

(No Model.)

I. CROSS.

SPOOL.

No. 379,633.

Patented Mar. 20, 1888.

Fig: 1.

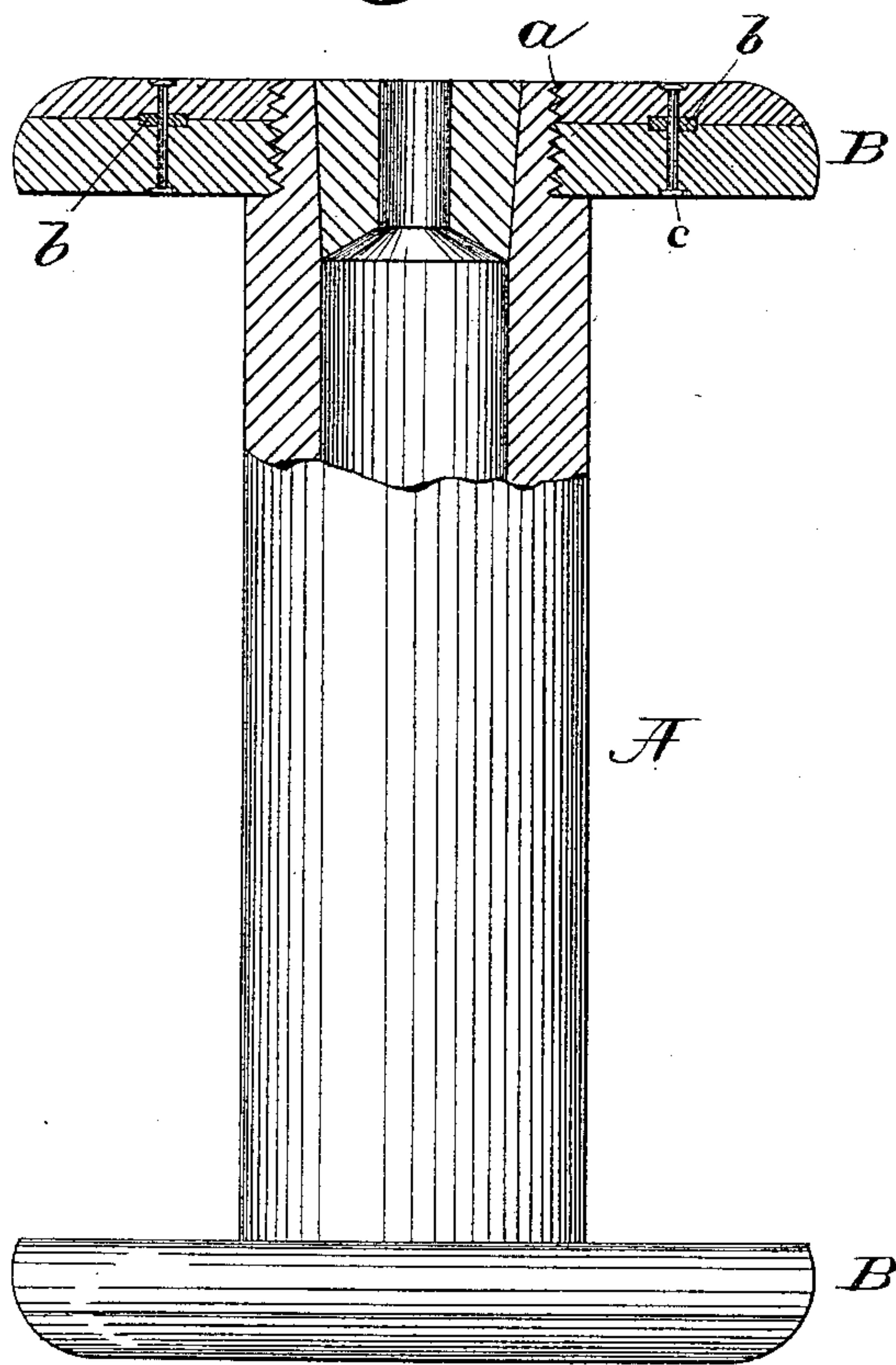


Fig: 2.

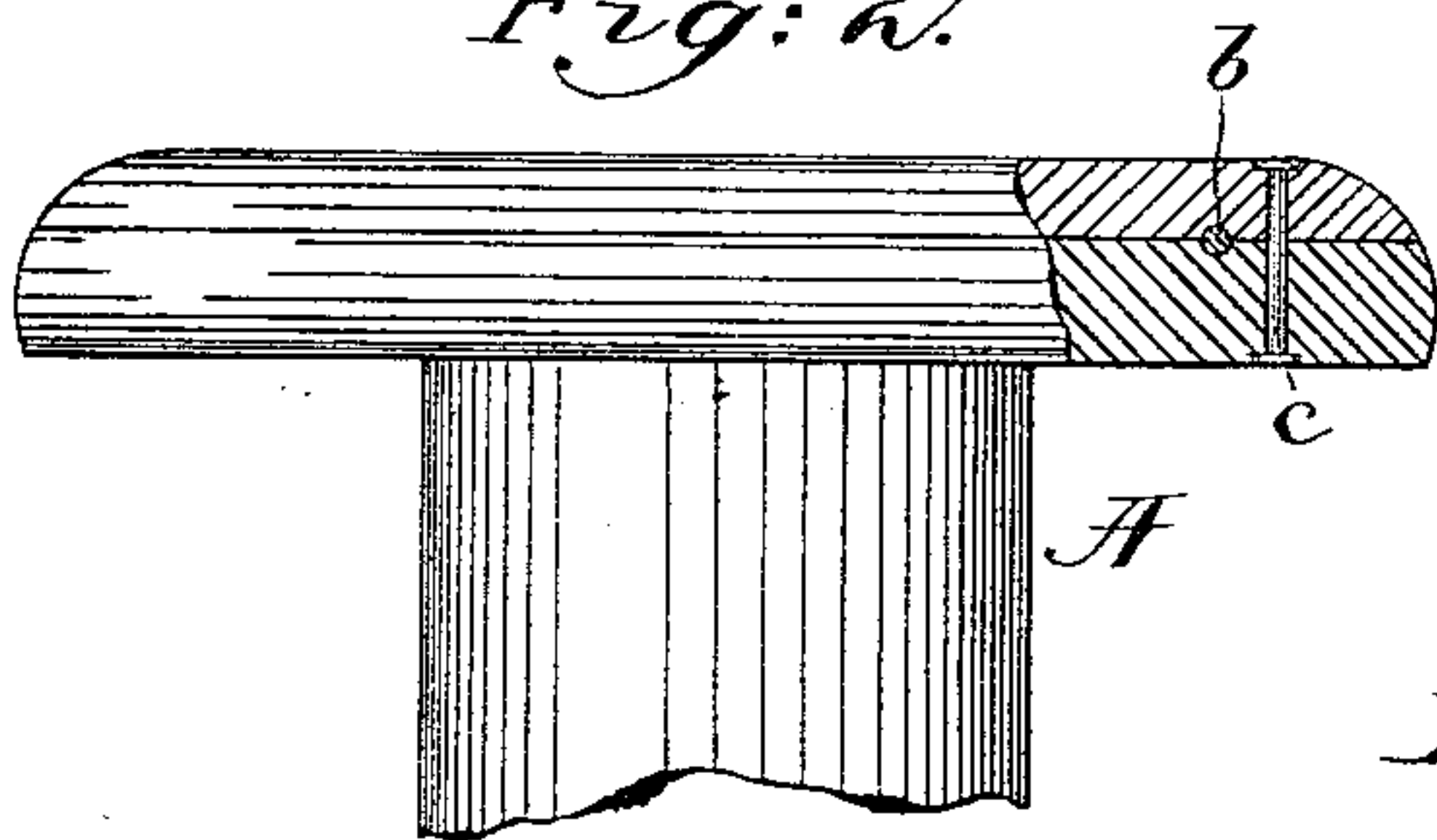


Fig: 3.

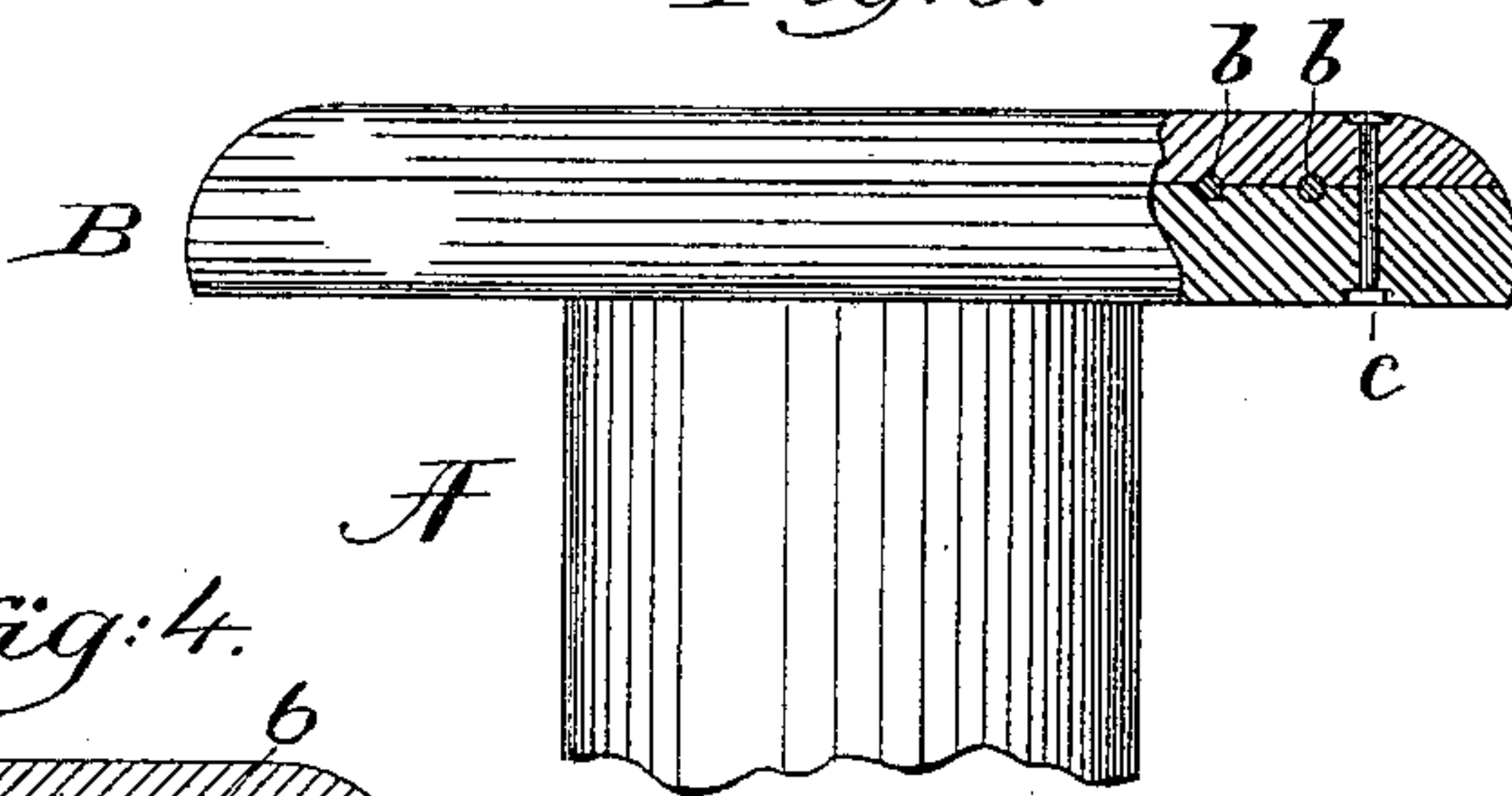
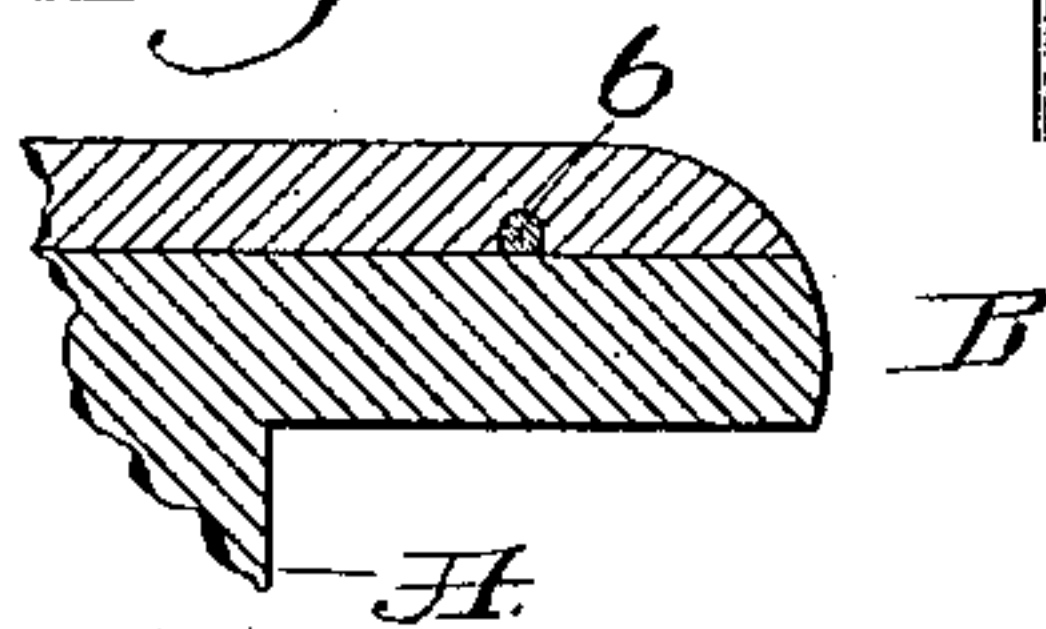


Fig: 4.



Witnesses.

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IRA CROSS, OF NASHUA, NEW HAMPSHIRE.

SPOOL.

SPECIFICATION forming part of Letters Patent No. 379,633, dated March 20, 1888.

Application filed September 26, 1887. Serial No. 250,726. (No model.)

To all whom it may concern:

Be it known that I, IRA CROSS, of Nashua, county of Hillsborough, and State of New Hampshire, have invented an Improvement in Spools, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to increase the strength of spool-heads; and my invention consists, essentially, in a spool the head of which between the two layers of material of which the head is composed is strengthened by a metallic annulus, which enters one or both of the said layers.

Figure 1, in elevation, partly broken out, represents a spool embodying my invention. Figs. 2 and 3 show modified forms of my invention, and Fig. 4 shows yet another modification.

The barrel or body A of the spool, of any usual material, has two heads, B B, each composed of two layers of wood or other material united to the barrel, preferably by screw-threads, as at *a*. The two pieces of material forming each head are grooved or chambered to receive a metallic annulus, *b*, which may be either of flat metal, as in Fig. 1, or of wire, as in Fig. 2; or, if desired, I may employ two pieces of wire, as in Fig. 3. By letting the metallic annulus into each half of the head the said parts are less liable to split than if the annulus entered wholly into one layer of the material forming a part of the head, as in Fig. 4; yet the annulus may enter but one layer.

To further strengthen the head the two parts thereof may be glued together, and I may also further unite the parts of each head by means of bolts, nails, or rivets, as *c*, they passing through the metal annulus, as in Fig. 1, or at one side of it, as in Fig. 2.

The employment of the annulus entering a groove in one or both of the heads prevents splitting, which would not be the case if a metal washer of the same diameter of the heads were placed between the two pieces of which each head is composed.

I claim—

1. A spool, substantially as herein described, it consisting of a barrel or body, A, heads B B, composed each of layers of material and shaped and put together to leave a groove between them, and a metallic strengthening-annulus of less diameter than the heads and entering the said groove between the said layers, for the purposes described.

2. The barrel or body A and the heads B, composed each of two parts or layers, a strengthening-annulus placed between the said halves and embedded therein, combined with rivets to unite the said parts or layers, all substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

IRA CROSS.

Witnesses:

GUY C. MILLS,
E. J. COPP.