

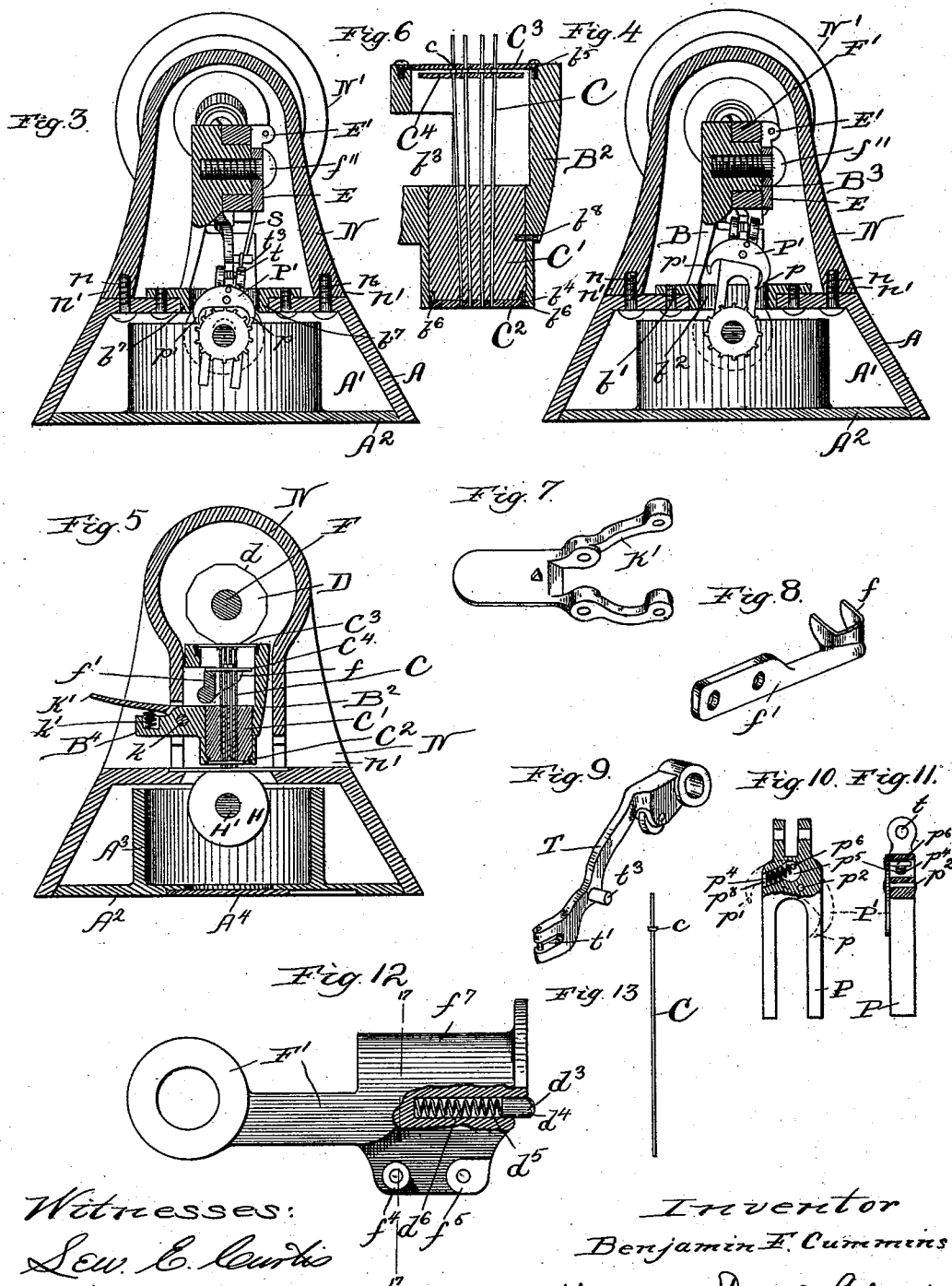
(No Model.)

3 Sheets—Sheet 2.

B. F. CUMMINS.
PERFORATING STAMP.

No. 486,858.

Patented Nov. 29, 1892.



Witnesses:
Sew. C. Curtis
J. W. Munday,

Inventor
Benjamin F. Cummins
By Munday, Curtis & Adeock
his Attorneys.

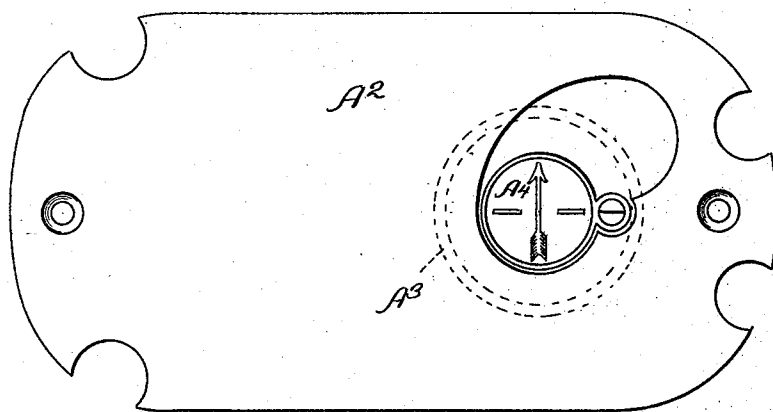
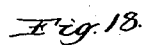
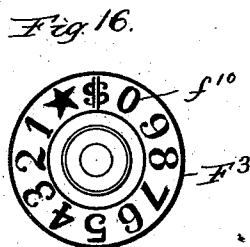
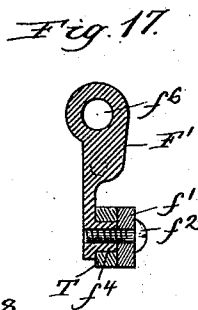
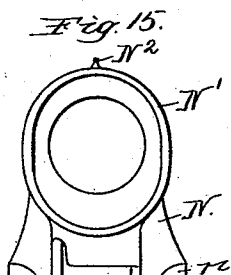
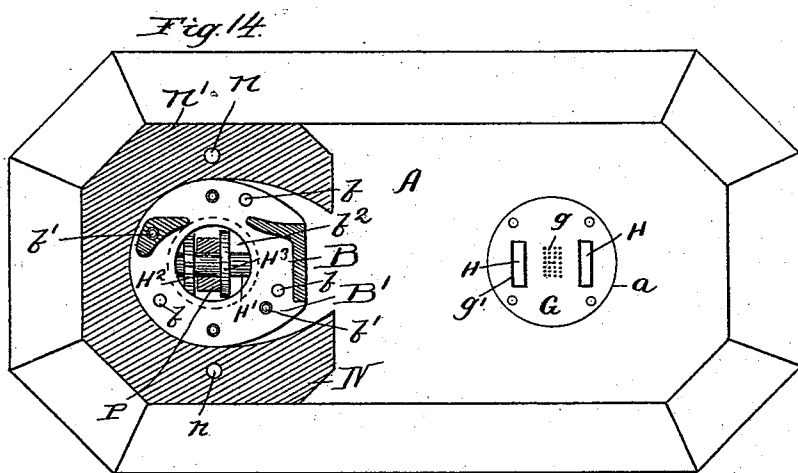
(No Model.)

3 Sheets—Sheet 3.

B. F. CUMMINS.
PERFORATING STAMP.

No. 486,858.

Patented Nov. 29, 1892.



Witnesses:
 Lew. C. Curtis
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UNITED STATES PATENT OFFICE.

BENJAMIN F. CUMMINS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE B. F. CUMMINS COMPANY, OF SAME PLACE.

PERFORATING-STAMP.

SPECIFICATION forming part of Letters Patent No. 486,858, dated November 29, 1892.

Application filed March 28, 1892. Serial No. 426,711. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. CUMMINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Perforating-Stamps, of which the following is a specification.

This invention relates to improvements in the construction of hand-stamps for perforating checks or other papers with characters indicating numbers or other data, and wherein a single set of independently-movable punches is employed in conjunction with a single die-plate for all said punches for perforating the different characters, some of the punches being used and others not used for making each character; and it relates more particularly to certain improvements upon the perforating-stamp of the class shown and described in Letters Patent Nos. 409,324 and 433,003, granted to C. C. Hill August 20, 1889, and July 29, 1890, respectively.

The object of the present invention is to cure certain defects in the construction and operation of the machine or stamp patented in said Hill patents, Nos. 409,324 and 433,003—in other words, to simplify the construction of said stamp and render it more practical and durable and to enable it to be operated with greater ease and rapidity and with certainty, and to generally perfect the practical details of its construction, so that the stamp itself may be manufactured cheaply and in large quantities.

A further leading object has been to so construct the device that all its operating parts or mechanism may be inclosed in a protecting case or shell, and thus prevent dust or dirt from interfering with the proper and easy operation of the individually-movable punches and other delicate parts, as well as to protect the accurately and nicely registering mechanism of the stamp from injury by blows or accident.

The nature of the invention or improvements will be readily understood by those skilled in the art from the accompanying drawings and the description following, in connection with the claims summarizing the several features of the invention.

In said drawings, which form a part of this

specification, Figure 1 is a side elevation of my improved perforating-stamp, its inclosing case or shell being alone in section. Fig. 2 is a similar view showing the punches depressed, and the base or bed plate is in this figure sectioned to show the paper-feed mechanism. Figs. 3, 4, and 5 are cross-sections taken on line 3 3 of Fig. 1 and on lines 4 4 and 5 5 of Fig. 2, respectively. Fig. 6 is an enlarged detail sectional view taken on the plane of Fig. 5. Fig. 7 is a detail perspective view of the thumb-lever for raising the paper-feed rollers. Fig. 8 is a detail perspective view of the punch-retracting lever. Fig. 9 is a perspective view of the lever by which motion is communicated to the paper-feed mechanism. Figs. 10 and 11 are detail views of the fork or slide which carries the pawl for operating the paper-feed mechanism. Fig. 12 is a detail elevation of the operating-lever which carries the reversely-socketed matrix by which the punches are operated. Fig. 13 is an enlarged detail view of one of the punches. Fig. 14 is a horizontal section on line 14 14 of Fig. 1. Fig. 15 is an end view of the inclosing case or shell. Fig. 16 is a face view of the indicating-disk. Fig. 17 is a cross-section on line 17 17 of Fig. 12, and Fig. 18 is a bottom view of the bottom plate.

In the drawings the same parts are designated by the same letters of reference throughout all the figures.

By my experience in the practical construction and operation of the perforating-stamps described in said Hill patents I have found that difficulty is frequently experienced by reason of the retracting-spring failing to withdraw the punches from the die or return them to position, such failure necessitating the taking of the stamp apart in order to withdraw the punches, when much difficulty is experienced in getting the nicely-registering parts together again, so that the machine will work properly. And even when this retracting spring was made very strong (owing to the great number of punches and the delicate character of the mechanism with which the spring was combined) the operation of the stamp as a whole was still uncertain and unsatisfactory, and the force required to compress the spring, added to that required to operate the

large number of punches, rendered the stamp hard to operate and caused it to be undurable and difficult to keep in order. To overcome this uncertainty and to remove this difficulty in the operation of the stamp, as well as to cause it to operate with ease, I have entirely done away with the retracting-spring for the punches and have combined the series of independently-movable punches and their withdrawing plate or disk directly with the operating-lever, so that the punches receive motion in both directions positively by the movement of the operating-lever. To facilitate and simplify the construction of the device, I make the frame in two pieces and form the holder or case for the soft-metal punches integral with the upper frame-piece itself, which is also provided with shoulders to receive the upper and lower guide-plates and with a chamber for the punch-withdrawing plate or disk and its operating-lever to reciprocate in, and also with an opening through which the soft-metal guide may be poured into said case or shell.

To protect the operating mechanism from dust or dirt and from danger of injury, it, including the matrix-carrying operating-lever, is inclosed in a protecting case or shell secured rigidly to the bed-plate, and said case is so constructed and combined with the operating-lever that the latter can have the necessary up-and-down movement within it, and the bed-plate itself is furnished with a removable bottom plate to inclose the paper-feed mechanism between such bottom plate and the bed-plate, the bottom plate itself being furnished with a receptacle to hold the punchings from the paper.

To prevent the wear on the pivot of the operating-lever from interfering with the necessary accurate and delicate registry of the punches with the reversely-socketed matrix carried by said lever, I provide the punch-holder or guide-piece of the frame with a large hollow stud formed integral therewith, which constitutes the pivot or bearing of said lever.

In order to properly and easily combine the revolving matrix-carrying portion of the operating-lever with the pivoted part thereof, the latter is furnished with a bend or shank, through which shank portion the shaft or revolving part of the lever passes and is secured by a nut or screw and washer tapped into its end. In order to simplify the construction of the device and to facilitate its convenient operation, the reversely-socketed revolving matrix is provided with a single series of registering openings or notches, with which the fixed and accurately-registering pin and the click or spring approximately-registering pin both co-operate.

The novel construction and combinations of parts by which these and other new and improved results are attained will now be fully and in detail explained in connection with the drawings.

In the drawings, A represents the plate or lower portion of the frame, the same being preferably made of cast-iron nickel-plated.

B is the upper or guide-holder portion of the frame, the same being furnished with a circular hollow base-plate or ring B', secured to the bed-plate A rigidly and firmly by three dowel-pins *b* and four screws *b'*. The opening *b*² through this base-plate B' is to receive the pawl-carrying slide or fork by which motion is communicated to the shaft of the paper-feed mechanism, which is mounted below the bed-plate A in the hollow chamber A', formed between said bed-plate A and the bottom plate A². The upper portion B of the frame for convenience I will hereinafter term the "holder," as it holds the soft-metal guide and also the other upper and lower guide-plates for the punches. Formed integrally with the holder B is a guide case or shell B² to receive the punches C, their soft-metal guide C', their lower guide-plate C², their upper guide-plate C³, and their reciprocating guide or withdrawing plate C⁴. The holder B or its guide-case B² is further provided with a lateral opening *b*³, through which the soft metal of the guide C' may be poured into the case B² in a molten condition and while the punches or pins representing the punches are in position and held in position by the upper and lower guide-plates C² C³. The holder B is further provided at each end of its guide-case B² with recesses or shoulders *b*⁴ *b*⁵ to receive the guide-plates C² and C³, respectively. The lower guide-plate C² is firmly secured in place by small pins or rivets *b*⁶ *b*⁶, which are planed off flush with the lower surface of said guide-plate C² and of the case B². The holder B is further provided with a large hollow stud B³, formed integral with the holder itself, so as to be perfectly rigid and immovable thereon to serve as the pivot or bearing for the operating-lever or the pivoted portion F' thereof. The reversely-socketed matrix D is rigidly secured to the revoluble part F of the operating-lever. The independently-movable punches C are each provided with a shoulder or enlargement *c*, against which the withdrawing-plate C⁴ impinges to withdraw the punches. The withdrawing-plate C⁴ fits free and loosely in the case B² of the holder and lies loosely on top of a U or fork shaped projection *f* on the end of the operating arm or lever *f'*, which is attached rigidly to the operating-lever F'. The fork or U shaped projection *f* embraces or partially encircles the group of punches, so that the loose withdrawing-plate C⁴, operated by said fork, will be lifted squarely without tilting the same, and thus causing the withdrawing-plate to bind on the punches. The punches fit loosely and freely in the holes of the withdrawing-plate C⁴. By thus combining the punches and their case B² and the operating arm or lever *f'* with an entirely loose and free withdrawing-plate, which lies loosely on the fork of

said operating-arm, I am enabled to withdraw the punches positively, and at the same time permit entire freedom and ease of movement of all the parts, thus also avoiding all binding and danger of injury.

The opening b^3 in the case B^2 not only serves as the opening through which the soft-metal guide is poured into the case, but also to give room for the movement of the operating-arm f' . The operating-arm f' for the punch-withdrawing plate or disk is made in a separate piece from the lever F' and secured thereto by screws f^2 and f^3 , the screws f^2 f^3 entering projections or bosses f^4 f^5 on the operating-lever F' , for the purpose hereinafter to be described. The reversely-socketed revoluble matrix D is preferably provided with twelve matrix-faces d , each being reversely socketed to the character designed to be perforated by each face with holes d' to receive those punches of the entire group which are not required to be used to perforate the particular character produced by such matrix-face. Each matrix-face is also provided with a single registering opening, recess, or notch d^2 , formed at the inner end of the matrix and preferably of a U shape, as indicated in the drawings. Coacting with this single series of registering notches d^2 on the matrix D is a click or spring registering-pin d^3 , having a rounded or cam-shaped end d^4 , which is mounted in a socket or hole d^5 in the operating-lever F' , the same being pressed into engagement with the said registering notches d^2 by a spring d^6 , and likewise coacting with the same series of registering notches d^2 is a fixed or stationary registering-pin d^7 secured rigidly to the holder B and projecting upwardly from the end of the guide-case B^2 . The click or spring registering-pin d^3 projects into the registering notches d^2 in a direction parallel to the axis of the matrix D , while the fixed registering-pin d^7 projects into the same registering notches in a direction at right angles to said matrix. The click or spring registering-pin d^3 is larger in diameter than the registering notches or recesses d^2 , so that only its rounded end can enter the same, this click-pin serving to approximately register each matrix-face with the punches and at the same time permit the matrix to be revolved easily and freely. The pin d^3 is held in place in its socket by the end of the matrix D , against which it projects. The fixed registering-pin d^7 serves to accurately register each matrix-face and the punch-holes d' therein with the punches. This registering-pin projects up slightly above the punches when they are withdrawn, so that in case the matrix is attempted to be brought down when the matrix-face is not in accurate registry with the punches the matrix will strike against this registering-pin d^7 instead of against the punches.

The shaft or rotary portion F of the operating-lever, and to which the matrix D is rigidly

secured, revolves in a hole or bearing f^6 , which extends entirely through the shank, offset, or shoulder portion f^7 of the lever F' , the shaft F being secured in place by a threaded screw or nut f^8 and washer f^9 , the end of the shaft F being properly threaded or tapped for the purpose. The shaft or lever F is furnished at its outer end with a handle F^2 and indicating-disk F^3 furnished with a series of characters f^{10} , corresponding to those to be perforated with each of the matrix-faces d . The lever F' is secured in its fixed pivot or bearing B^3 by a threaded bolt or screw f^{11} , which passes through a washer E . The bed-plate A is furnished with a circular shoulder or recess a to receive the die-plate G . The die-plate G is furnished with die-holes g , one for each of the punches, and with slots or openings g' for the lower paper-feed rolls H to project through and thus come in contact with the upper paper-feed rolls K . The upper paper-feed rolls K are mounted on a forked lever K' and fit one on each side of the guide-case B^2 . The holder B or its guide-case B^2 is furnished with a lateral projection or arm B^4 , to which the paper-feed-roll lever K' is pivoted by a pin k . The forked lever K' fits astride this projecting arm B^4 , and the arm B^4 is furnished with a spring k' near its outer end, which serves to press the feed-rollers K down upon the lower feed-rollers H with the pressure required for properly feeding the paper. As the forked lever K' fits astride the arm or projection B^4 , the latter serves, also, as a stop for the lever K' to limit the extent to which the feed-rollers K may be raised. The lever K' is a short lever designed to be operated by the thumb or finger.

The feed-rollers H are secured rigidly to a shaft H' , having shouldered ends h , which fit in bearing-blocks h' , preferably made of brass, and which are secured by screws to the bed-plate A on the bottom side thereof, the screws entering raised ledges or projections a' , with which the bed-plate is provided on its bottom side for this purpose. This makes a very convenient and cheap way of journaling or mounting the feed-wheel shaft below the bed-plate. The feed-wheel shaft H' is furnished with a ratchet-wheel H^2 and collar H^3 , between which and astride the shaft reciprocates the fork or slide P , carrying the two-pronged pivoted locking-pawl P' . One prong p of this pawl engages the ratchet-wheel on one side and serves to turn it the space of one tooth when the other or locking-prong p' of the pawl engages the ratchet-wheel on the opposite side and locks it in position, thus insuring a perfectly even and regular feed of the paper at each stroke of the operating-lever and a uniform spacing between the letters perforated by the stamp. The pawl P' is pivoted by a pin p^2 to the slide or fork P and is held in position so that the prong p will properly engage the ratchet-wheel at the downstroke of said slide P by a spring p^4 , mounted in a hole or chamber p^5 in the slide P , and which presses

against a pin p^6 , secured to the pawl P' . The slide or fork P is preferably made of brass, and the opening through which the spring p^4 is inserted may be preferably closed by solder p^8 . The fork or slide P is connected or pivoted to an operating-lever T by a pin t , which passes through a slot t' . The lever T is pivoted to the hollow stud f^4 , formed on the lever F' , and to which it is secured by the operating-arm f' and the screw f^2 , passing through the same. The arm f' thus operates as a washer or holding-plate for the lever T , and the same screw f^2 serves to hold them both in place. The lever T has a movable fulcrum t^2 , consisting, preferably, of a friction wheel or roller, which rolls back and forth on the horizontal flange or web B^3 of the holder B as the lever F' vibrates up and down. As the paper can of course only be fed forward when the punches C are withdrawn therefrom, I make the arm of the lever T , which is connected to the lever F' , comparatively short and provides said lever T with the rolling or movable fulcrum and furnish it with an actuating-spring S , so that the fork or slide P and its pawl P' may receive a quick and rapid downward movement at the last portion of the upstroke of the operating-lever F' . By this means I insure the entire withdrawal of the punches from the paper before any movement is communicated to the feed-wheel, and at the same time I secure the requisite long stroke of the pawl and slide necessary to give the required movement to the paper. The spring S bears at one end against an arm or projection t^3 on the lever T and is secured at its other end in a socket or holder E' on the washer E , said washer being provided with a leg or projection E^2 , which bears against the base-ring B' of the holder B to keep the washer and the spring carried thereby in place.

The bottom plate A^2 is secured to the bed-plate A by screws a^3 , so that it may be conveniently removed. The bed-plate A at its lower rim or flange is furnished with a shoulder or recess a^4 to form a seat for the bottom plate A^2 . The bed-plate A is further provided with rubber feet or cushions a^5 to prevent its marring the table or desk upon which it is placed. Cast integrally with the bottom plate A^2 is a cup or receptacle A^3 , which registers with the die-plate G , so as to receive the bits of paper from the punching. This receptacle A^3 is furnished with an opening in its bottom, closed by a pivoted slide A^4 , so that the receptacle may be emptied from time to time, as required, without removing the bottom plate from the bed-plate A . Secured to the bed-plate A by screws n is a hollow case or shell N , having a base flange or rim n' , encircling the base-flange B' of the holder B , and which incloses said holder and the mechanism carried by it, including the matrix and the matrix-operating lever. This case or cover N is furnished with an elliptical-shaped flange or collar N' at its end to receive the indicating-

disk F^3 and permit its up-and-down movement with the operating lever $F F'$, by which it is carried. The flange or rim N' is furnished with an index point or pin N^2 at its top to coact with the indicating-disk F^3 , carried by the revolving part F of the operating-lever. The indicating-disk F^3 also co-operates with the case or shell N to close the opening in its end N' . It should also be stated that the holder B is furnished with a centering-flange b^7 at its base-ring B' , which fits in the hole or opening formed in the bed-plate A .

The guide-case B is provided with a pin or projection b^8 to aid in holding the soft-metal guide C' in place.

I claim—

1. In a perforating-stamp, the combination, with a group of independently-movable punches and their corresponding female die, of a guide for said punches, a reciprocating plate for withdrawing said punches, a lever carrying a matrix for operating said punches, and an arm or lever for operating said punch-withdrawing plate, connected with said matrix-operating lever, said punches having each a shoulder or enlargement to engage said withdrawing-plate, substantially as specified.

2. In a perforating-stamp, the combination, with a group of independently-movable punches and their corresponding female die, of a guide for said punches, a reciprocating plate for withdrawing said punches, a lever carrying a matrix for operating said punches, and an arm or lever for operating said punch-withdrawing plate, connected with said matrix-operating lever, said punches having each a shoulder or enlargement to engage said withdrawing-plate, said punches fitting freely in the holes of said withdrawing-plate and said withdrawing-plate being loose on its operating-arm, substantially as specified.

3. The combination, with a die-plate, of a set of independently-movable punches, a guide for said punches, a reciprocating withdrawing-plate for said punches, a lever for operating the punches, and an arm f' , connected to said operating-lever and furnished with a fork f , embracing the set of punches for operating said withdrawing-plate, substantially as specified.

4. The combination, with die-plate G , of a set of independently-movable punches C , each furnished with a shoulder or enlargement c , a guide for said punches, a withdrawing-plate C^4 for said punches, a revoluble matrix D , and an operating-lever $F F'$, furnished with an arm f' for operating said withdrawing-plate, substantially as specified.

5. The combination, with the die-plate G , of a set of independently-movable punches C , each furnished with a shoulder or enlargement c , a guide for said punches, a withdrawing-plate C^4 for said punches, a revoluble matrix D , and an operating-lever $F F'$, furnished with an arm f' for operating said withdrawing-plate, said operating-arm having a fork or U shaped lifter f , embracing said punches

and on which said withdrawing-plate rests loosely, substantially as specified.

6. In a perforating-stamp, the combination, with the series of independently-movable punches, of a guide therefor, a female die for said punches, a matrix for operating the punches, a rotatable pivoted operating-lever carrying said matrix, and a holder B, furnished with a large integral stud B³, to which said operating-lever is pivoted, said guide being also carried by said holder, whereby the matrix, the die, and the punches are maintained in proper registry with each other, substantially as specified.

7. The combination, with bed-plate A, furnished with die-plate G, of holder B, furnished with integral guide-case B² and integral pivot-stud B³, a set of independently-movable punches C, furnished with shoulders or enlargements *c*, a guide for said punches, a matrix D, a lever-shaft F, to which said matrix is secured, and a lever F', pivoted on said stud B³, upon which said lever-shaft F is journaled, and a punch-withdrawing plate C⁴ and means for operating said plate, substantially as specified.

8. The combination, with bed-plate A, furnished with die-plate G, of holder B, furnished with integral guide-case B² and integral pivot-stud B³, a set of independently-movable punches C, furnished with shoulders or enlargements *c*, a guide for said punches, a matrix D, a lever-shaft F, to which said matrix is secured, and a lever F', pivoted on said stud B³ and upon which lever said lever-shaft F is journaled, a punch-withdrawing plate C⁴, and an operating-arm *f'* therefor, connected with said lever F', substantially as specified.

9. The combination, with bed-plate A, furnished with die-plate G, of holder B, furnished with integral guide-case B² and integral pivot-stud B³, a set of independently-movable punches C, furnished with shoulders or enlargements *c*, a guide for said punches, a matrix D, a lever-shaft F, to which said matrix is secured, and a lever F', pivoted on said stud B³ and upon which lever said lever-shaft F is journaled, a punch-withdrawing plate C⁴, and an operating-arm *f'* therefor, connected with said lever F', said arm *f'* having a fork *f* embracing said group of punches, substantially as specified.

10. The combination, with bed-plate A, furnished with die-plate G, of holder B, furnished with integral guide-case B² and integral pivot-stud B³, a set of independently-movable punches C, furnished with shoulders or enlargements *c*, a guide for said punches, a matrix D, a lever-shaft F, to which said matrix is secured, and a lever F', pivoted on said stud B³ and upon which lever said lever-shaft F is journaled, said holder B or its guide-case B² having a lateral opening *b*³ and said guide comprising a lower guide-plate C² and a soft-metal guide C', and a punch-withdrawing plate C⁴ and means for operating the same, substantially as specified.

11. The combination, with bed-plate A, furnished with die-plate G, of holder B, furnished with integral guide-case B² and integral pivot-stud B³, a set of independently-movable punches C, furnished with shoulders or enlargements *c*, a guide for said punches, a matrix D, a lever-shaft F, to which said matrix is secured, and a lever F', pivoted on said stud B³ and upon which lever said lever-shaft F is journaled, said holder B or its guide-case B² having a lateral opening *b*³, said guide comprising a lower guide-plate C² and a soft-metal guide C' and an upper guide-plate C³, and a punch-withdrawing-plate C⁴ and means for operating the same, substantially as specified.

12. In a perforating-stamp, the combination, with the bed-plate A, having a die-plate G secured thereto, of a paper-feed wheel and shaft mounted below said bed-plate, a holder B, carrying punches, a guide for the punches and mechanism for operating the punches and provided with a hollow base-plate or ring B', secured to said bed-plate around an opening therein, and a device for communicating motion to said paper-feed-wheel shaft, operating through said hollow base-plate or ring B' and the opening in the bed-plate, said device consisting of a fork or slide P, carrying a pawl P', the paper-feed-wheel shaft being furnished with a ratchet and means for operating said slide P, substantially as specified.

13. The combination, with bed-plate A, of die G, holder B, having hollow base-plate or ring B', secured to said bed-plate around an opening therein, paper-feed wheels H and shaft H', mounted below said bed-plate and furnished with a ratchet H², slide or fork P, furnished with pawl P', a set of independently-movable punches C, a guide therefor and matrix and lever for operating the same, and a lever T for communicating motion to said fork or slide, said lever T being connected to said operating-lever and having its fulcrum on said holder B, substantially as specified.

14. The combination, with bed-plate A, of die G, holder B, having hollow base-plate or ring B', secured to said bed-plate around an opening therein, paper-feed wheels H and shaft H', mounted below said bed-plate and furnished with a ratchet H², slide or fork P, furnished with pawl P', a set of independently-movable punches C, a guide therefor and matrix and lever for operating the same, and a lever T for communicating motion to said fork or slide, said holder B having a flange B⁵ and said lever T being connected to said matrix-operating lever and furnished with a rolling or movable fulcrum resting on said flange B⁵ of the holder, substantially as specified.

15. In a perforating-stamp, the combination, with the bed-plate, of a paper-feed-wheel shaft mounted below the bed-plate, a holder B, having a lateral flange B⁵, an operating-lever F', pivoted to said holder, a slide or fork P, furnished with a pawl P', a ratchet on said feed-wheel shaft, and a lever T, having its short arm pivoted to said operating-lever F'

and its long arm pivotally connected with its fork or slide P, said lever having a movable fulcrum t^2 resting on said ledge or flange B^5 , substantially as specified.

5 16. In a perforating-stamp, the combination, with the bed-plate, of a paper-feed-wheel shaft mounted below the bed-plate, a holder B, having a lateral flange B^5 , an operating-lever F' , pivoted to said holder, a slide or fork
10 P, furnished with a pawl P' , a ratchet on said feed-wheel shaft, and a lever T, having its short arm pivoted to said operating-lever F' and its long arm pivotally connected with its fork or slide P, said lever having a movable
15 fulcrum t^2 resting on said ledge or flange B^5 , and a spring S for giving a quick movement to said pawl-carrying slide, substantially as specified.

20 17. In a perforating-stamp, the combination, with the bed-plate, of a paper-feed-wheel shaft mounted below the bed-plate, a holder B, having a lateral flange B^5 , an operating-lever F' , pivoted to said holder, a slide or fork P, furnished with a pawl P' , a ratchet on said
25 feed-wheel shaft, and a lever T, having its short arm pivoted to said operating-lever F' and its long arm pivotally connected with its fork or slide P, said lever having a movable fulcrum t^2 resting on said ledge or flange B^5 ,
30 said movable fulcrum consisting of an anti-friction roller or wheel, substantially as specified.

35 18. In a perforating-stamp, the combination, with bed-plate A, of holder B, secured thereto, a set of punches, their guide, and operating-lever mounted on said holder B, and a hollow case or shell N, inclosing said holder B, the punches, and their operating-lever and within which said operating-lever vibrates,
40 said case or shell N having a collar or flange N' at its open end and said operating-lever being furnished with a disk F^3 , closing the opening in the end of said shell, substantially as specified.

45 19. In a perforating-stamp, the combination, with bed-plate A, of die-plate G, holder B, secured to said bed-plate, a group of independently-movable punches C and their guide carried by said holder, a matrix D for
50 operating said punches, a rotatable pivotal operating-lever $F F'$, to the rotatable part or shaft F of which said matrix is secured, a case or shell N, inclosing said holder and the mechanism carried thereby and furnished
55 with an open end or rim N' , and an indicating-disk F^3 , secured to said shaft F, said holder N having an index point or mark N^2 , substantially as specified.

60 20. The combination, in a perforating-stamp, with a set of independently-movable

punches, their matrix, guide, and the punch-withdrawing plate, of the holder B, having stud B^3 , the part F' of the operating-lever pivoted on said stud B^3 and furnished with an arm f' for operating the punch-withdrawing plate, and a lever T, connected to said part F' of the lever for communicating motion to the paper-feed mechanism, the paper-feed mechanism, and the part F of said operating-lever, carrying said matrix, substantially as specified. 65 70

21. The combination, with a set of independently-movable punches, their matrix, guide, and punch-withdrawing plate, of the holder B, having stud B^3 , an operating-lever
75 consisting of two parts F and F' , said part F being revoluble on said part F' and carrying said matrix and said part F' being pivoted on said stud B^3 and furnished with arm f' for operating the punch-withdrawing plate, 80 paper-feed mechanism, and a lever T, connected to said part F' of the lever for communicating motion to the paper-feed mechanism, said part F' having studs $F^4 F^5$, to which said arm f' is secured by screws and
85 to one of which said lever T is pivoted, substantially as specified.

22. The combination, with a set of independently-movable punches, their matrix, guide, and punch-withdrawing plate, of the
90 holder B, having stud B^3 , an operating-lever consisting of two parts F and F' , said part F being revoluble on said part F' and carrying said matrix and said part F' being pivoted on said stud B^3 and furnished with arm f' 95 for operating the punch-withdrawing plate, paper-feed mechanism, and a lever T, connected to said part F' of the lever for communicating motion to the paper-feed mechanism, said part F' having studs $F^4 F^5$, to which
100 said arm f' is secured by screws and to one of which said lever T is pivoted, and said holder B having a ledge or flange B^5 , upon which the fulcrum of said lever T rests, substantially as specified. 105

23. In a perforating-stamp, the holder B, furnished with integral guide-case B^2 for the punches and a soft-metal guide for the punches in said case, said holder being also provided with an integral stud B^3 to serve
110 as the pivot for the operating-lever, in combination with a set of independently-movable punches, a matrix, and an operating-lever carrying said matrix and pivoted to said stud B^3 , substantially as specified.

BENJAMIN F. CUMMINS.

Witnesses:

H. M. MUNDAY,
EDMUND ADCOCK.