom of the plate when the die is at rest and placing the springs g' above the top of the plate it is evident that the upward pressure of the spring will draw the head against the bottom of the plate, and the shoulder of the head will bear against the surface of the plate and cause the stem or portion of the die that projects through the plate to stand in a vertical position without having to pass it through more than the one plate, thus dispensing with the additional plate that would be necessary if it were not for the above construction. It also avoids the necessity of any additional means of connecting the dies with the operating lever or dial other than that afforded through the plunger F, thus simplifying the construction very materially without detracting any from the utility and efficiency of the device. These dies g are arranged and spaced upon the plate G to correspond to the arrangement and spacing of the numerals or characters on the plate D, so that when any figure or character upon the plate D is moved adjacent to the top of the plunger F the die for form-

ing the same numeral or character will be simultaneously moved beneath the lower end of said plunger to be depressed thereby.

H denotes a female-die plate having a series of female dies *h* arranged and spaced therein to correspond with the arrangement and spacing of the male dies on the plate G. This latter die-plate H also has a fixed engagement upon the rotatable post E, in consequence of which the plate H is moved laterally simultaneously with the plates G and D, thereby bringing the male and female dies of the same numeral or character one under the other and both, as already indicated, under the corresponding numeral or character on the plate D. The plate H is also preferably located on a level with the top of the bed-plate, so that when the check is inserted under the clamp it will rest upon the top of the bed-plate and of the die-plate. By this construction and arrangement it is clear any desired set of dies *g h* may be moved beneath the plunger F by simply moving the desired numeral or character upon the plate D adjacent to the top of said plunger. Then by depressing said plate D the dies cut the corresponding numeral or character in the check upon the bed-plate, the clamp being suitably perforated or cut away, as at *b*³, to allow the male dies to pass therethrough. In this manner a succession of any desired numerals or characters may be cut in the check one after another. The succession of desired numerals or characters are preferably spaced from one another in the check by moving the check forward after each operation of a set of dies in the following manner:

J denotes a feed-wheel milled on its periphery and toothed upon its inner face, having a rotatable engagement beneath the bed-plate A, its periphery projecting through said plate so as to have contact with the check. J' is a spring-pawl to engage said feed-wheel and give thereto a partial rotation at each operation of the pawl. This pawl is engaged upon a rocking lever K, suitably fulcrumed upon arms K', as shown at *k*.

L denotes a spindle projecting freely through the plates H G and cover C' of the case up beneath and in contact with the plate D.

M denotes a spring arranged beneath the rear end of the lever K to restore it to normal position together with the spindle L.

The plates G and H are constructed with elongated arc-shaped slots, as shown in Figs. 3 and 4, to permit their horizontal movement as above desired, through which the spindle L projects. Thus it is clear each depression of the dial-plate D lifts the pawl into new engagement with the ratchet-plate, so that when the spring M is free to operate and throw down the pawl it will rotate the ratchet-plate a corresponding distance and move the check, thereby securing the required spacing.

The employment of a single plunger F with

the series of individual male and female dies, as specified, renders the device very simple, while the results obtained are perfect and complete. The dial-plate and the male and female die plates all swing horizontally from the same center.

The male dies may either be cutting-dies or needle-dies, as may be preferred.

At the base of the punch I prefer to provide a drawer Q to hold the clippings.

As shown, the dial-plate is provided with an arc-shaped elongated slot into which the end of the spring-plunger, which is preferably shouldered, may project, the plunger being constructed with a shoulder, as shown at *f*, beneath the dial-plate, in order that a downward pressure may be exerted thereupon. With this construction the numerals or characters can be more readily brought into radial line with the plunger, index-marks being provided leading radially from the characters to the slot.

What I claim as my invention is—

1. In a perforating-machine, the combination, with a bed-plate provided with a casing, of feeding mechanism within the bed-plate, and a post journaled in the casing, a broad flat dial-plate pivotally secured at one edge to the post and provided upon its opposite edge with a handle, a male and a female die plate, each rigidly secured to the post within the casing, vertically-movable dies in the male-die plate, a spring-actuated plunger within the casing, the upper end of which is engaged by the dial and the lower end engages with the dies in the male-die plate, and means intermediate the post and the plunger for engaging with the dial and the feeding mechanism, whereby the feed is operated by the dial in any of its lateral positions, substantially as set forth.

2. In a perforating-machine, the combination, with a bed-plate provided with a casing, of a post journaled therein, a dial-plate pivotally secured to the post at one end and provided with a handle at its opposite end and having a slot intermediate the ends and a male and a female die plate, each rigidly secured to the post within the casing, vertically-movable dies in the male-die plate, and a vertically-movable spring-actuated plunger within the top of the casing, the upper end of which is shouldered and projects through the slot in the dial-plate and the lower end engages with the dies in the male-die plate, said dial-plate being provided with characters along the slot to correspond with the characters of the die-plates, substantially as set forth.

3. In a perforating-machine, the combination of a bed-plate provided with a casing, feeding mechanism within the bed-plate and a post journaled in the casing, a dial hinged to the post above the casing, and a slotted male and a female die plate, each rigidly secured to the post within the casing, vertically-movable dies in the male-die plate, a plun-

ger within the casing, the upper end of which
is loosely secured in the top of the casing
and the lower end passes through the slot in
the die-plate and engages with the feeding
5 mechanism, and means intermediate the dial
and the male dies for operating said dies by
means of the dial, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY H. NORRINGTON.

Witnesses:

N. S. WRIGHT,
JOHN F. MILLER.