

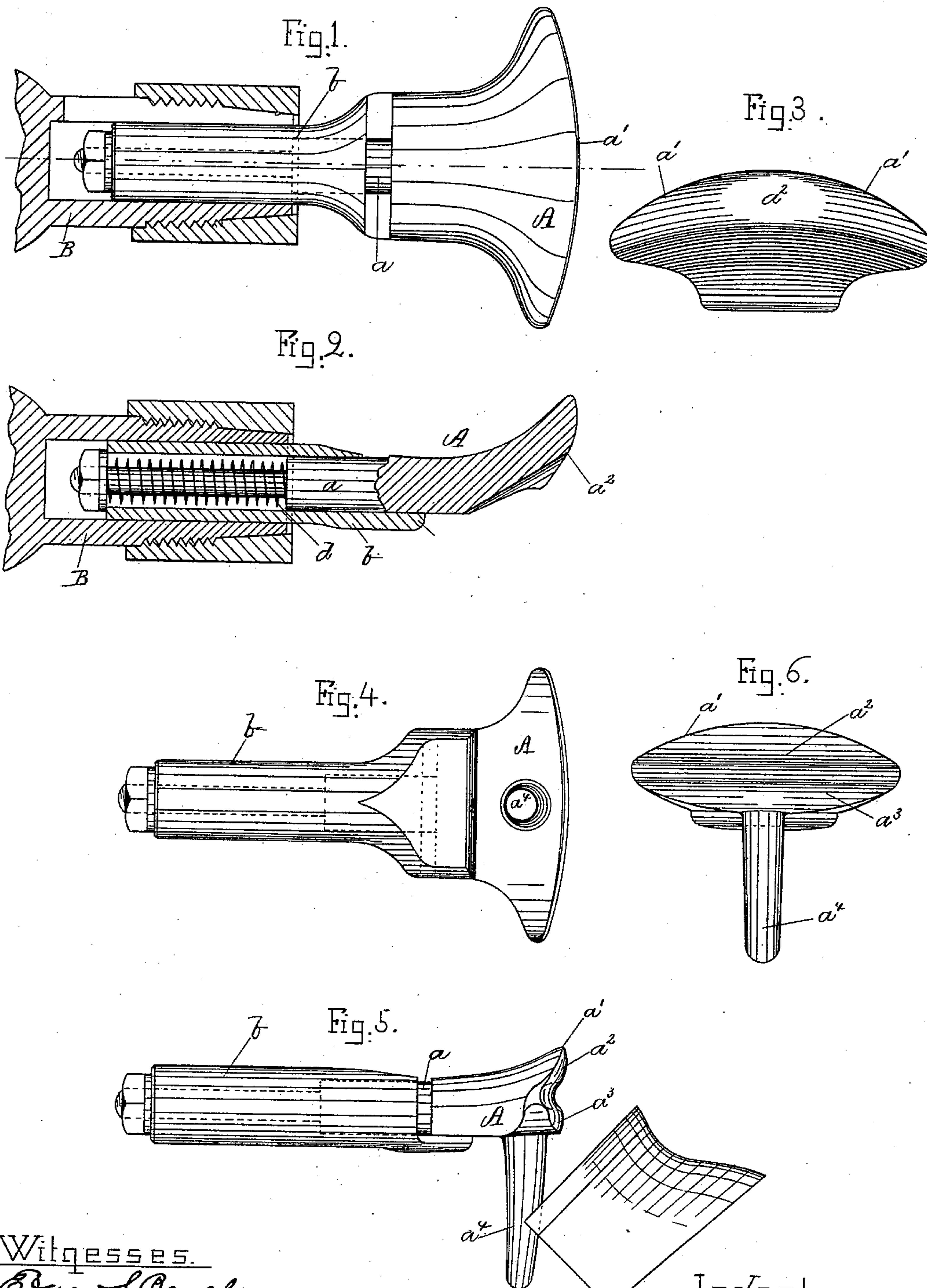
(No Model.)

2 Sheets—Sheet 1.

A. HARDEN.
SHANK BURNISHING DEVICE.

No. 384,573.

Patented June 12, 1888.



Witnesses.

Edward S. Beach.

Leinitz W. Möller.

Inventor.

Albert Harden.

by J. E. Maynard.
Atty.

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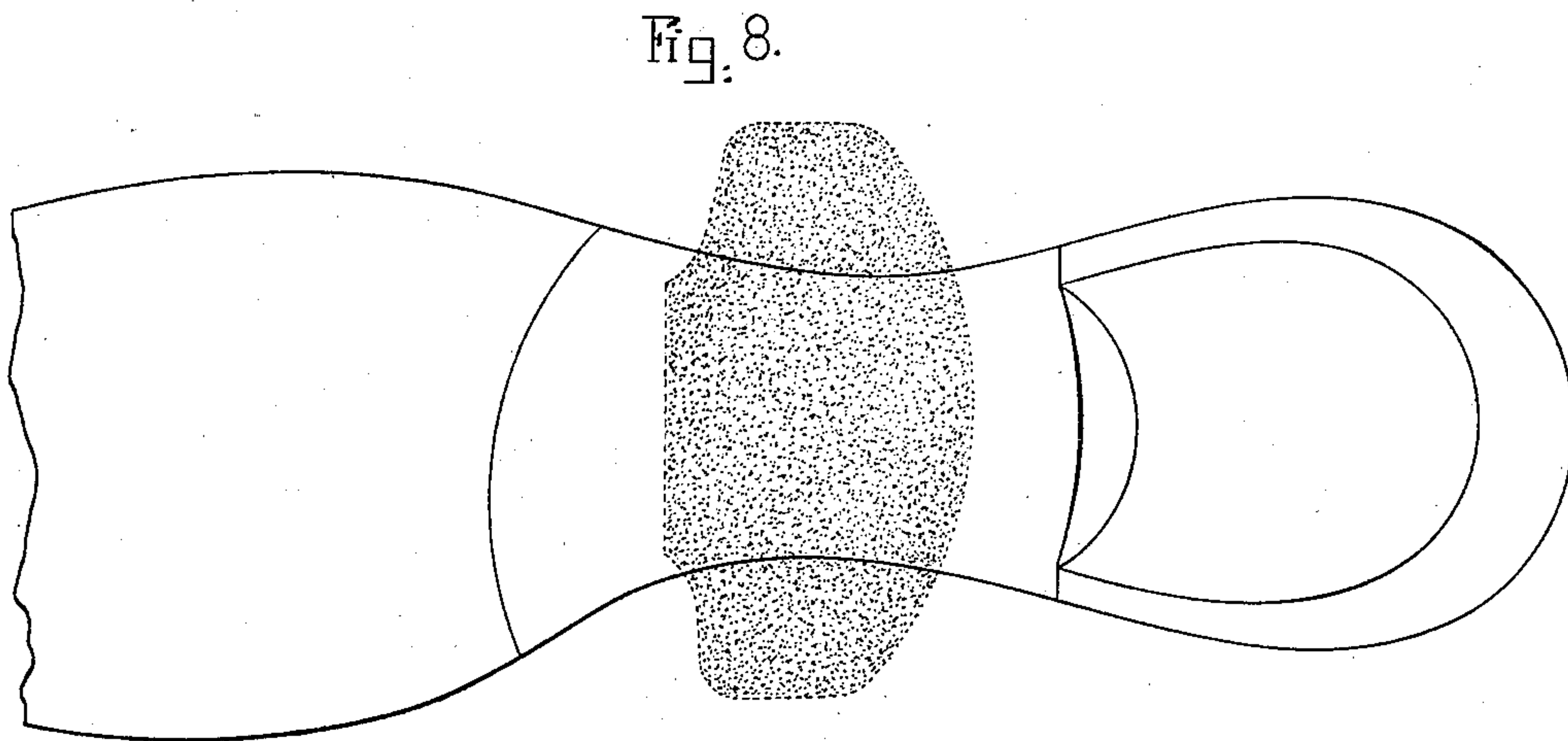
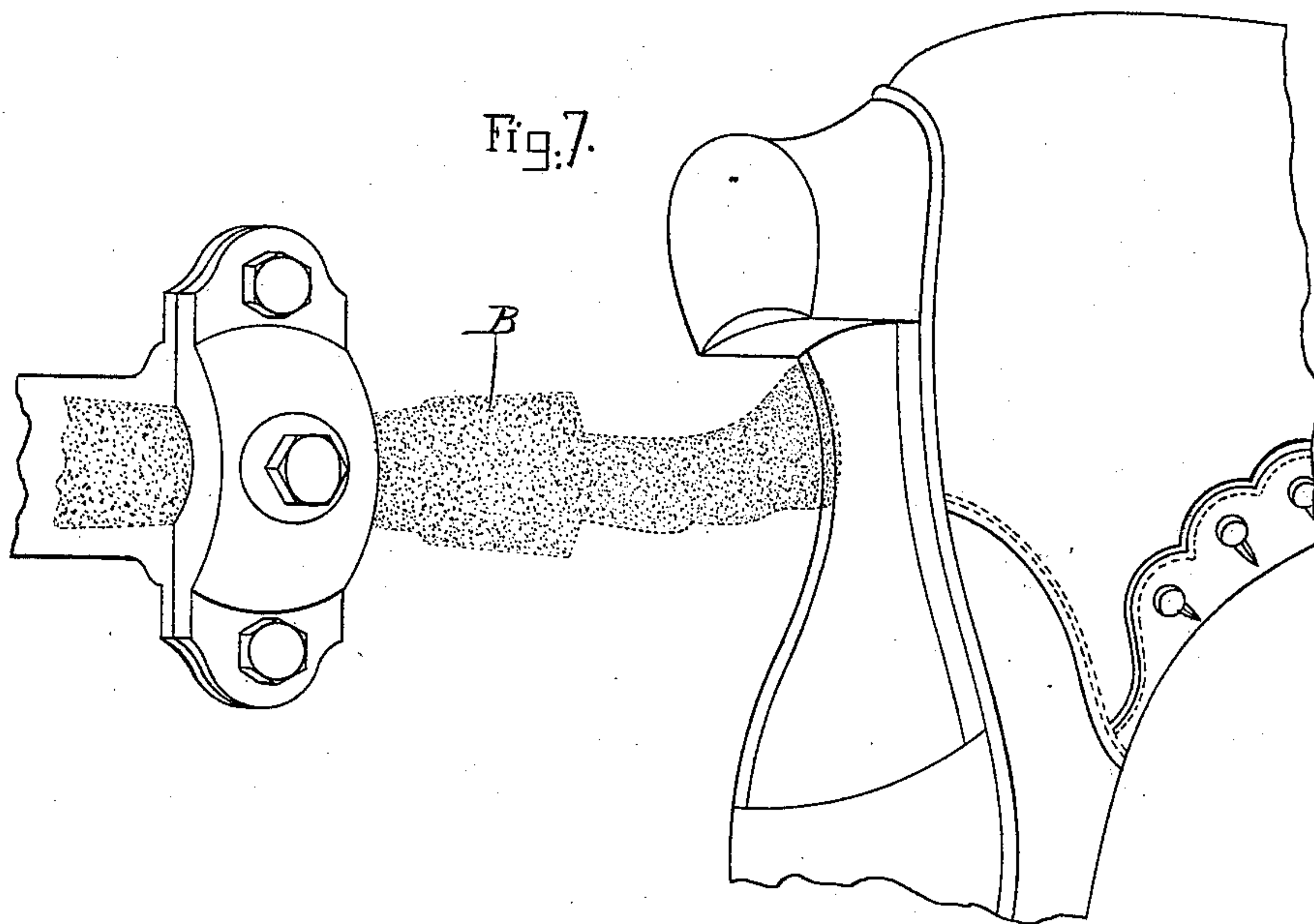
2 Sheets—Sheet 2.

A. HARDEN.

SHANK BURNISHING DEVICE.

No. 384,573.

Patented June 12, 1888.



Witnesses.

Edward S. Beach.

Lauritz N. Moller.

Inventor

Albert Harden.

by J. R. Maynard.
Atty.

UNITED STATES PATENT OFFICE.

ALBERT HARDEN, OF EAST BRIDGEWATER, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF TO STILLMAN A. WEST, OF ST. LOUIS, MISSOURI.

SHANK-BURNISHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 384,573, dated June 12, 1888.

Application filed October 23, 1886. Renewed May 19, 1888. Serial No. 274,375. (No model.)

To all whom it may concern:

Be it known that I, ALBERT HARDEN, of East Bridgewater, in the county of Plymouth and State of Massachusetts, have invented a new and useful Shank-Burnishing Iron, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation partly in section. Fig. 2 is a section, and Fig. 3 is a face view, of one size and style of my tool. Figs. 4, 5, and 6 are like views of another style and size. Figs. 7 and 8 are explanatory.

My invention is a new and useful device for burnishing the shanks of boots and shoes; and it consists of a burnishing-iron with a long narrow working-surface curved both crosswise and lengthwise, and having a curved front edge. This iron is connected with its supporting stock or holder by means of a spring, and reciprocates rapidly when in use.

In the drawings I have shown my device as made for use with that kind of shank-burnishing machine described in Patent No. 258,532, dated November 13, 1883, to S. A. West; but it will be clear that my invention is applicable generally to all burnishing-machines in which a vibrating iron is used, the only change necessary being in the tang and its connection with the stock or holder.

In the drawings, A is the iron proper; a , its tang; b , a sleeve, which when in use is rigidly secured to the socket or support B, which is the socket or support of the West machine, and d a spring between the iron and its supporting-sleeve b .

In some machines the iron requires two tangs; but a single tang is all that is necessary in the West machine, and I have therefore shown only one tang.

In operation the iron reciprocates very rapidly with its support, which is a socket, B, in the West machine, but in other machines is a reciprocating carriage or head, and when in motion the rapidly-reciprocating iron becomes practically translucent, as indicated in Figs. 7 and 8, so that the workman's view of the shank and the parts adjacent is practically unobscured. For that reason the workman is enabled to hold the shoe in his hands and yet present it so accurately to the iron that there

will be no contact, except between the iron and the blacked portion of the shank.

After much experiment I have found that with an iron whose front edge is curved at a' , and whose working-face a^2 is a curve in any cross-section, and which vibrates at about two thousand times per minute, and is backed up by a spring, of, say, about six pounds tension, this work can be done with wonderful perfection in all the styles of burnished shanks now known to me. It is this device—namely, an iron with its front edge, a' , curved, as shown, its face a^2 convex and of a length greater than its width, and provided with means for connecting it with its holder—which constitutes my invention; and my device has been found admirably adapted for doing work which, so far as I know, cannot be done practically in any other way than by hand-labor.

The styles of shanks vary so largely that in practice it is necessary to make several sizes of irons of the style shown in Figs. 1, 2, and 3, and for some styles of shoes it is desirable to make my iron double-faced, as shown in Figs. 4, 5, and 6, in which the face a^2 and front edge, a' , are the same as in Figs. 1, 2, and 3; but an extra face, a^3 , is added for burnishing the tread of the heel, and a horn, a^4 , for burnishing the scallop cut in the breast of the heel, as indicated in Fig. 5. All this will be clear to all skilled in the art without further description.

Figs. 7 and 8 are intended to illustrate the fact that the presence of the iron does not prevent the workman from seeing the shank when he holds the work up to the face of my iron.

I am aware of Beaudry's Patent, No. 238,206, dated March 1, 1881, and disclaim all that is shown in it.

What I claim as my invention is—

1. The tool A, with its curved edge a' and its long narrow convex face a^2 , substantially as and for the purposes specified.

2. In combination, the tool A, with its long narrow convex face a^2 , curved at its edge a' , the spring d , and the tool-carrier B, substantially as described.

ALBERT HARDEN.

Witnesses:

EDWARD S. BEACH,
JOHN R. SNOW.