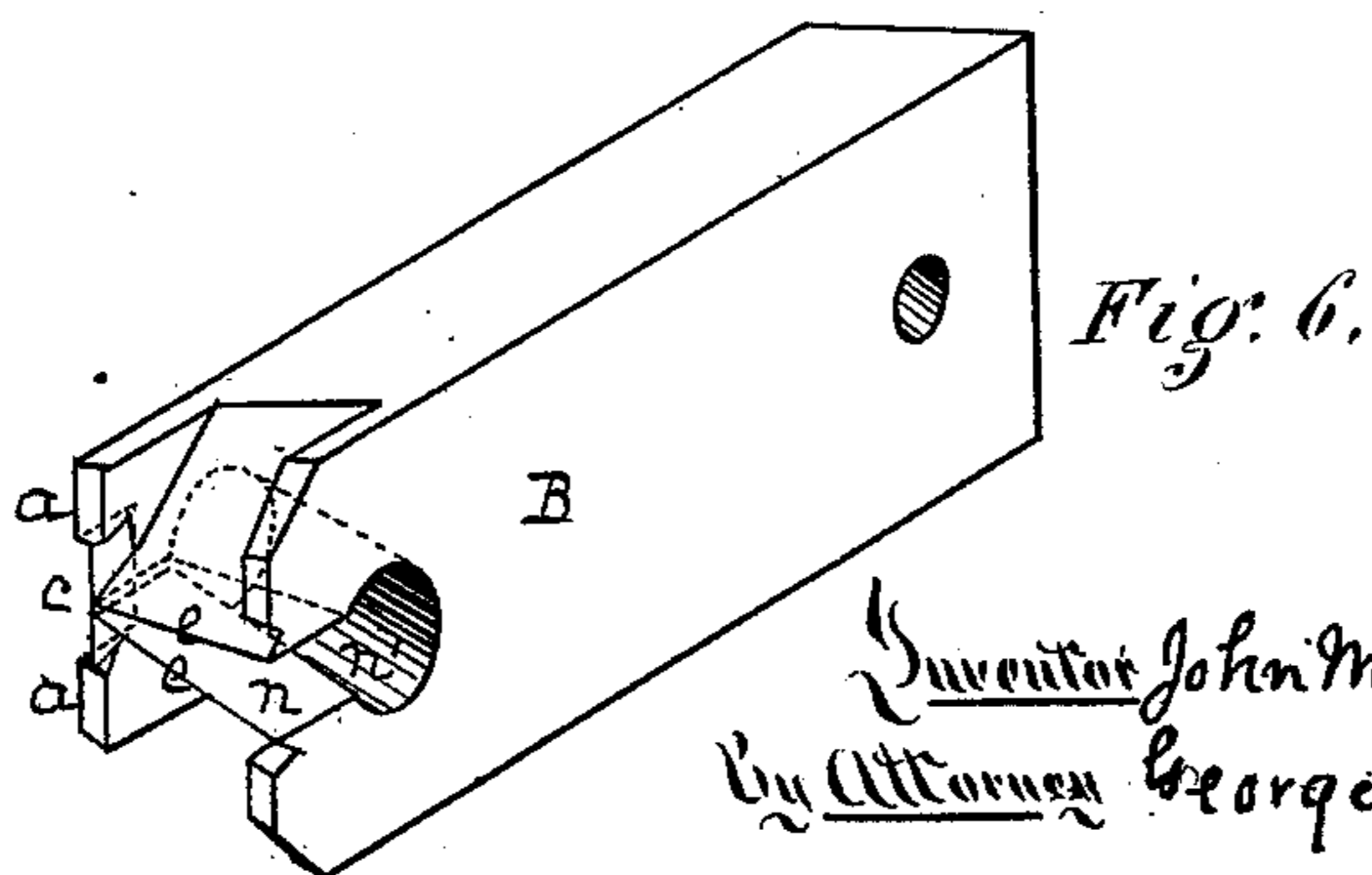
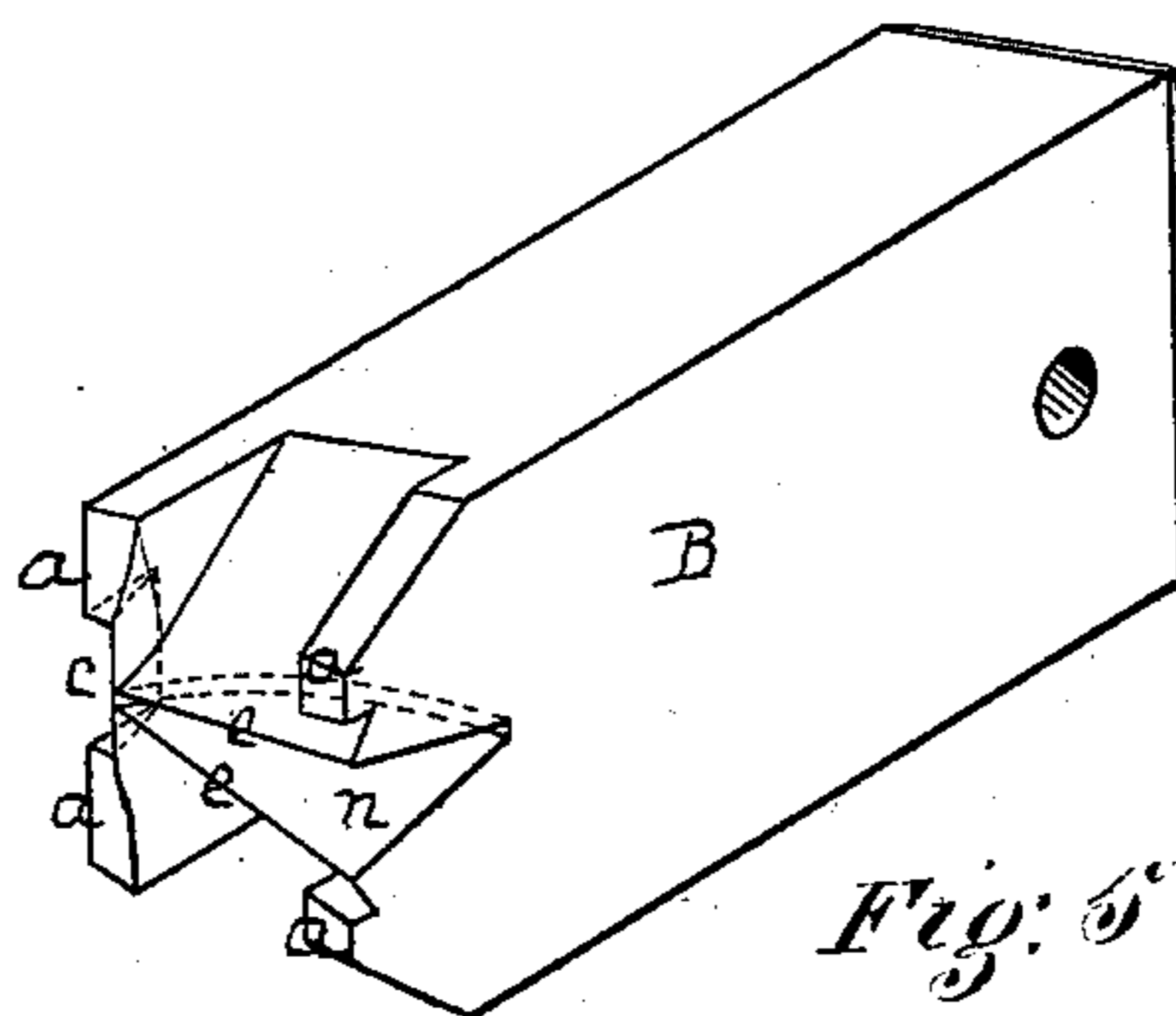
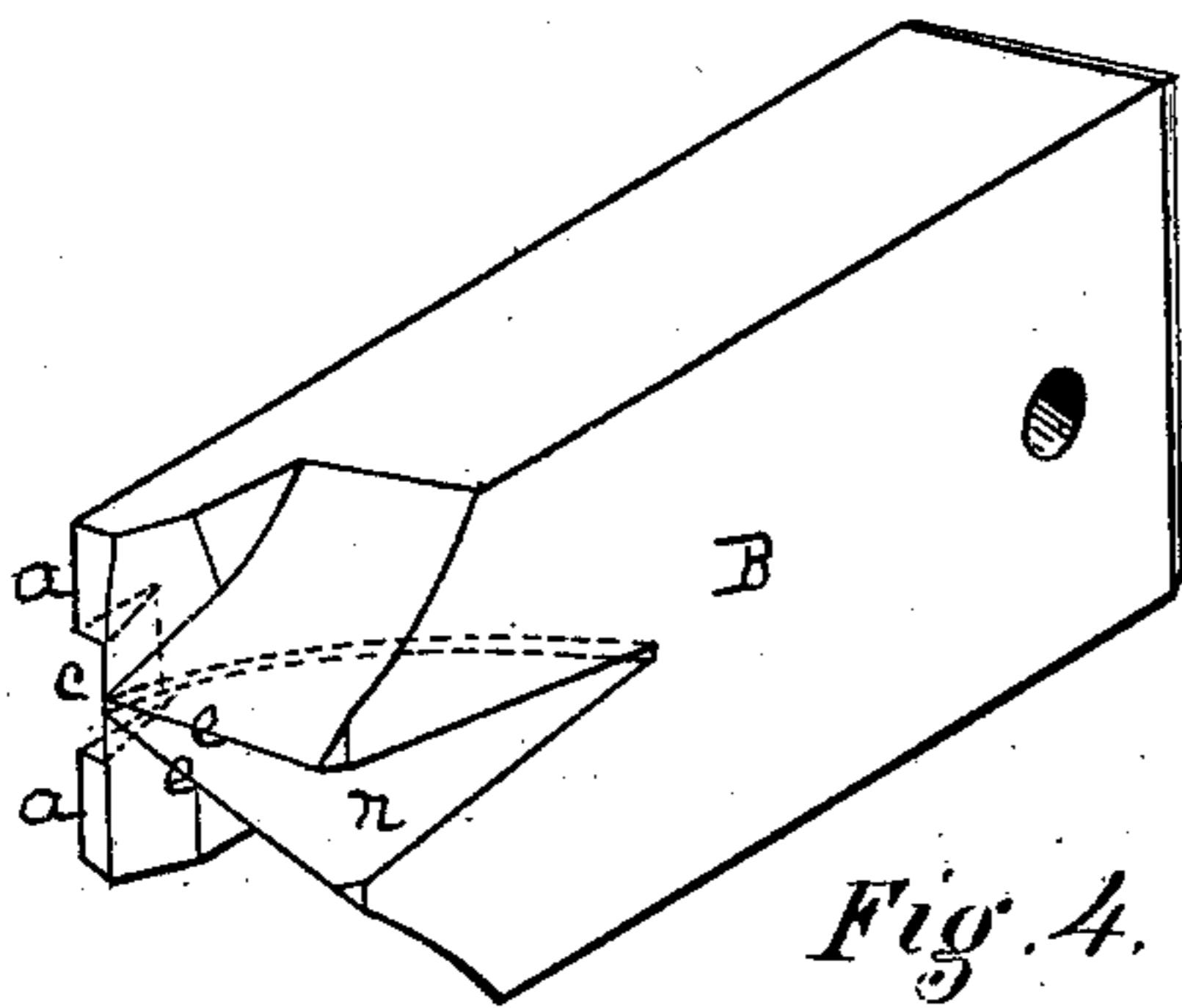
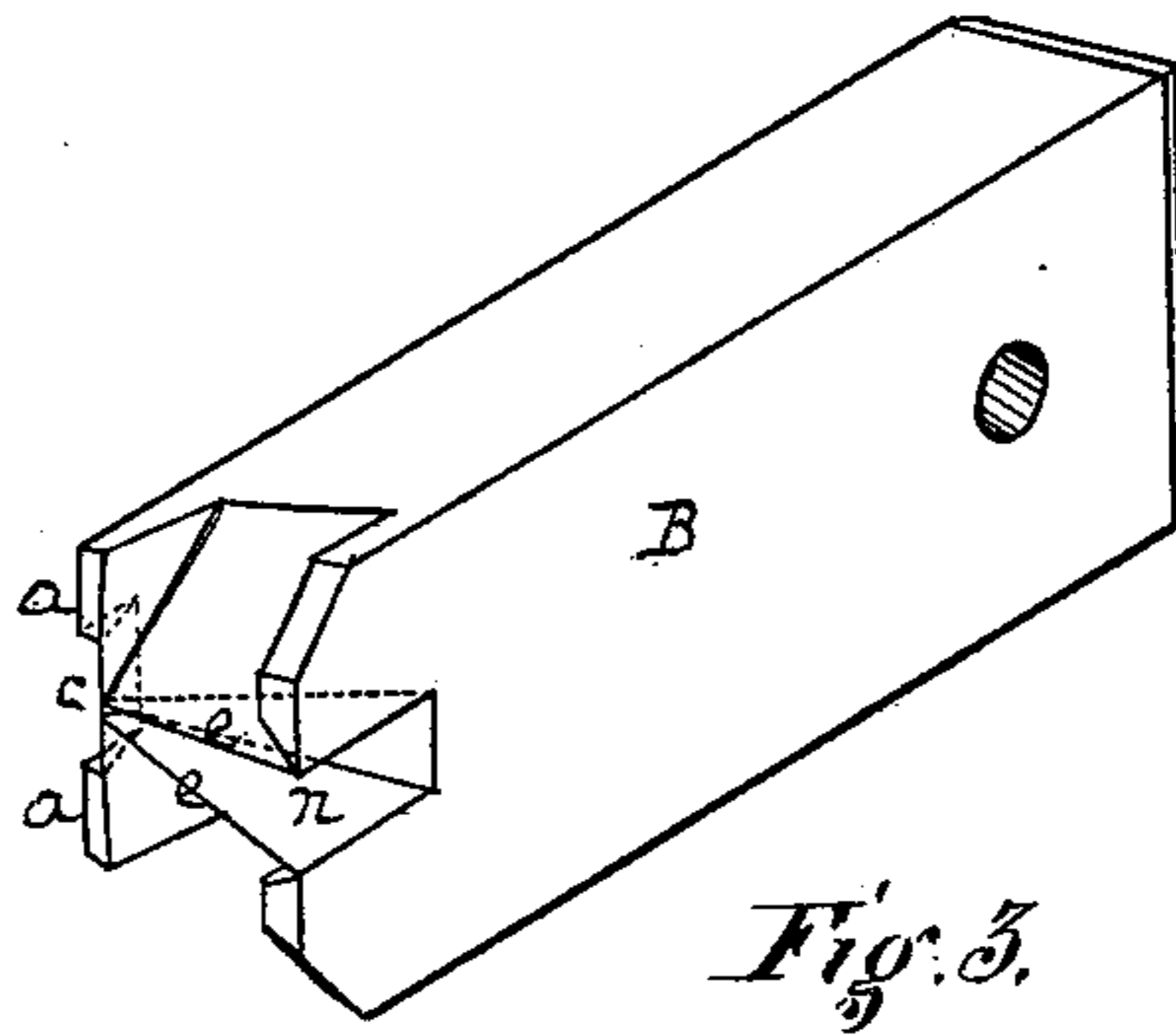
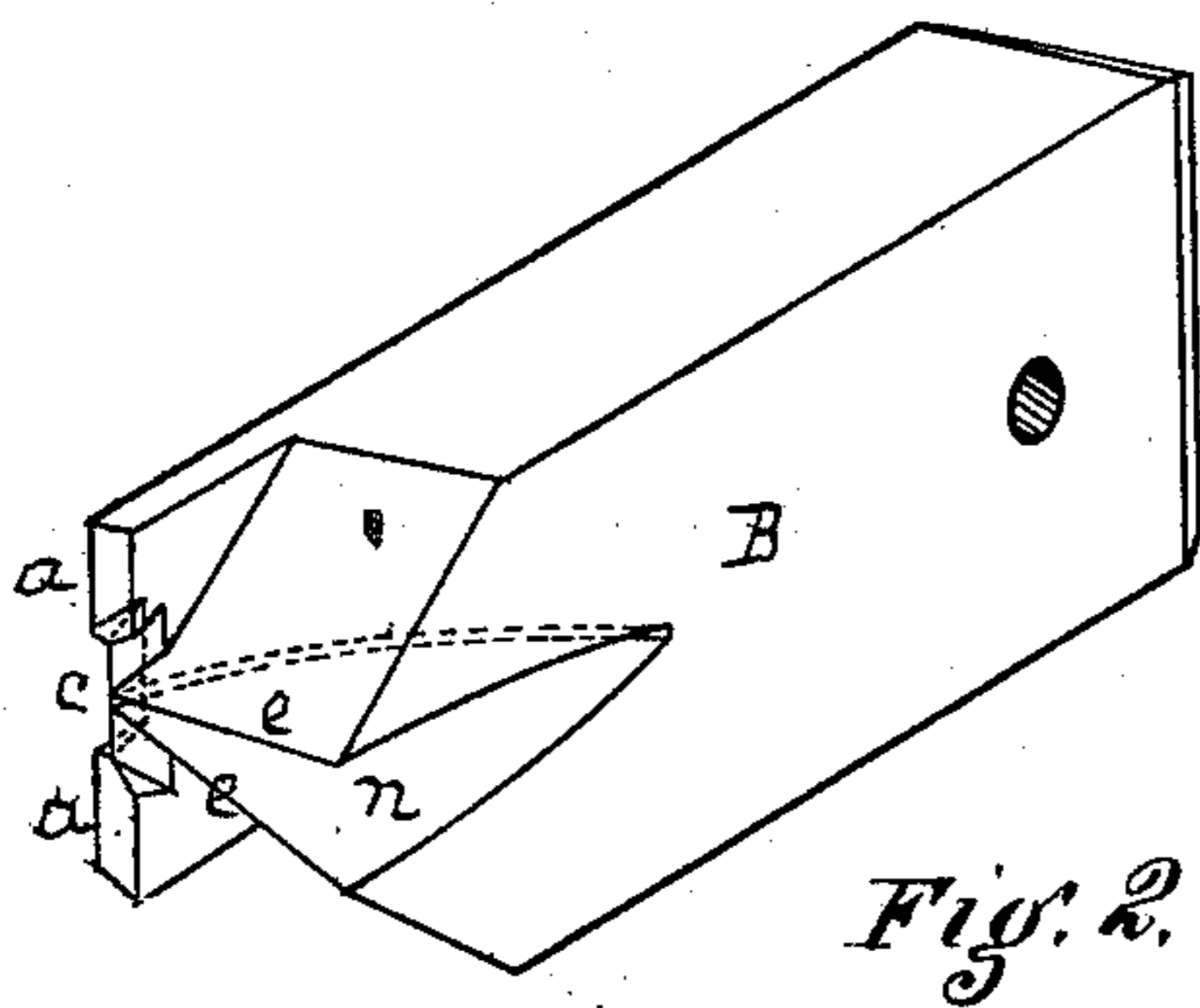
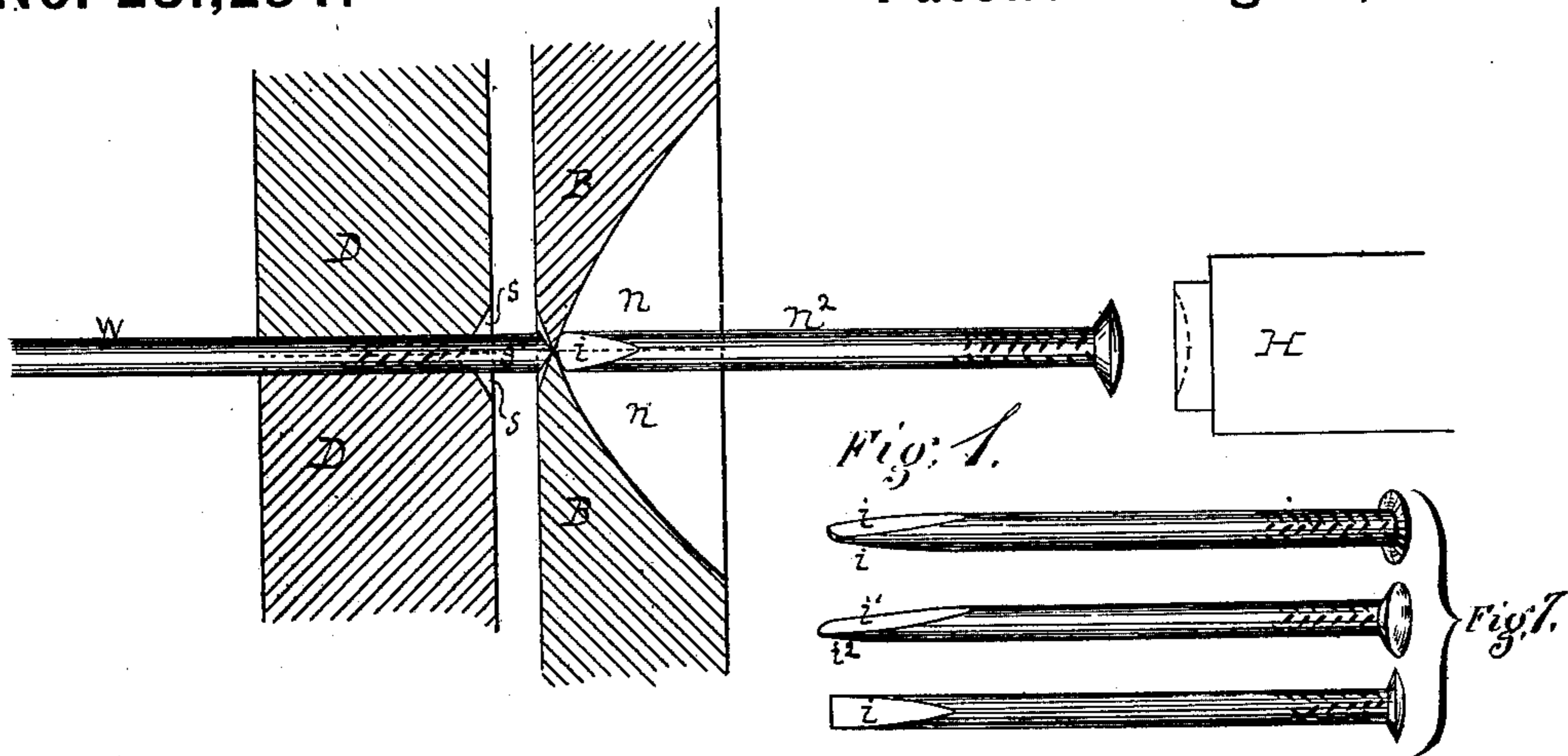


J. M. E. BAACKES.
Dies for Pointing Wire Nails.

No. 231,254.

Patented Aug. 17, 1880.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN M. E. BAACKES, OF CLEVELAND, OHIO, ASSIGNOR TO THE JP NAIL COMPANY, OF SAME PLACE.

DIE FOR POINTING WIRE NAILS.

SPECIFICATION forming part of Letters Patent No. 231,254, dated August 17, 1880.

Application filed February 19, 1880.

To all whom it may concern:

Be it known that I, JOHN MICHAEL E. BAACKES, of Cleveland, county of Cuyahoga, State of Ohio, have invented or discovered a new and useful Improvement in Nail-Pointing Dies, (Case B;) and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—like letters indicating like parts—

Figure 1 is a horizontal sectional view in the plane of the line of feed longitudinally through a pair of my improved dies, illustrative of their relation to the gripping-dies, (shown also in section,) and to the header, (shown in elevation.) Figs. 2 to 6 show, in perspective, end views of different forms of dies, but all illustrative of the same feature of improvement in modified forms; and Fig. 7 illustrates the forms of points which the dies are adapted to make.

The style of nail to the making of which my improved dies are particularly applicable is made from wire with a cut, chisel, or wedge shaped point, the width of which is no greater than the diameter of the wire from which it is made; but for the purposes of the present invention any sized wire suitable for making nails may be employed.

As illustrated in the drawings, the wire *w* is to be fed intermittently from the left, between the gripping-dies *D*, which have each a half-round cavity for the purpose; and if a screw-head is desired, a countersink, *s*, is made, so that the projecting end *s'* of the wire may, by a header, *H*, be upset therein; but other forms of heads may be made by the use of known forms of headers and anvil-dies.

From the projecting end of the headed wire, as fed forward, a nail, *n*², is cut off and made with a cut, wedge, or chisel shaped point by the use of the dies *B*; and as all the dies shown do not differ in any material respect except in the form of the cavity by which provision is made for the nail to clear itself or be cleared from the dies, I have designated them all by the same letter.

The dies, whichever form be used, are used in pairs, and with cutting-edges which are du-

plicates of each other, so that the same cutting action will be effected from opposite sides of the nail-blank. These dies are to be mounted in die-holders and operated by a reciprocating motion in the direction of their length to and from the central line of feed, and the devices proper for this purpose and for performing the other usual functions of nail cutting and pointing machines are so well known in the art that I do not deem it necessary to show or describe the same. They may be of any known suitable style, form, or construction.

Each die *B* has one or more abutments, *a*, by which, while allowing the dies to make the necessary length of stroke, to prevent the cutters *c* *e* from injuring each other. These cutting-edges work in line with each other, and the cutters *c* are intended for severing the nail *n*² or (if unheaded) the nail-blank from the parent wire *w*. At the same stroke at which this is done a pair of diverging cutters, *e*, on the forward end of each die cut off a wedge-shaped or tapering section from the top and bottom or two opposite faces of the nail-point, so as to leave two sloping faces, *i*, terminating at the point and giving the chisel shape desired.

By setting the dies so that the central point of junction of the cutters *c* *e* shall be in line with the axial line of the wire, the slopes *i* of the upper and lower faces of the nail-point will be the same; but in order to make a clinch-point I set the dies a little above or below the point thus indicated, so as to cut one sloping face, *i'*, a little longer and deeper than the other, *i*², Fig. 7; but such variation from the center line should be less than one-half the diameter of the wire in order that the cutters *e* which cut the shorter slope, *i*², may support properly the nail-blank on that side as against the tendency of the other cutters *e* which cut the longer slope (the power and resistance then being greatest on that side) to deflect the end or point of the nail laterally in the opposite direction. In this way a clinch-point may be made such that when the nail is driven into wood the longer slope, *i'*, will cause it to bend as it enters the wood, and by taking a curved path in the wood secure in part the results of clinching.

It is an important feature of these dies B that the cavity *n* between the cutters *c* be carried back a distance equal to or greater than one-half the diameter of the wire, to the end
5 that little or no compressing action shall take place edgewise on the chisel-point, such as to convert it into a pyramidal point.

Dies having cutting-edges *c c* and a cavity between the cutters *c* such as will swage and
10 compress the material laterally and thereby form two sides of a pyramidal point are old; but my dies differ from these in the absence of any swaging walls or surfaces between the cutters *c*, such as will destroy or materially
15 lessen or impair the chisel shape which the cutters *c* are adapted to give. These cavities *n* may have any desired shape with reference to the function indicated, and be made in any suitable way; but by preference they should
20 be deep enough or carried back far enough so that if one nail sticks in the die it will be forced back and out of the way by the next nail and without injury to or interfering with the cutting of the latter. In this way the nail
25 may be readily discharged from the dies. These cavities may be milled out, as in Figs.

2, 4, and 5, or planed, as in Fig. 3, or a hole, *n'*, may be bored, as in Fig. 6, and the intermediate metal be planed out; but I do not limit myself to any particular form of cavity
30 or way of making the same, provided it be such as to secure the attainment of the functions as above indicated.

I claim herein as my invention—

A pair of cutting-dies, B, each provided with
35 a cutter, *c*, for conjointly cutting off a nail from a rod or wire, and each having also two cutters, *c c*, diverging from cutter *c*, for shaving two sides of the nail obliquely, so as to produce upon it a wedge-shaped extremity, the
40 back wall of the cavity, between the two cutters *c c*, being formed so far back of the cutting-edges as to prevent an edgewise compressive contact thereof with the edges of the wedge-shaped extremity, substantially as set
45 forth.

In testimony whereof I have hereunto set my hand.

JOHN MICHAEL E. BAACKES.

Witnesses:

WM. E. CUSHING,
C. B. BEACH.