

No. 632,084.

Patented Aug. 29, 1899.

E. E. ANGELL.

RAND TRIMMING AND STITCH RUBBING MACHINE.

(Application filed Feb. 23, 1899.)

(No Model.)

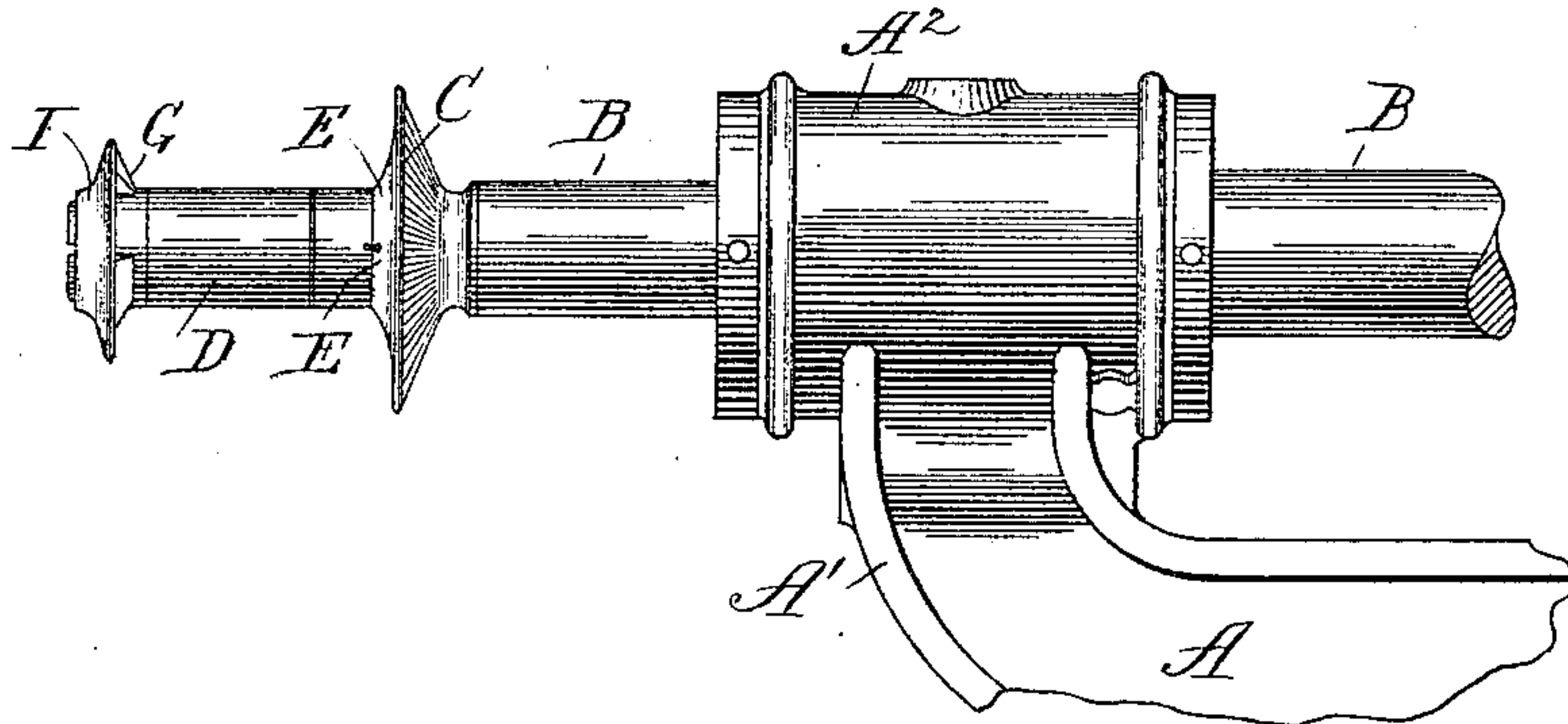


Fig-1-

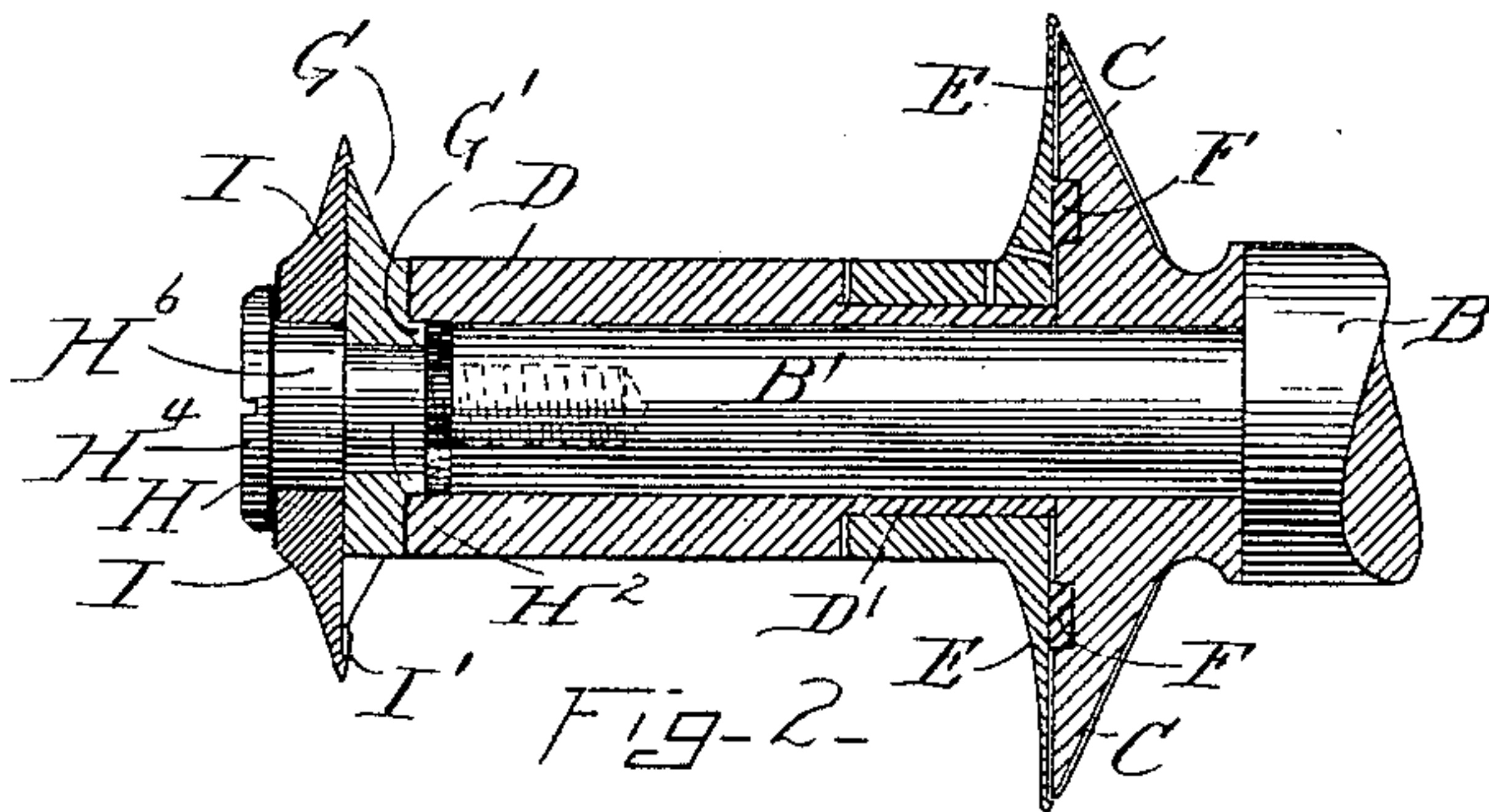
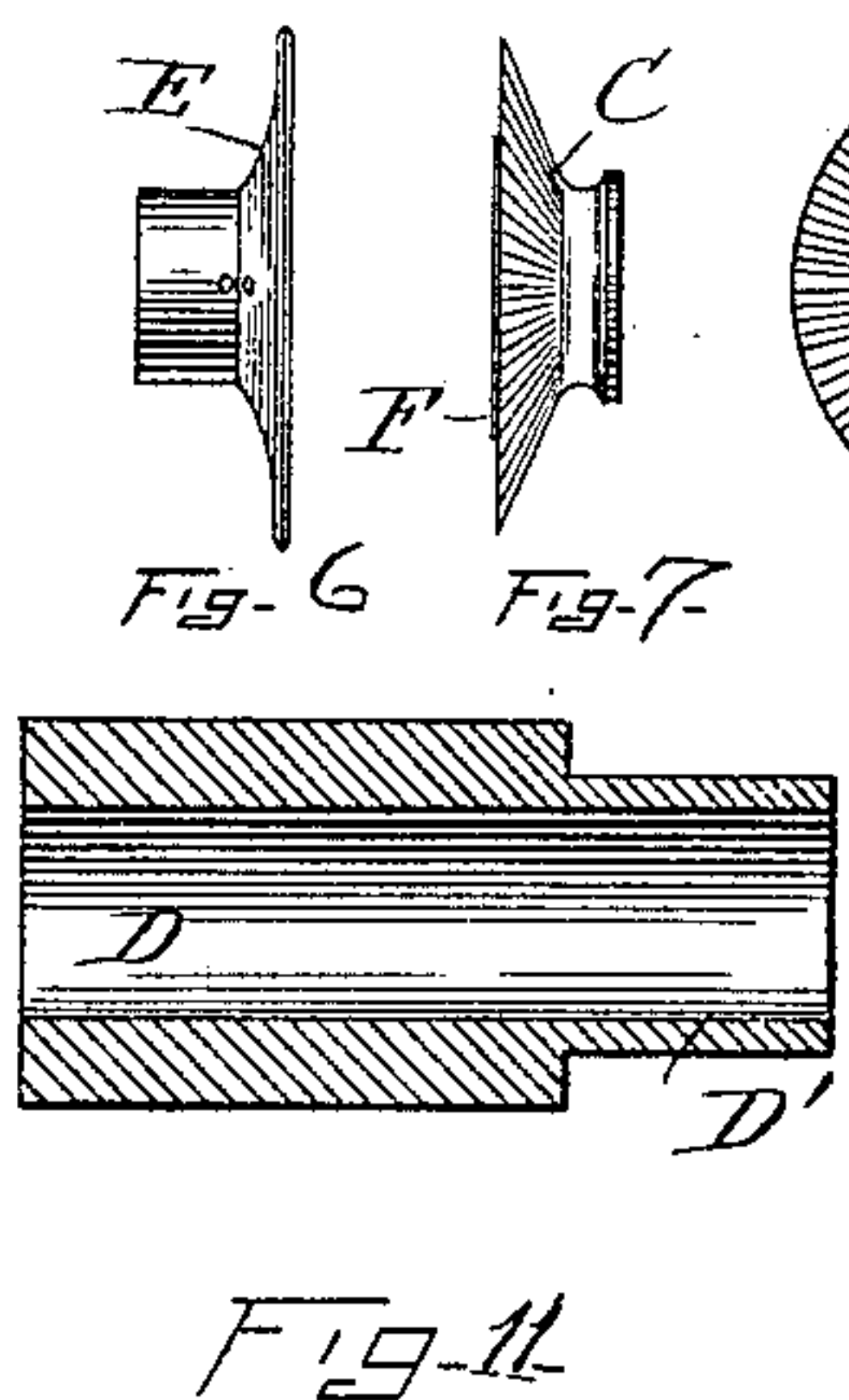
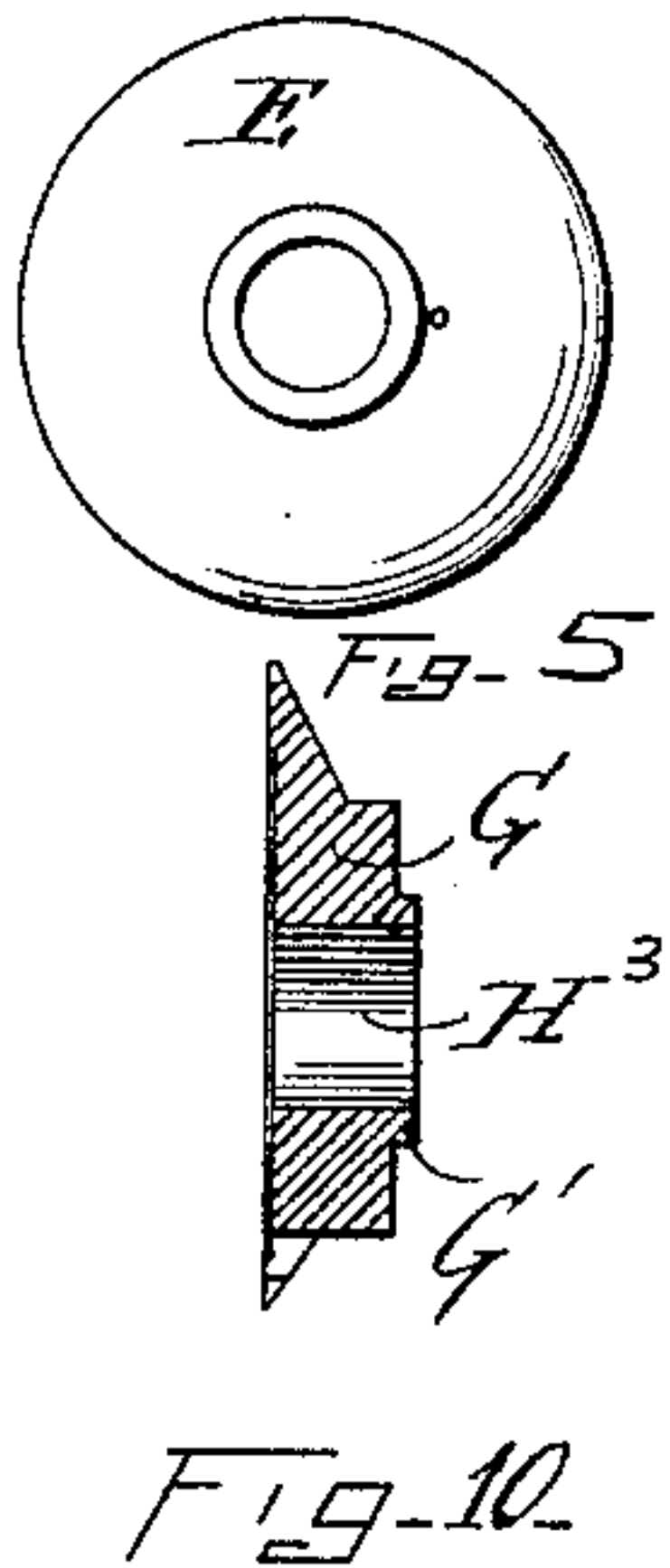
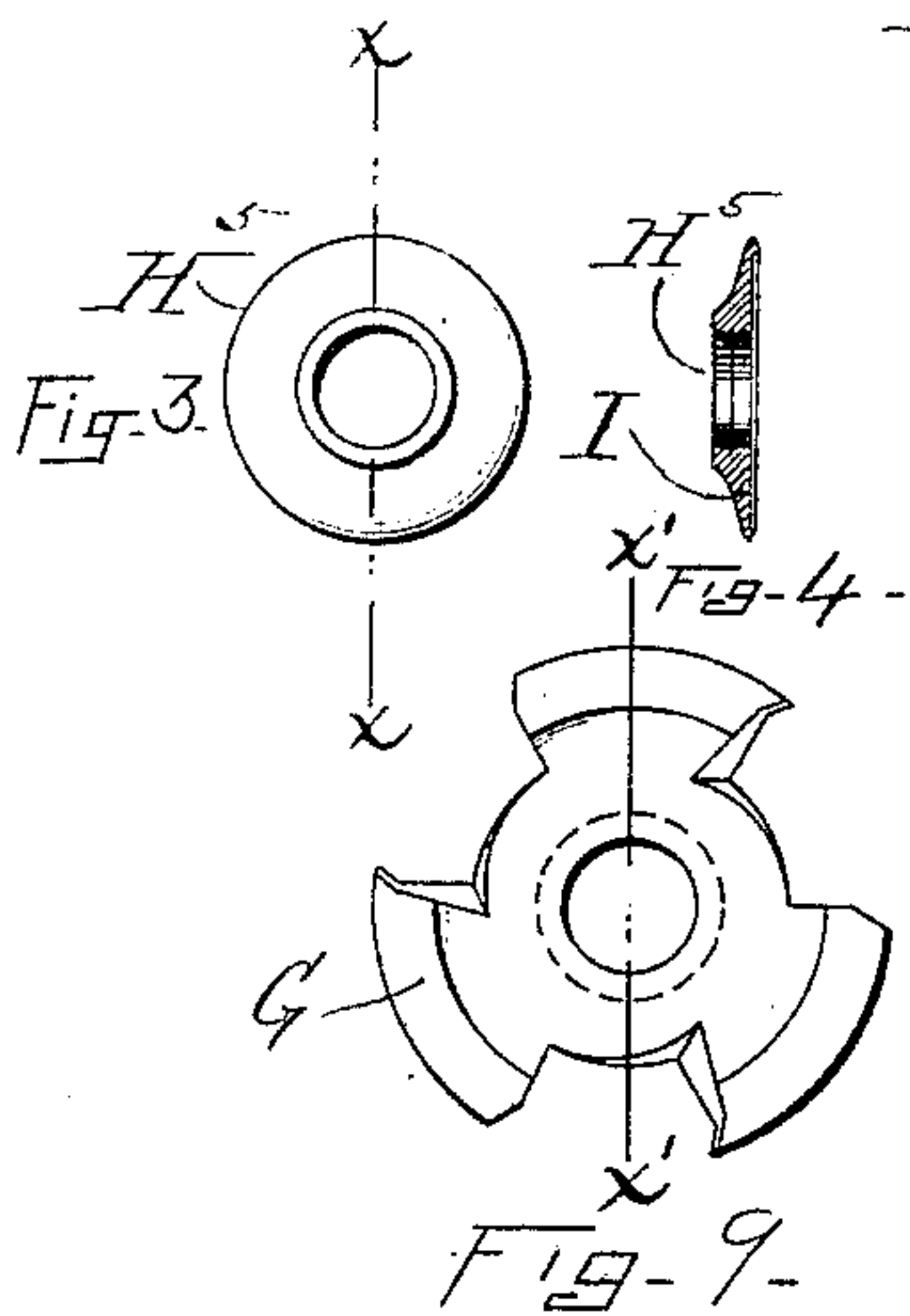


Fig-2-



WITNESSES.

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UNITED STATES PATENT OFFICE.

EDWIN E. ANGELL, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO THE
AMERICAN SHOE MACHINERY COMPANY, OF PORTLAND, MAINE.

RAND-TRIMMING AND STITCH-RUBBING MACHINE.

SPECIFICATION forming part of Letters Patent No. 632,084, dated August 29, 1899.

Application filed February 23, 1899. Serial No. 706,565. (No model.)

To all whom it may concern:

Be it known that I, EDWIN E. ANGELL, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Rand-Trimmers and Stitch-Rubbing Machines, of which the following is a specification.

This invention relates to a rotary rand-trimmer and stitch-rubbing machine of the
10 character described and shown in the patents to E. F. Maxwell, No. 561,017, dated May 26, 1896; No. 549,676, dated November 12, 1895, and No. 567,246, dated September 8, 1896.

The object of this invention is to mount
15 on the same shaft rand-trimming and stitch-rubbing devices in a practical and permanent manner.

My invention consists of certain novel features hereinafter described, and particularly
20 pointed out in the claims.

In the accompanying drawings, which illustrate a construction embodying my invention, Figure 1 is a side view of a portion of a shoe-trimming machine and showing the stitch-
25 rubber and rand-trimmer in their proper positions. Fig. 2 is a sectional view through the rand-trimmer and stitch-rubber and showing the manner of mounting the same upon the revolving shaft. Fig. 3 is a plan view of the
30 rand-trimmer shield. Fig. 4 is a sectional view through the rand-trimmer shield on the line X X, Fig. 3. Fig. 5 is a plan view of the stitch-rubber shield. Fig. 6 is a side view of the stitch-rubber shield. Fig. 7 is a side view
35 of the stitch-rubber. Fig. 8 is a plan view of the stitch-rubber. Fig. 9 is a plan view of the rand-trimmer, looking from the shield side. Fig. 10 is a sectional view through the rand-trimmer on the line X' X', Fig. 9. Fig.
40 11 is a sectional view of the bushing on which the stitch-rubber shield is mounted and which also centers the rand-trimmer at the opposite end.

Like letters of reference refer to like parts
45 throughout the several views.

A represents a portion of the usual supporting-frame of a trimming-machine, which at its upper end A' carries a hollow bearing A². The shaft B, which is mounted in said
50 bearing, is of the construction shown in the patent to Ambrose S. Vose, dated April 23,

1895, No. 538,055. The extension B' of the shaft B is of smaller diameter than said shaft, and on its inner end there is located a stitch-rubber C, and forward of said stitch-rubber
55 is located a bushing D, which has on its inner end the reduced extension D', which fits around the shaft and contacts with the stitch-rubber, as shown in Fig. 2. Around the extension D' of the bushing D is freely mounted
60 the stitch-rubber shield E, and the object of loosely mounting this shield on the extension D' of the bushing D is to prevent its rotation when the work is being operated on by the
65 stitch-rubber, except as it is rotated by the work, thus preventing injury to the upper of the boot or shoe. The extension D' of the bushing D bears against the stitch-rubber C and holds it tightly against the shaft B, so
70 that it rotates with said shaft. The steel ring F is located in a recess on the inner side of the stitch-rubber and projects slightly above the surface of said rubber for the purpose of preventing the contact of the stitch-
75 rubber with the stitch-rubber shield. When the work is placed on the machine, the stitch-rubber and the stitch-rubber shield are pinched together between the upper and the edge of the sole of the boot or shoe, and the ring F provides a friction-surface for the
80 stitch-rubber shield, and this arrangement is preferable to having the stitch-rubber shield in contact with the entire inner surface of the stitch-rubber, because in the latter case there
85 would be too much friction between the shield and the rubber, and the shield would revolve with the stitch-rubber and mar the upper of the shoe in the operation of the machine. The stitch-rubber shield being of hardened
90 metal and the stitch-rubber being of soft metal if said hardened ring F were not in the stitch-rubber, as shown, but if the projection were made solid with the rubber and of the same metal the said shield would in a short
95 time wear away the projection on the stitch-rubber, which is provided to lessen the friction between the two parts. The bushing D extends beyond the outer end of the extension B' of the shaft B, as shown in Fig. 2, and the cutter G is provided with an annular lip
100 G', which fits into the bushing D, as shown in Fig. 2, and by this arrangement the cutter

is accurately centered on the shaft, the cutter being of course secured to the shaft by the screw H, with the head H² in the opening H³ of the rand-trimmer and the head H⁴ in the opening H⁵ of the rand-trimmershield I, which is loosely mounted on said head H⁴, and the head H⁶ of the screw rests upon the outer edge of the shield, as shown in Fig. 2. When the parts are connected up, the lip I' of the rand-trimmer shield I projects over the edge of the rand-trimmer a proper distance to protect the upper.

I do not limit myself to the arrangement and construction shown, as the same may be varied without departing from the spirit of my invention.

Having thus ascertained the nature of my invention and set forth a construction embodying the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an apparatus of the class described, a shaft having a reduced extension, a stitch-rubber mounted on said extension and bearing against the main portion of the axle, a bushing placed on said extension and bearing against said rubber and having an annular recess formed in its outer periphery at its inner end, a shield loosely journaled on said

bushing in said annular recess, and means for holding said bushing in place on said extension.

2. In an apparatus of the class described, a shaft having a reduced extension, a stitch-rubber mounted on said extension and bearing against the main portion of the axle, a bushing placed on said extension and bearing against said rubber and having an annular recess in its outer periphery at its inner end and projecting at its outer end beyond said extension, a shield loosely journaled on said bushing and in said annular recess, a ring interposed between said rubber and said shield, a screw turned into the outer end of said extension and having two bearings of different diameters, a cutter mounted on the inner one of said bearings and abutting the outer end of said bushing, and a shield mounted on the other of said bearings.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 15th day of February, A. D. 1899.

EDWIN E. ANGELL.

Witnesses:

A. L. MESSER,
C. A. STEWART.