

(No Model.)

2 Sheets—Sheet 1.

W. F. JUDY.
CHECK PUNCH.

No. 495,553.

Patented Apr. 18, 1893.

Fig. 1.

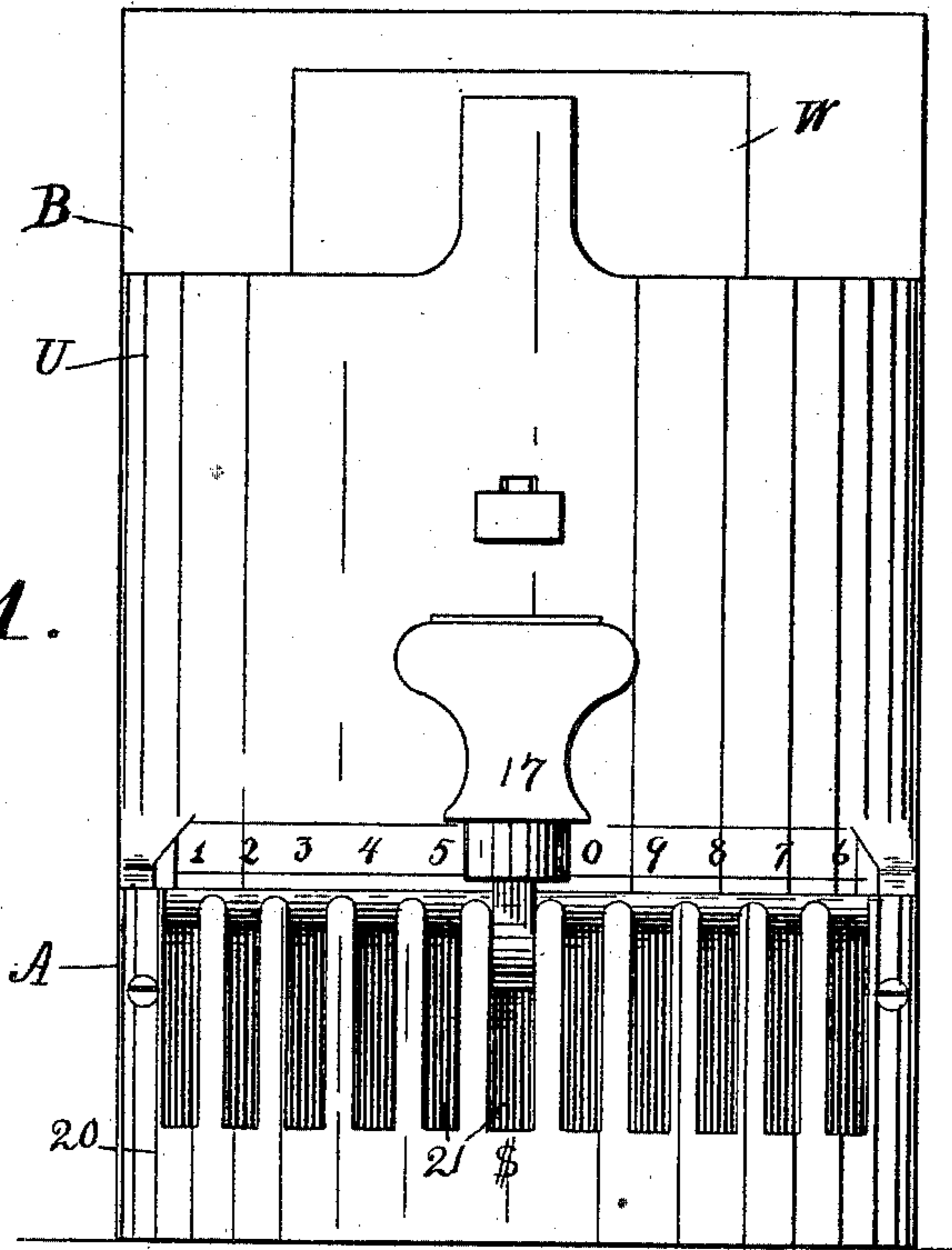
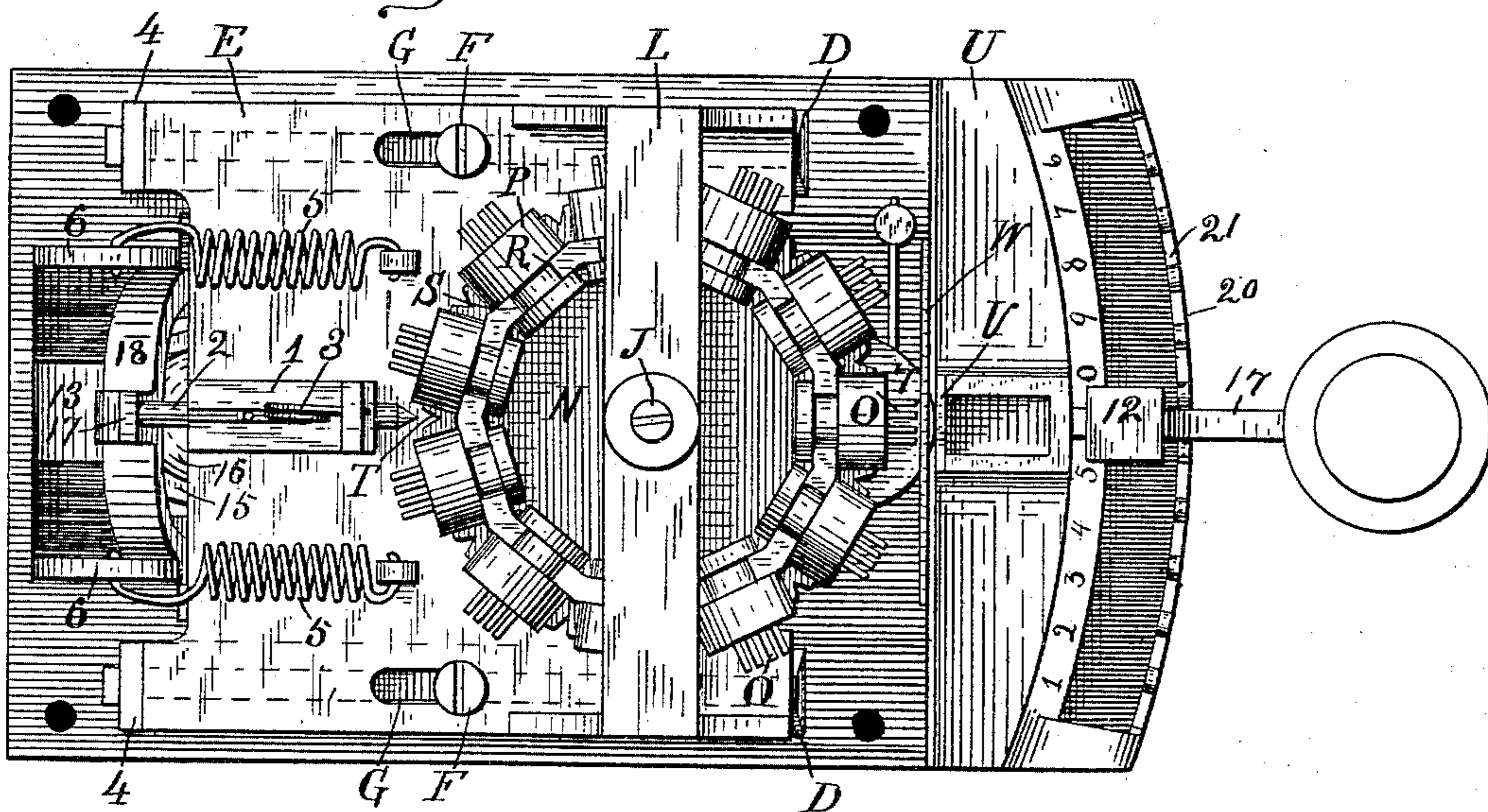


Fig. 2.



WITNESSES:

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INVENTOR:

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By *H. P. Hood*
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(No Model.)

2 Sheets—Sheet 2.

W. F. JUDY.
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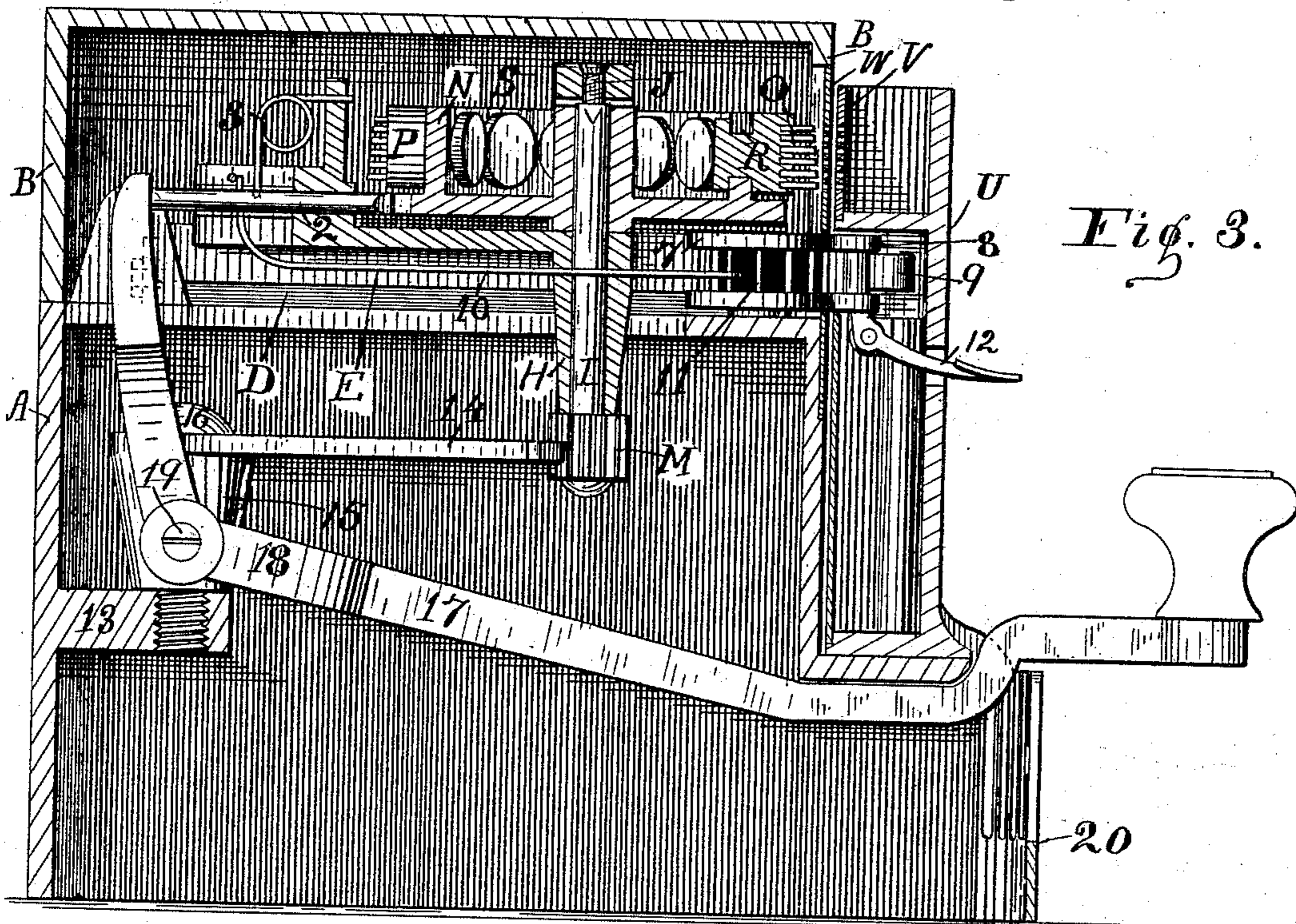


Fig. 3.

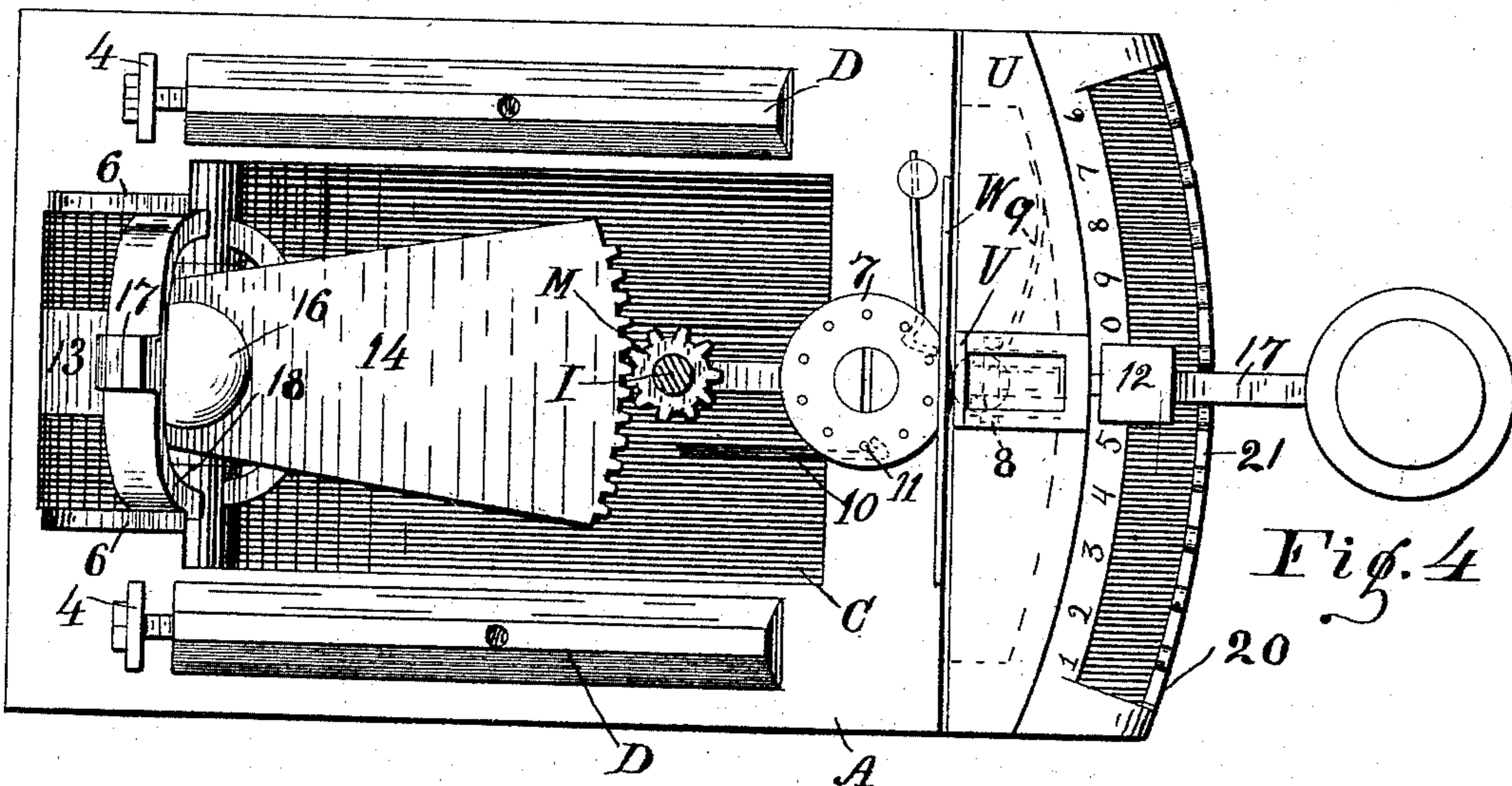


Fig. 4.

WITNESSES:
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INVENTOR:
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UNITED STATES PATENT OFFICE.

WILLIAM F. JUDY, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO
RICHARD B. ROBERTS, OF SAME PLACE.

CHECK-PUNCH.

SPECIFICATION forming part of Letters Patent No. 495,553, dated April 18, 1893.

Application filed August 18, 1892. Serial No. 443,427. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. JUDY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Check-Punches, of which the following is a specification.

My invention relates to an improvement in that class of machines which are used to perforate mercantile paper, as checks and drafts, in the form of figures, to indicate the amount for which the paper is drawn.

The object of my improvement is, to improve and simplify the construction of that class of check-punching machines in which a series of punches are mounted in a revoluble head, and are successively presented, at a fixed point, for operation upon the paper, as hereinafter fully set forth.

The accompanying drawings illustrate my invention.

Figure 1 represents a front elevation. Fig. 2 represents a plan, having the upper part of the case removed. Fig. 3 represents a vertical longitudinal section. Fig. 4 represents a plan similar to Fig. 2, but having the punching-wheel and its carrier, removed.

In the drawings, A, indicates a substantially rectangular hollow casing, having a removable hollow cap or cover, B. The top of casing A, is provided with a central rectangular opening C. Arranged on opposite sides of opening C, are a pair of parallel horizontal ways D, D. Mounted upon ways D, D, so as to slide longitudinally thereon, is a plate E, which is secured to the ways by means of screws F, F, passing through slots G, G, in the plate. Depending from the under side of plate E, is a vertical bearing H, in which a vertical shaft, I, is mounted so as to turn therein, the upper end of said shaft being further supported by a center-bearing J, mounted in the bridge L, formed integral with plate E. The lower end of shaft I, is provided with a spur-pinion M, which is secured to the shaft so as to turn therewith. Mounted upon the upper end of shaft I, so as to turn therewith, is a wheel, N, carrying a series of punches O, O, projecting from its periphery; each of said punches being formed of a series of small rods arranged to form a

numeral, or other character, in a manner well known in this class of machines.

Heretofore in this class of machines the several groups of punches forming the several numerals or characters, have been inserted directly in the rim of the wheel. I prefer, however, for greater convenience in mounting the punches, to form each character in a separate cylindrical block P, having a peripheral groove R, adapted to embrace the rim of the wheel, which is provided with a series of notches S, adapted to receive the reduced portion of the block P. By this construction each character when formed, may be accurately placed in the wheel N, and then secured to the wheel by means of solder or other suitable means. The periphery of wheel N is also provided with a series of notches T, there being one notch for each character formed by the punches.

Mounted upon the upper front portion of casing A, is a hollow standard U, carrying a perforated die-plate V, which is adapted to receive any of the series of punches mounted on wheel N. Secured to casing A, opposite to and between wheel N and the die-plate V, is a perforated plate W, through which the punches pass before reaching the die; there being sufficient space between said plate and the die-plate for the insertion of the check or other paper to be punched. Mounted in a bearing 1, on plate E, so as to slide longitudinally therein, is a sliding-pawl 2, having its forward end tapered and adapted to engage either of the notches T, in wheel N, the pawl being normally held out of engagement with the wheel by a spring 3. Plate E is held normally in engagement with stops 4, 4, projecting from the top of case A, by means of spiral springs 5, 5, secured at their opposite ends, respectively, to plate E, and to lugs 6, 6, projecting from the upper surface of case A. The punches are thus withdrawn from the die and the stripper-plate W, and held out of engagement therewith.

Mounted upon the top of casing A, so as to revolve horizontally thereon, is a feed-roll, 7, having its periphery in line with the face of plate W; which feed-roll is opposed by a small pressure-roll 8, mounted upon a spring 9 in standard U; the arrangement being such

that, when the check is placed in the space between the plate W and the die-plate, it is grasped between the peripheries of the opposed feed-roll 7 and pressure-roll 8.

5 Motion is communicated to feed-roll 7 by means of a hook-shaped pawl 10, one end of which is secured to the sliding-pawl 2, and the other end of which engages a series of pins 11, inserted in the feed-wheel 7, the arrangement being such that pawl 10 engages
10 the feed-wheel during the backward movement of the sliding-pawl 2, and after the punch has been withdrawn from the die and the check.

15 For the purpose of withdrawing the pressure-roll 8 from feed-roll 7, a bell-crank lever 12 is pivoted to standard U, one end of said lever engaging the spring upon which roll 8 is mounted, and the other end projecting
20 through the front of the standard.

Mounted upon a lug, 13, projecting within casing A, from one of its walls, is a segment of a gear-wheel, 14, adapted to engage the pinion M on shaft I. Said segment is provided with a hub, 15, which is mounted so as
25 to swing in a horizontal plane on the lug 13 by means of a pivot, 16. A bell-crank lever, 17, having at its angle a loop, 18, adapted to embrace the hub of segment 14, is pivoted to
30 said hub at 19, so as to swing thereon in a vertical plane. One arm of lever 17 projects upward through the top of case A and engages one end of the sliding-pawl 2, while the other end projects forward through the
35 front of the lower part of case A, the long arm of the lever being held normally upward by means of the spring 3.

Secured to the front end of casing A, beneath lever 17, is a guide plate, 20, having a
40 series of vertical slots, 21, adapted to receive lever 17, and corresponding in number to the series of punches in wheel N.

The operation of my device is as follows. The parts are normally in the position shown
45 in Figs. 2 and 3, pinion M being held in engagement with the segment 14, by means of springs 5 and 5. The check to be marked is now placed in a vertical position between the feed-roll 7 and pressure-roll 8, and in the
50 space between plate W and the die-plate. Lever 17 being now swung toward the right or left, so as to come into position above one of the slots 21 in guide-plate 20, the punch corresponding to the figure found above said
55 slot is brought into position before the die-plate by means of the segment 14 which turns with the lever. The long arm of lever 17 is now depressed so as to enter the slot. The first movement downward of lever 17, operates,
60 through its short arm, to push the sliding-pawl 2 forward into one of the notches T in wheel N, thus securely locking said wheel in position. The further downward movement of the lever operates to slide plate E and
65 wheel N forward until the punch is forced through the check and into the die-plate. At the same time pawl 10 has been carried for-

ward out of engagement with the pin 11, and pinion M has been carried out of engagement with segment 14. Upon releasing lever 17, 70 plate E is first drawn backward by the recoil of springs 5, thus withdrawing the punch from the die and paper, and partially raising the lever. When plate E is brought to rest by stops 4, pinion M has been brought into
75 re-engagement with segment 14, and pawl 10 has engaged one of the pins in feed-roll 7. The recoil of spring 3 now withdraws sliding-pawl 2 from engagement with wheel N, and, through hook 10, has turned the feed-roll forward one step, thus bringing the check into
80 position to receive the next figure. At the same time the backward movement of pawl 2 restores the long arm of lever 17 to its normal position above the top of guide 20. 85

I claim as my invention—

1. In a check-punching machine, the combination of the main-casing the die-plate mounted thereon, the sliding-plate mounted upon ways upon said casing so as to slide
90 thereon toward said die-plate, the shaft mounted in a bearing in said plate, the wheel mounted on said shaft so as to turn and carrying upon its periphery a series of punches, a stop mechanism mounted upon the sliding-
95 plate and adapted to engage said wheel and to thereby lock it in position; an operating-lever, arranged to engage said stop-mechanism and intermediate connecting mechanism connecting said wheel and said operating lever, whereby by the movement of the lever in one direction the wheel is rotated, and by the movement of the lever in another direction the locking mechanism is first brought
100 into engagement with the wheel, and the wheel is afterward, by the continued movement of the operating lever in the same direction, propelled toward the die-plate, substantially as set forth. 105

2. In a check-punching machine, the combination of the main-casing, the die-plate
110 mounted thereon, the sliding-plate mounted on the casing and arranged to slide toward and from said die-plate, the wheel bearing a series of punches on its periphery and mounted
115 on said sliding-plate so as to revolve thereon, the pinion connected with said wheel so as to revolve therewith the toothed-segment pivoted to the main-casing so as to swing in a horizontal plane thereon and arranged to engage
120 said pinion, the bell-crank lever pivoted to said segment so as to swing thereon in a vertical plane, and intermediate connecting mechanism connecting said wheel and the plate whereon it is mounted with said lever, all arranged to co-operate substantially as set forth, whereby the wheel carrying the punches is rotated by the lateral movement of the lever, and is carried toward the die-plate by the vertical movement of the lever, substantially
125 as set forth. 130

3. In a check-punching machine, the combination of the main-casing, the die-plate mounted thereon, the sliding-plate mounted

on the casing and arranged to slide toward
and from said die-plate, the wheel bearing a
series of punches on its periphery and mount-
ed on said sliding-plate so as to revolve there-
on, means for rotating said wheel so as to pre-
5 sent the punches thereon successively to the
die-plate, the stop-mechanism mounted upon
said sliding-plate and adapted to engage said
wheel and thereby lock the wheel in position,
10 and the operating-lever pivoted to the main-
casing and arranged to engage said stop-mech-
anism, all arranged to co-operate substan-
tially as set forth, whereby the stop-mechan-
ism is brought into engagement with the
15 wheel carrying the punches by the first stage
of the movement of the operating-lever, and
said wheel is then carried forward toward the
die-plate by the continued movement of the
operating-lever in the same direction.

20 4. In a check-punching machine, the com-
bination of the main casing, the feed-roll

mounted thereon, the pressure-roll opposed to
said feed-roll, the wheel bearing a series of
punches on its periphery, the operating lever
pivoted to the main-casing, the sliding pawl 25
arranged in the path of said operating lever
and engaging said wheel, and the hook-shaped
pawl secured to said sliding pawl and ar-
ranged to engage said feed-roll, whereby the
wheel is locked in position and the feed-roll 30
is rotated step-by-step, by means of the oper-
ating-lever, as set forth.

5. In a check-punching machine, the com-
bination with the wheel N, having a series of
notches S, of the series of cylindrical blocks 35
P each provided with a peripheral groove R,
and carrying on its outer face a punch formed
of a series of rods, substantially as set forth.

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Witnesses:

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