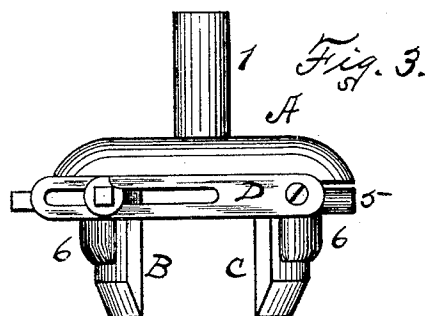
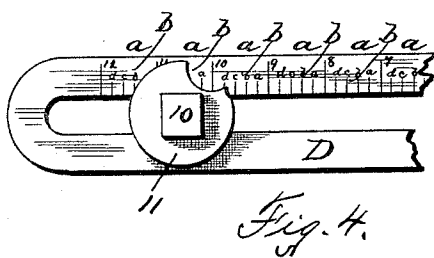
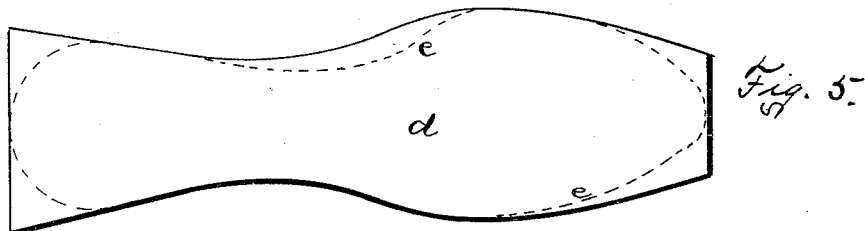
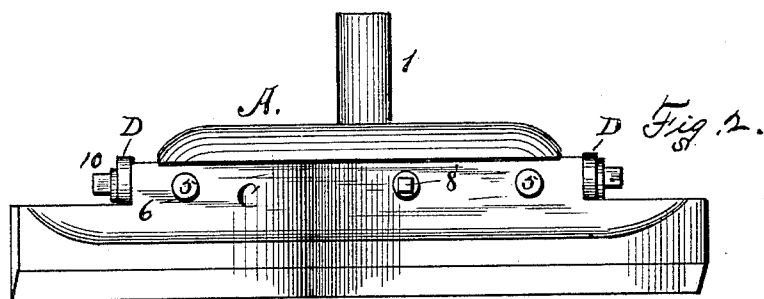
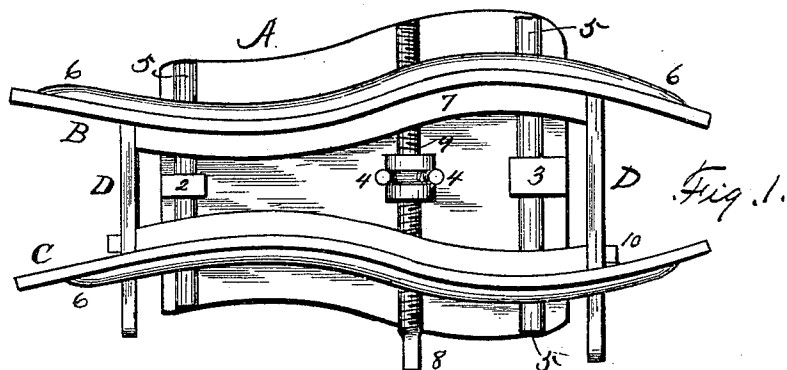


(No Model.)

R. R. GIBBS.
DIE FOR CUTTING SOLES.

No. 460,774.

Patented Oct. 6, 1891.



WITNESSES:
H. A. Carhart.
C. B. Birme.

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UNITED STATES PATENT OFFICE.

ROBERT R. GIBBS, OF UTICA, NEW YORK.

DIE FOR CUTTING SOLES.

SPECIFICATION forming part of Letters Patent No. 460,774, dated October 6, 1891.

Application filed May 11, 1891. Serial No. 392,407. (No model.)

To all whom it may concern:

Be it known that I, ROBERT R. GIBBS, of Utica, in the county of Oneida, in the State of New York, have invented new and useful
5 Improvements in Dies for Cutting Soles, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to dies for cutting out
10 blanks for soles or insoles for boots or shoes, and particularly to that class in which the cutting-knives are adjustable, so that they will embrace a full line of sizes from 1 to 12, and also the different widths of the different
15 sizes.

My object is to produce a single die which by the adjustment of the knives can be used to cut from the race blanks for soles or insoles of all sizes and of all of the widths of
20 the sizes ready for the rounding-machine, thus accomplishing with one die what has heretofore required a separate die for each size and each width of a size.

My invention consists in the several novel
25 features of construction and operation herein-after described, and which are specifically set forth in the claims hereto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

30 Figure 1 is a bottom plan view of the die complete. Fig. 2 is a side elevation thereof. Fig. 3 is an end elevation of the same. Fig. 4 is an enlarged detail of part of the scale upon each end to regulate the sizes and widths.
35 Fig. 5 is a plan view of a sole or insole blank, and the dotted lines indicate the lines upon which the blank is trimmed in or by the rounding-machine.

40 A is the body, of substantially the form shown in the drawings, and provided with a stem or shank 1 on its upper face, with lugs 2 3 upon its lower face, and pins 4 also. In the lugs 2 and 3 horizontal guides 5 are secured parallel to each other.

45 B C are the knives, having blades curved so that the cutting-edge of each is the form of one side of the blank, and each blade is re-enforced externally, as at 6, and internally by the rib 7 at the top. The guides fit through
50 the blades and their re-enforcements adjacent to their upper edge, and the right and left hand screw 8 screws through the upper edges

of the knives, its central grooved head 9 fitting between the pins 4, which maintains this head in position at all times.

55 D D are stay-bars pivoted upon the ends of one rib 7, and slotted to receive the set-screws 10, which screw into the ends of the rib upon the outer blade, and 11 is a combined washer and pointer under the head of each set-screw.
60 These stay-bars are each provided with a scale 12, divided into the main divisions *a*, which indicate the sizes, and the minor subdivisions *b*, which indicate the different widths. Additional divisions may be made to indicate
65 the half-sizes. This scale is used in this manner: The division marked "10" indicates the spread of the knives to cut that size of sole; "10^a" on the scale, a sole of that size and width.
70 For an insole for a 10 shoe I set the knives at 9, one size smaller, and for a 10^a insole I set the knives at 9^a, or in other words, the insoles are cut one size smaller than the sole. The leather is raced in the usual manner, each
75 race being of proper length for the size of sole or insole to be cut therefrom.

To adjust or set the knives I loosen the screws 10 and then turn the screw 8 until the pointer indicates the size upon the scale at both ends and then tighten the screws 10,
80 which secure the knives in position, and the stay-bars prevent the ends of the knives from springing, aiding the re-enforcement, while the screw 8 stays them centrally, and the guides 5 guide and keep the knives in proper
85 alignment while they are being moved in or out.

This die can be operated by hand by striking upon the shank, or the shank can be set into the vertically-operated plungers of a
90 press or other suitable machine.

After the blank *d* has been cut with the die, it is trimmed to the sole or insole pattern by or in a rounding-machine, as indicated by the dotted lines *e*.

95 What I claim as my invention, and desire to secure by Letters Patent, is—

1. A cutting-die comprising a body, transverse parallel guides mounted thereunder, knives mounted upon said guides, a transverse right and left hand screw fitting through said knives and mounted upon said body, and transverse stay-bars slotted, as shown, connecting said knives adjacent to their ends, and

set-screws for securing said stay-bars to the knives when set, in combination, as set forth.

2. A cutting-die comprising a body, parallel guides mounted thereunder, knives mounted
5 upon the guides, a right and left hand adjusting-screw connecting and fitting through the knives, stay-bars adjustably connecting the knives adjacent to their ends, gages for sizes and widths upon the stay-bars, and in-

dexes upon the set-screws, in combination, as set forth.

In witness whereof I have hereunto set my hand.

ROBERT R. GIBBS.

In presence of—

EGBERT BAGG,

ALONZO F. MILLER.