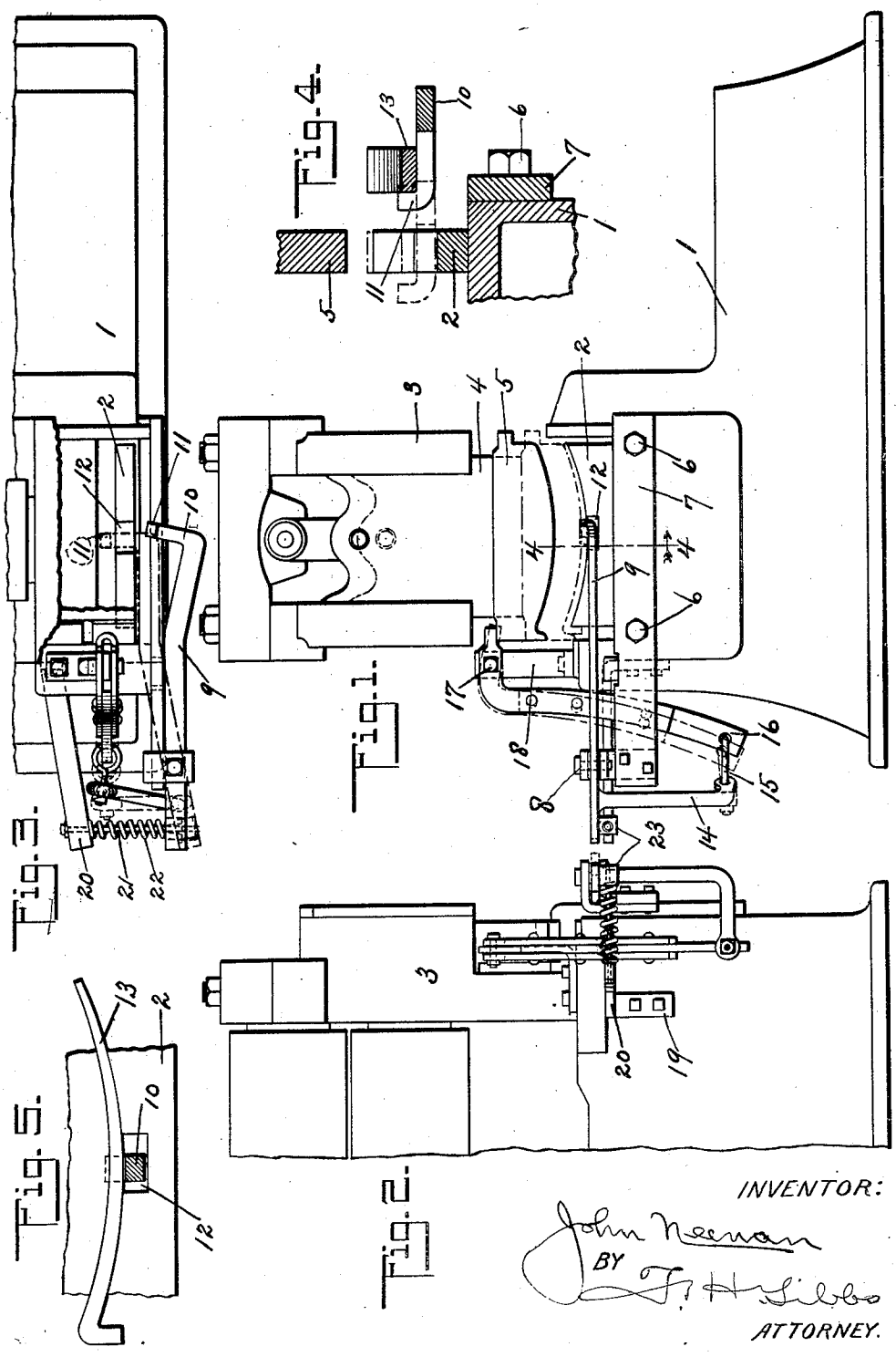
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EJECTING DEVICE FOR KEY FORMING MACHINES.

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1,432,199. Patented Oct. 17, 1922.



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UNITED STATES PATENT OFFICE.

JOHN NEENAN, OF TERRE HAUTE, INDIANA, ASSIGNOR TO AMERICAN CAR AND FOUNDRY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

EJECTING DEVICE FOR KEY-FORMING MACHINES.

Application filed July 6, 1921. Serial No. 482,669.

To all whom it may concern:

Be it known that I, JOHN NEENAN, residing at Terre Haute, Vigo County, State of Indiana, and being a citizen of the United States, have invented certain new and useful Improvements in an Ejecting Device for Key-Forming Machines, of which the following is a full, clear, and exact description, 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 illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof within the scope of the claims will occur to persons skilled in the art.

In said drawings:

Fig. 1 is a front elevation of a machine for forming brake shoe keys showing my improved ejecting device applied thereto;

Fig. 2 is an end elevation;

Fig. 3 is a plan view of my device, parts of the machine being broken away to show the device more clearly;

Fig. 4 is a section taken on the line 4—4 of Fig. 1 and shows the manner in which the ejecting means engages the finished key; and

Fig. 5 is a fragmentary view in front elevation, showing the relation of the key and ejecting arm while the key is between the dies.

It is the object of my invention to provide an improved device for removing the finished key from the dies of the forming machine.

In the embodiment of my invention shown in the drawings the device is attached to a key forming machine comprising a base 1 supporting the lower die 2 and a frame 3, carried by the base 1, in which is mounted the reciprocating head 4 carrying the upper die 5.

Secured to the base 1, as by bolts 6, is a supporting bar 7 having a bracket 8 attached to its outer end. Pivotally mounted in the bracket 8 is a bent lever 9 having, at one side of its pivot point, a portion 10 bent inwardly at substantially right angles to the body portion and provided with an upwardly bent portion 11 at the end, the portion 10 being adapted to enter a slot 12 formed in the lower die 2 so that the upwardly bent portion 11 will engage with the finished key 13 as it rests upon the die 2. To the lever 9 at the other side of its pivot point, there is rigidly secured a downwardly extending bent arm 14 having a pivotal connection with a link 15 that has its other end pivotally connected to one end of the lever 16. The lever 16 is pivotally mounted at 17 on a bracket 18 attached to the base 1 and has its other end projecting into the path of the upper die 5 so that the lever 16 will be operated by the die 5 as it completes its upward movement.

Attached to the base 1 is a bracket 19 having a projecting arm 20 in which is mounted the rod 21 encircled by a spring 22, the other end of the rod 21 engaging in a guide block 23 mounted on the lever 9. The spring 22 is confined between the arm 20 and the guide block 23 and serves to operate the lever 9 when the lever 16 is released by the downward movement of the die 5.

With the dies separated to the greatest extent, the initial downward movement of the die 5 frees the lever 16 from engagement with the die 5 and permits the spring 22 to operate the lever 9 to a position in which the portion 10 enters the slot 12 and the portion 11 of the lever 9 is positioned, as shown in dotted lines in Figs. 3 and 4, on the opposite side of the die 2 to that occupied by the major portion of the lever 9. During the remainder of the downward movement and until the die 5, in its upward movement, engages the lever 16 the lever 9 remains in the position shown in dotted lines in Fig. 3. Upon the engagement of the die 5 with the lever 16, the lever 16 acting through link 15 and arm 14 operates the lever 9, against the action of spring 22, to withdraw the portion 10 of the lever 9 from the slot 12 in the die 2 and causes the portion 11 of the lever 9 to engage the key 13 and remove it from the die 2.

What I claim is:

1. The combination with a machine having a movable die and a slotted stationary die, of means entering the slot in said stationary die to remove the work from said die, a lever operated by said movable die and means connecting said lever and means.

2. The combination with a machine hav- a plurality of dies, of a horizontal lever operating in a slot in one of said dies to remove the work from the die, a vertical lever

operated by the other of said dies, means connecting said levers and spring restoring means for said levers.

3. The combination with a machine having a movable die and a slotted stationary die, a horizontal lever operating in the slot in said stationary die to remove the work from said die and a vertical lever operated by said movable die and adapted to operate the horizontal lever.

4. The combination with a machine having a movable die and a slotted stationary die, of a lever operating in the slot of said stationary die to remove the work from said die, means operated by said movable die and adapted to operate said lever, and spring restoring means for said lever and means.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN NEENAN.

Witnesses:
E. J. OSBORNE,
E. D. BUICK.