

(No Model.)

C. A. RANDALL.
Perforating-Stamp.

No. 227,299.

Patented May 4, 1880.

Fig. 1.

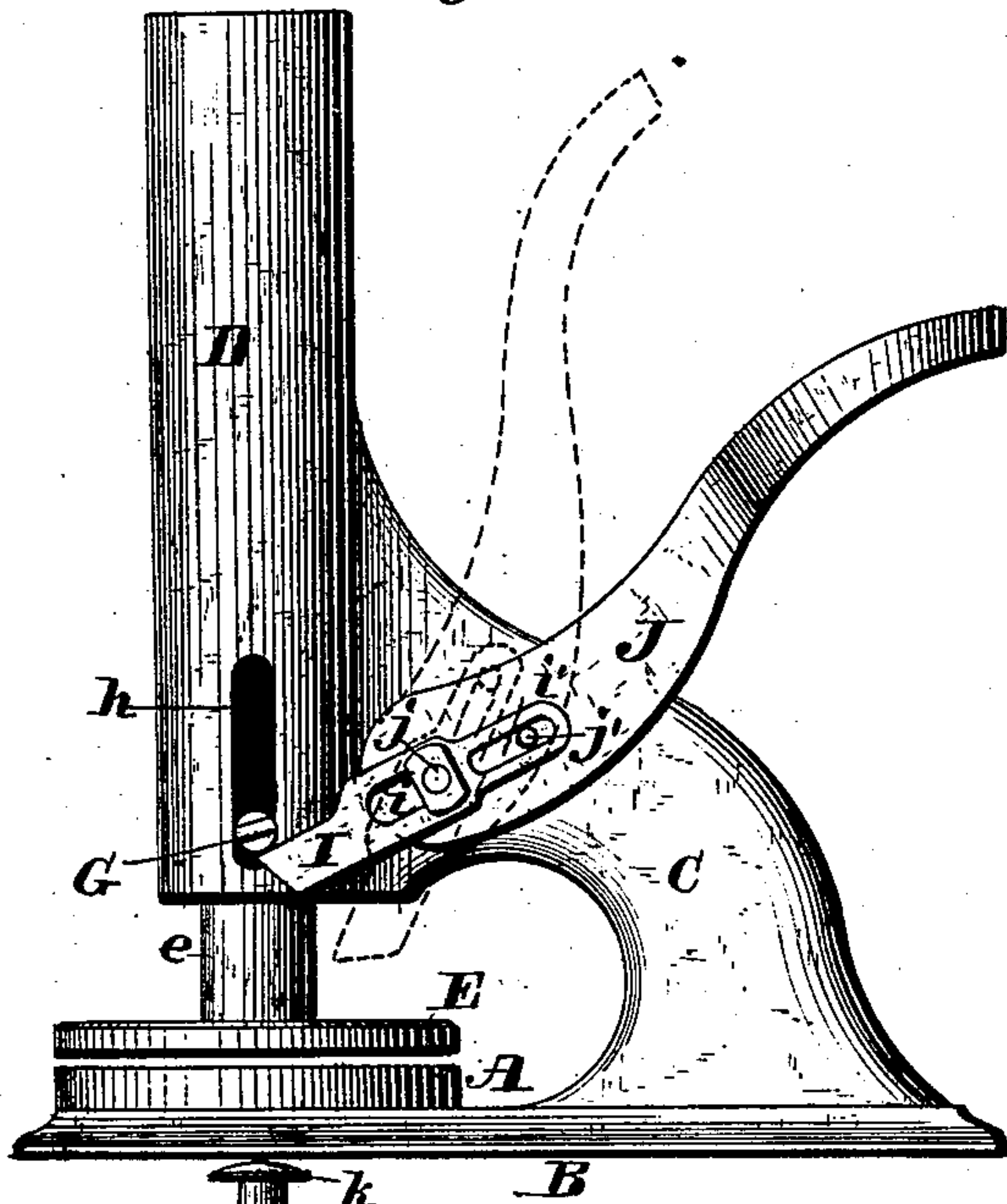


Fig. 2.

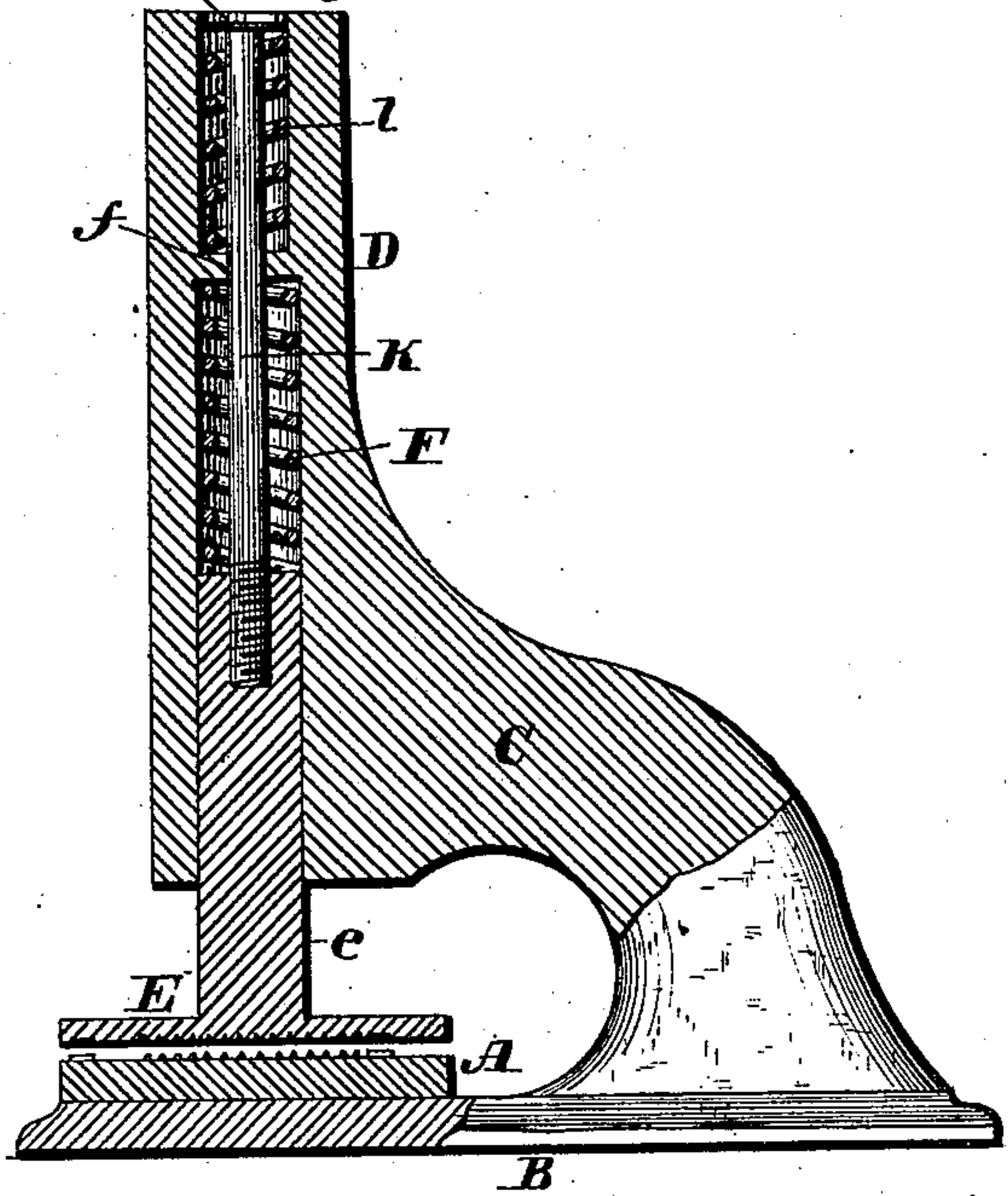


Fig. 3.

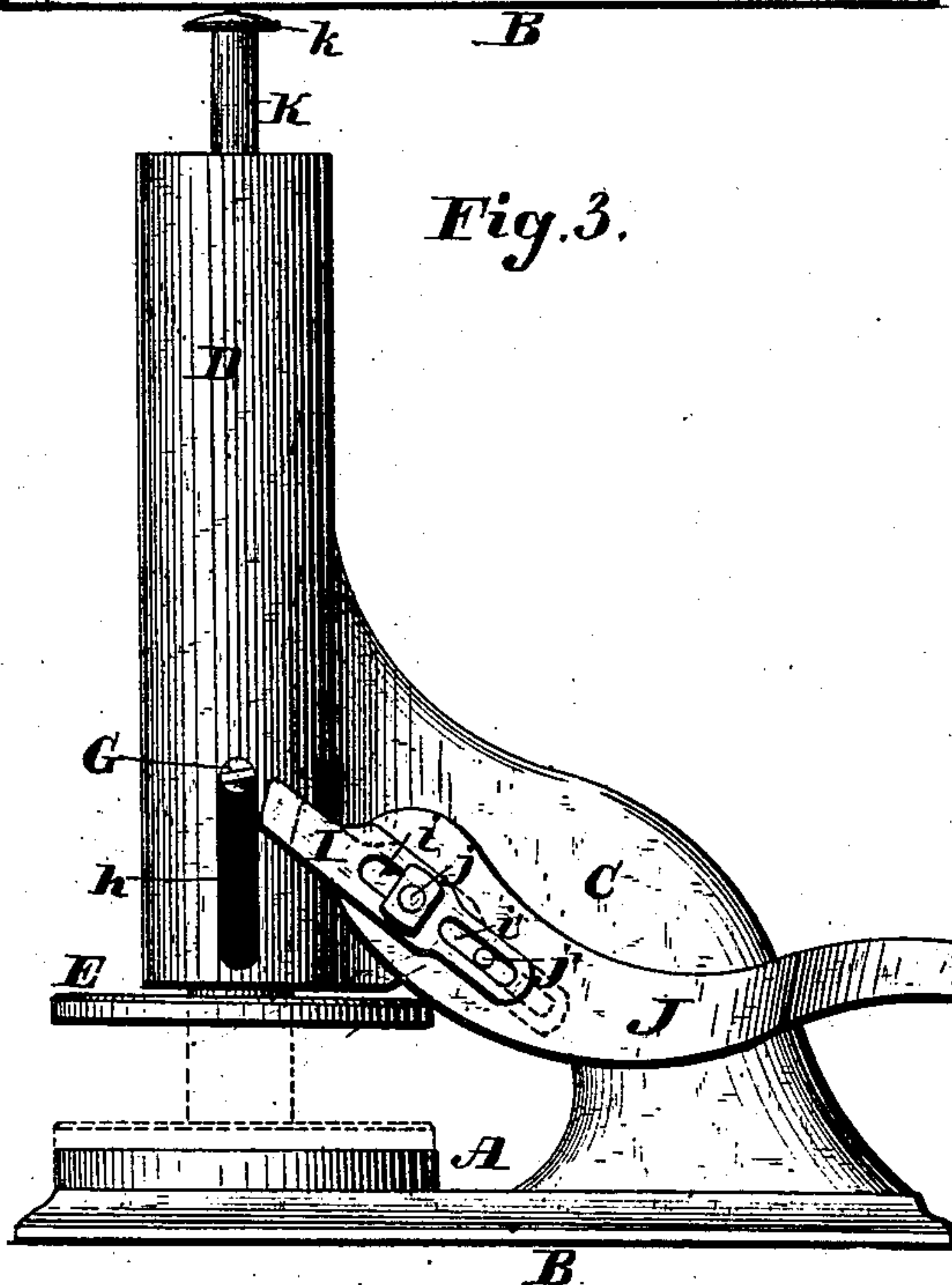
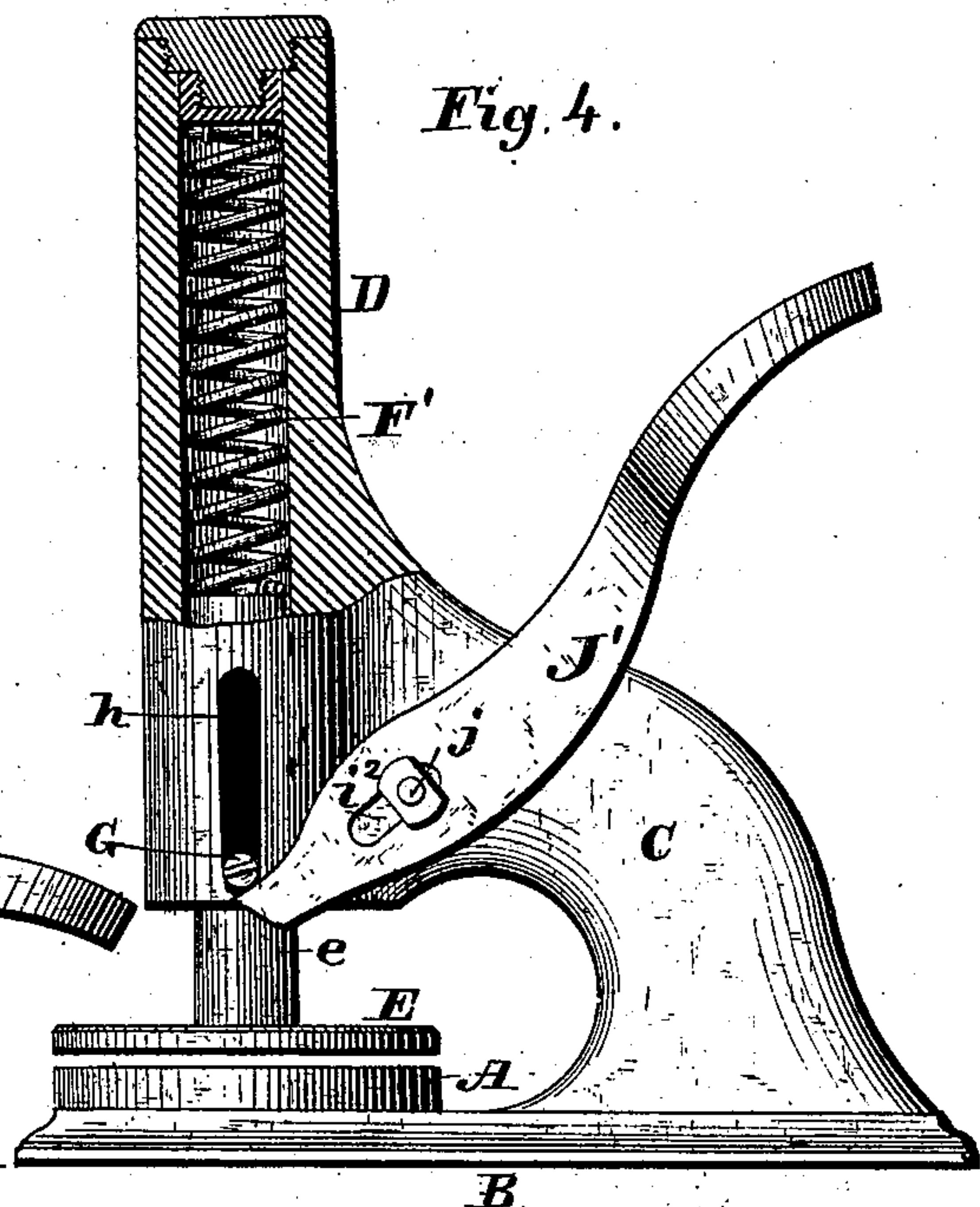


Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

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PERFORATING-STAMP.

SPECIFICATION forming part of Letters Patent No. 227,299, dated May 4, 1880.
Application filed March 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. RANDALL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Embossing Hand - Stamps, of which the following is a specification.

This invention relates to that class of embossing hand - stamps which are adapted mainly for use in offices and counting-houses for roughening the surfaces of monetary papers where numbers and amounts are written, in order to prevent alteration or raising.

Embossing hand - stamps have heretofore been of two kinds, in one of which the movable die is operated by percussion for embossing, and retracted by a spring, the percussion being produced by a blow from the hand upon a head formed upon the stem carrying the die. Such stamps are quite rapid and effective, but their use is objectionable on account of the required blow by the hand, which becomes very painful if repeated often at short intervals. In the other kind of stamp referred to the movable die is impelled for pressure by a cam-lever, the pressure upon the material to be embossed being gradual instead of percussive. While in such a press the disagreeable blow by the hand is not required and great power is obtained, it is not so rapid in action, and does not produce the clear, sharp, well-defined impression upon the material which is effected by the quick strike and retraction of the percussive die.

It is the object of my invention to combine in an embossing hand - stamp the desirable qualities of the two kinds of stamp above referred to, while discarding or obviating the objectionable features of both; and to this end it consists, mainly, in a hand-stamp so constructed that the movable die is operated for embossing by the force of a spring which is first placed under tension by means of a lever, and suddenly tripped or released to exert its resilient action upon said die, giving it a percussive action upon the material and stationary die. Thus the lever is the only part operated by hand, while at the same time are secured the efficiency and rapidity of percussive action.

In the accompanying drawings, Figure 1 is

a side elevation of an embossing hand-stamp constructed according to my invention. Fig. 2 is a vertical section of the same. Fig. 3 is an elevation, illustrating the action of the lever and trip-dog. Fig. 4 is a view, partly in section, of a modification of the apparatus.

The letter A indicates the stationary or bed die, secured to a suitable base, B, from which rises a curved standard, C, carrying rigidly at its upper end a vertical barrel, D.

The movable die E is fixed to a stem, *e*, which extends upward into the open lower end of barrel D, and against the upper end of the stem *e* bears a strong spiral spring, F, which is inclosed by the barrel D, and the upper end of which bears against an annular flange or shoulder, *f*, projecting from the inner surface of said barrel.

A stud, G, projects from the stem *e* through a slot, *h*, formed in the barrel D, and under this stud takes the end of a sliding dog, I, carried by the hand-lever J, which is fulcrumed to the curved standard C.

The fulcrum-pin *j* of the hand-lever passes through a slot, *i*, at about the middle of the dog, and a pin, *j'*, projecting from said lever, passes through another slot, *i'*, in the outer portion of said dog, these slots being of such length as to permit the dog to slide rearwardly to escape or clear the stud G, and forward to take under said stud, as shown in Fig. 1.

When the long arm or handle of the lever J is depressed the dog forces the stem *e* upward, compressing the spring F until, in the arc of its movement, said dog leaves the stud, as shown in Fig. 3, and the spring, being thus released, drives the stem *e* and the movable die forcibly downward upon the bed-die A giving a quick percussive blow upon the material which is placed upon said bed-die to be embossed. At the moment the dog I in its upward movement escapes the stud G said dog is caused by gravity to slide rearwardly to the position shown in dotted lines, Fig. 3, so that it will clear the stud in a downward movement, and when the lever is then raised to the position shown in dotted lines, Fig. 3, the dog slides forward, so as to again take under the stud ready for operating the die.

In order that the upper die may be promptly retracted from the bed-die, a rod, K, provided

with a head, *k*, extends downward through the upper portion of the barrel *D*, and is screwed into the upper end of the stem *e*, its head *k* resting upon a spiral spring, *l*, which stands upon the upper surface of the flange or shoulder *f* in the barrel.

The spring *F* is of such length that it does not force the upper die against the bed-die, except when under expansive action, the latter part of its stroke being made against the tension of spring *l*, so that when the stroke of said spring *F* is completed the spring *l* immediately acts against the head *k* to lift the upper die from the material and bed-die.

By adjusting the length of rod *K*, by means of its screw-connection with stem *e*, the height to which the upper die may be raised can be regulated to correspond to the thickness of the material operated upon.

In the modification shown in Fig. 4 the extra lifting-spring and the sliding dog are dispensed with.

The driving-spring *F'* has its lower end firmly secured to the stem *e*, and its upper end fixed at the top of the barrel, the length of the spring being such that after delivering its stroke under the influence of its recoil after compression it will retract sufficiently to raise the upper die a predetermined distance from the bed-die.

The sliding dog being omitted, the lever *J'* has its inner arm prolonged to act in lieu of said dog, and the lever is slotted, as at *i'*, to embrace its fulcrum-pin and to permit it to slide forward and rearward to engage or clear the stud *G*, as desired. The inner end of the lever is beveled, (as is also the end of the dog when used,) in order that it may be forced rearward should it strike the stud *e* in moving downward.

I am aware that a continuously-operative

stamp has been provided with a revolving stamping-pad carried by a lever which is raised by cams at certain points of its revolution and depressed by a spring when it escapes from said cams, the lever being carried by a shaft driven by gear-connection with a crank-shaft, and I do not claim such a stamp or any of its separate parts.

Having now described my invention, I claim—

1. In an embossing hand-stamp, the combination, with the bed-die, the movable die, and a fixed guide for confining said movable die to rectilinear motion, of a spring acting upon the movable die, a hand-lever for moving said movable die from the bed-die against the tension of the spring, and means for disconnecting said hand-lever from and connecting it with the said movable die, substantially as described.

2. The combination, with the movable die having stem *e*, provided with stud *G*, of the barrel *D*, slotted to embrace said stud, a lever for bearing against stud and moving stem inwardly of the barrel, the spring *F*, bearing upon said stem *e*, the rod *K*, engaging with said stem and provided with head *k*, and the spring *l*, supporting said head, substantially as and for the purpose set forth.

3. The combination, with the movable die having stem *e*, provided with stud *G*, of the slotted supporting-barrel, the lever *J*, and the freely-sliding dog carried by said lever, substantially as and for the purpose set forth.

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

CHARLES A. RANDALL.

Witnesses:

CHARLES G. COE,
HARRY S. GOODRIDGE.