

No. 754,125.

PATENTED MAR. 8, 1904.

G. J. CAPEWELL.  
METALLIC BUTTON.

APPLICATION FILED NOV. 18, 1901.

NO MODEL.

Fig. 1

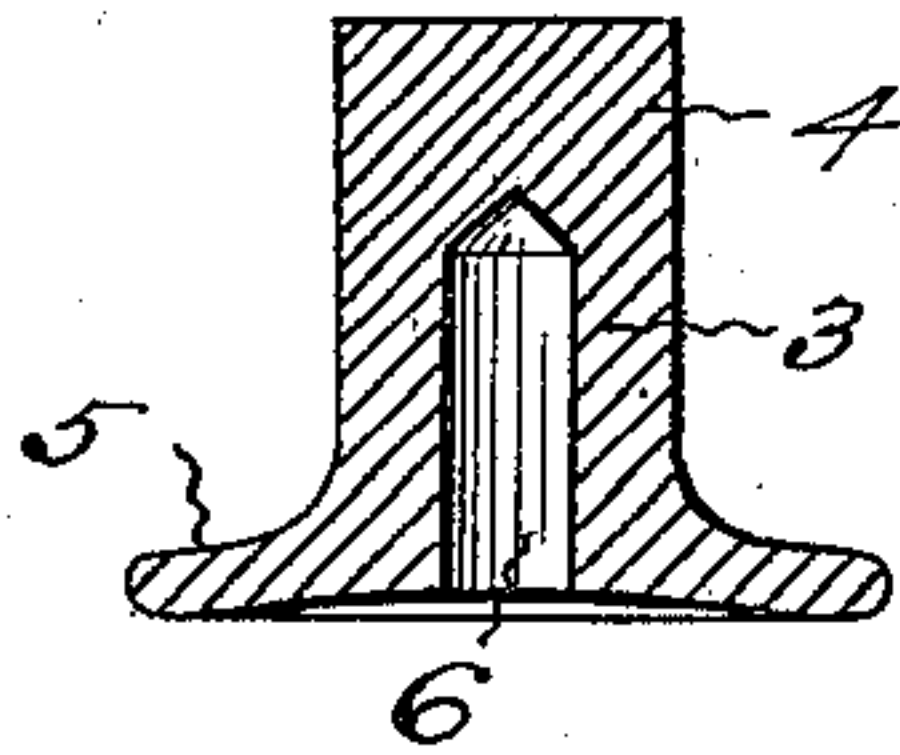


Fig. 2

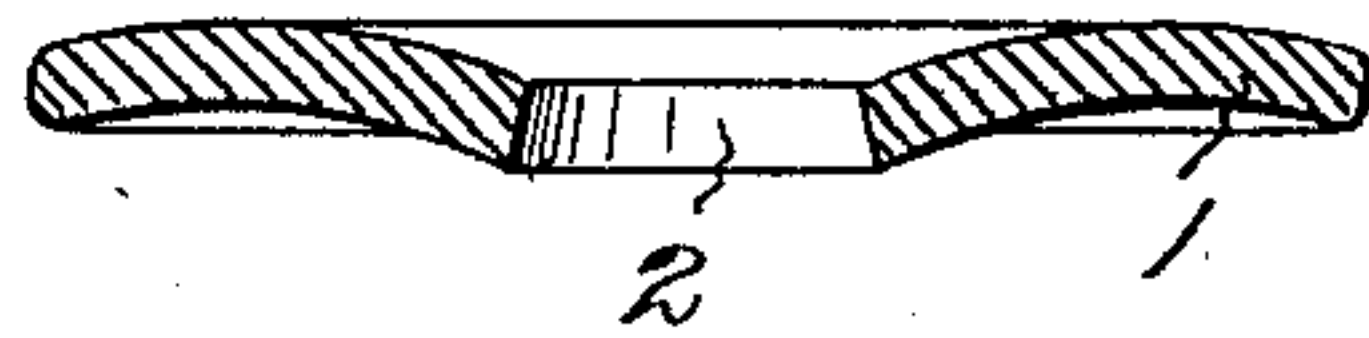


Fig. 3

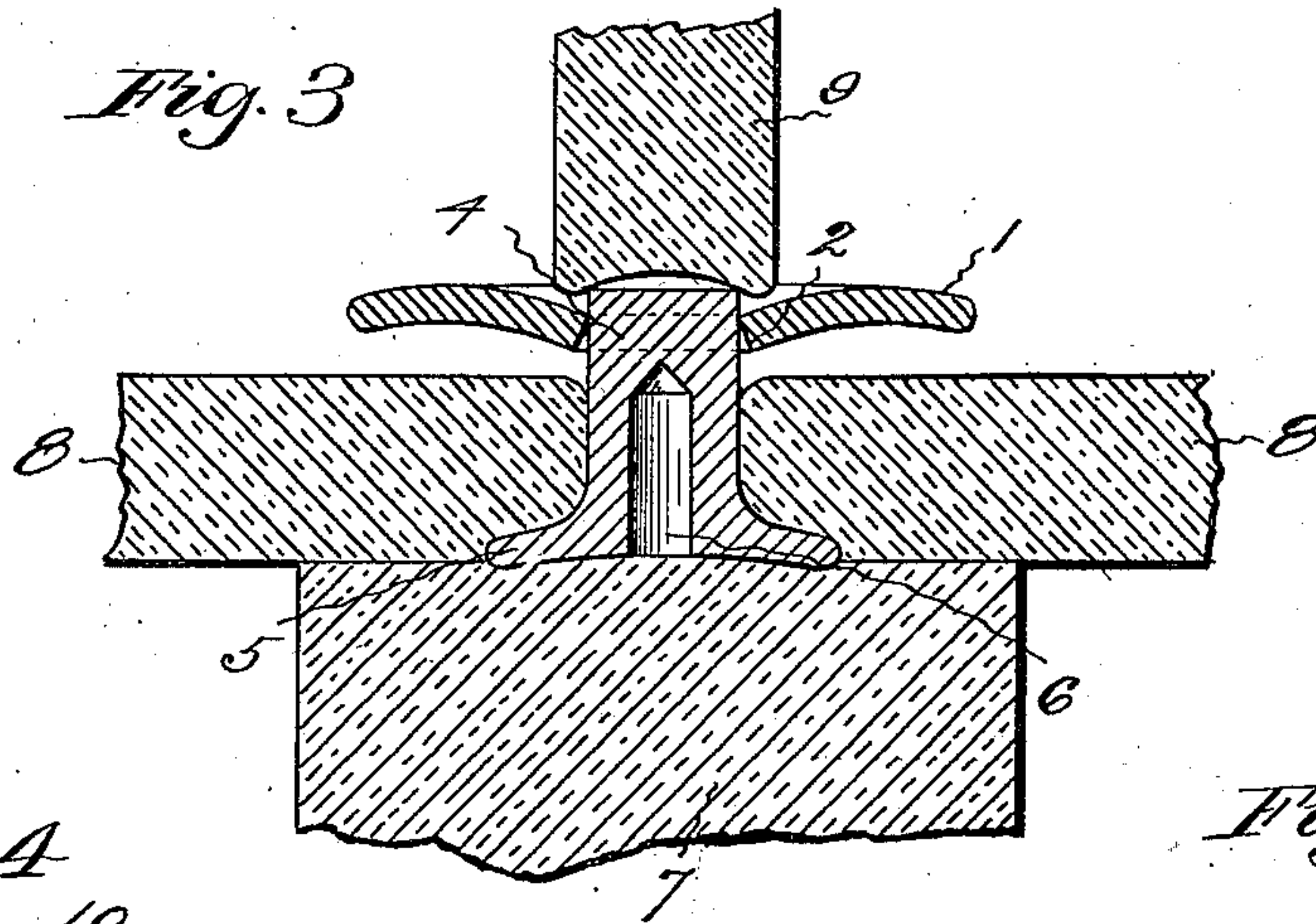


Fig. 4

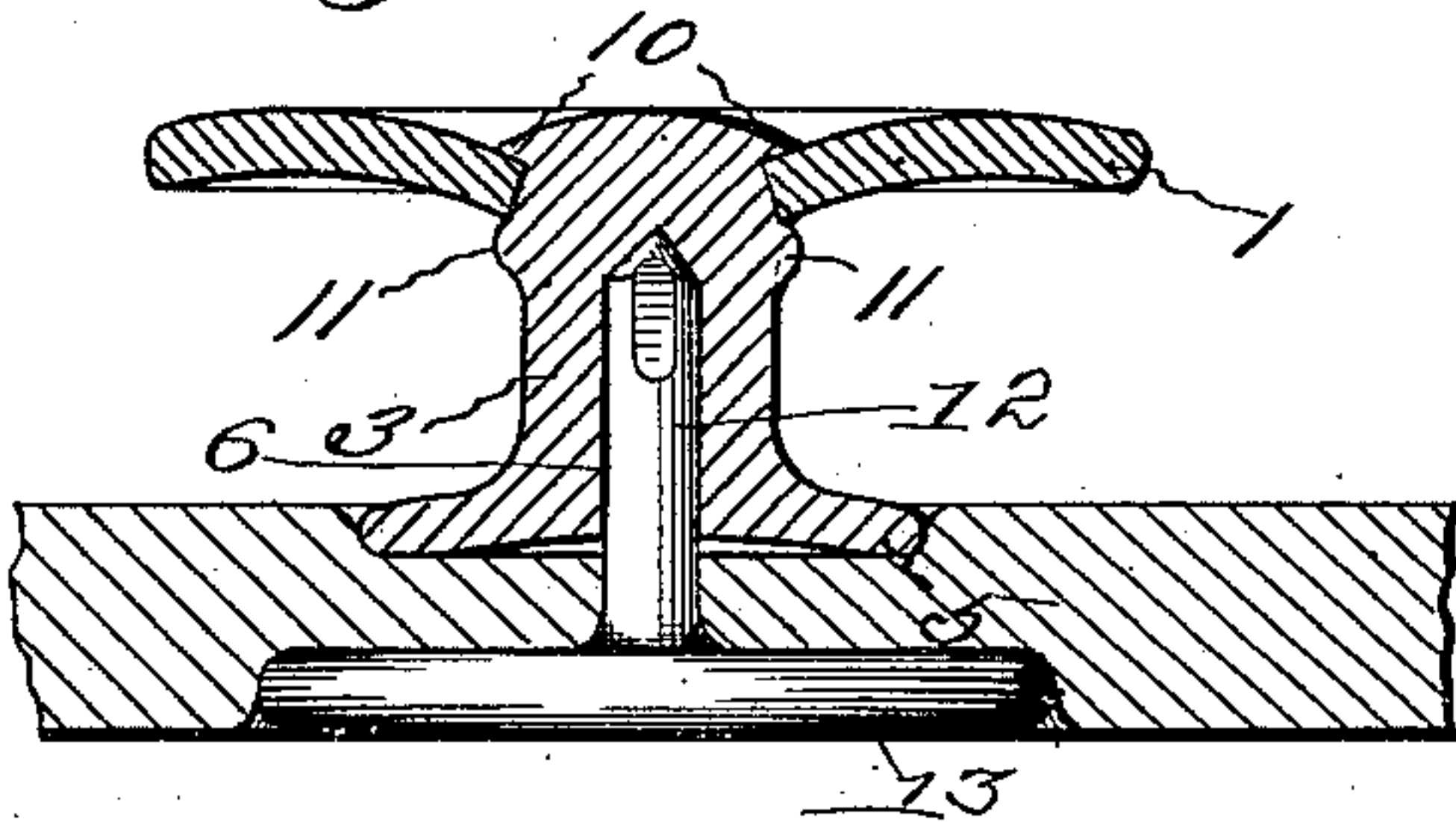


Fig. 5

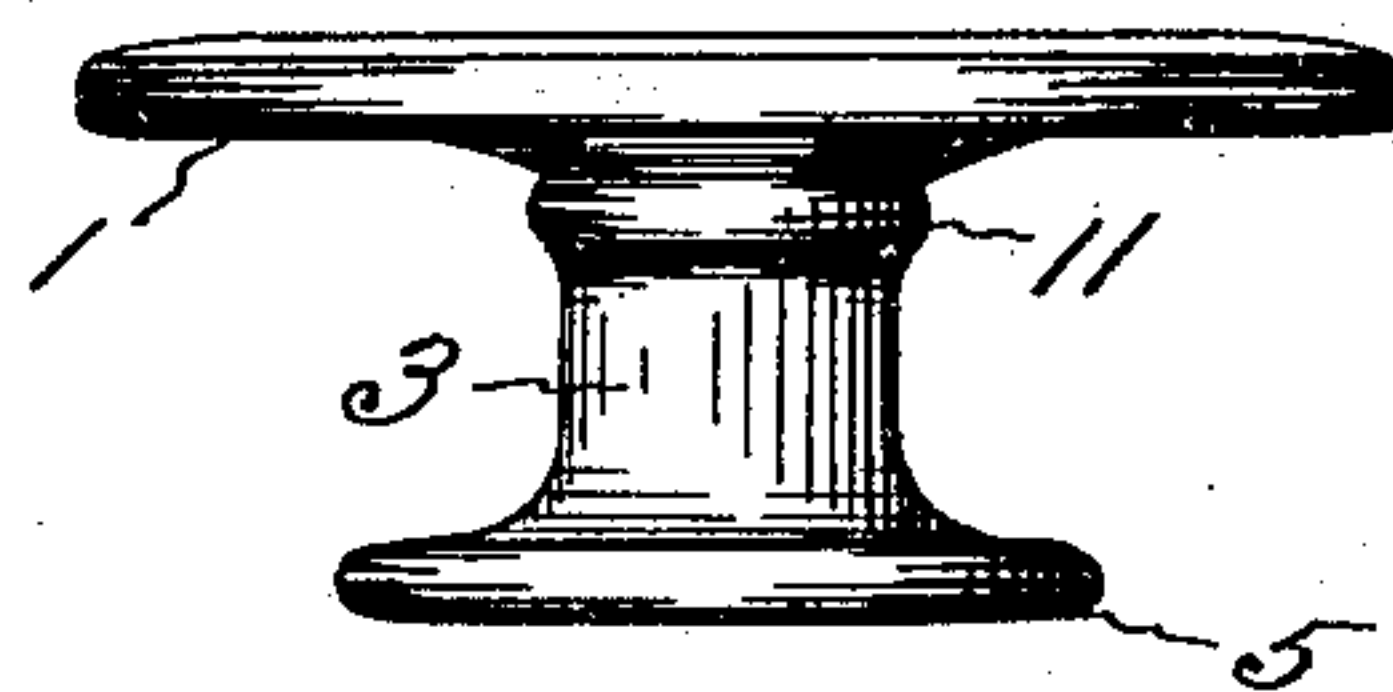


Fig. 6

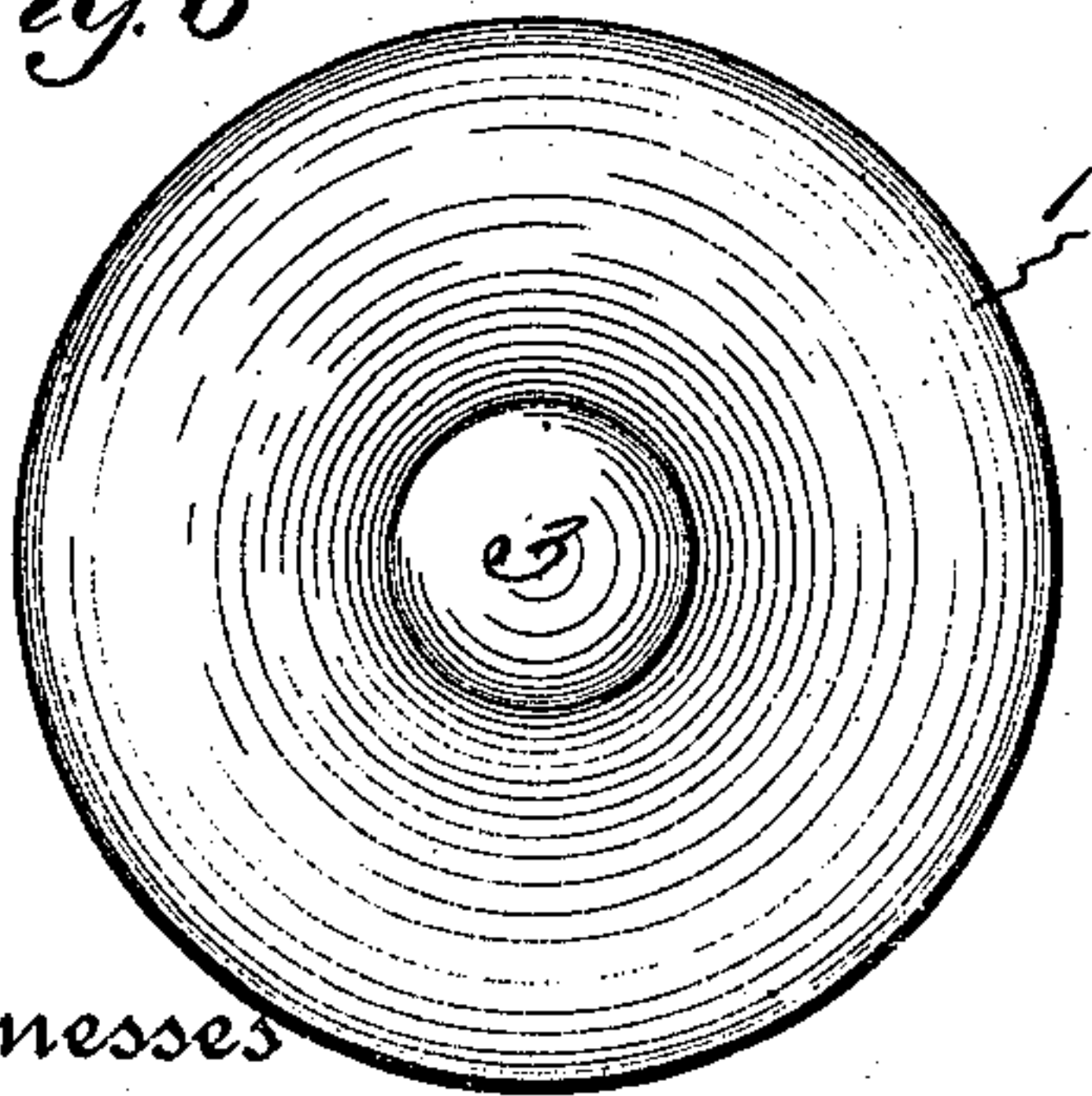
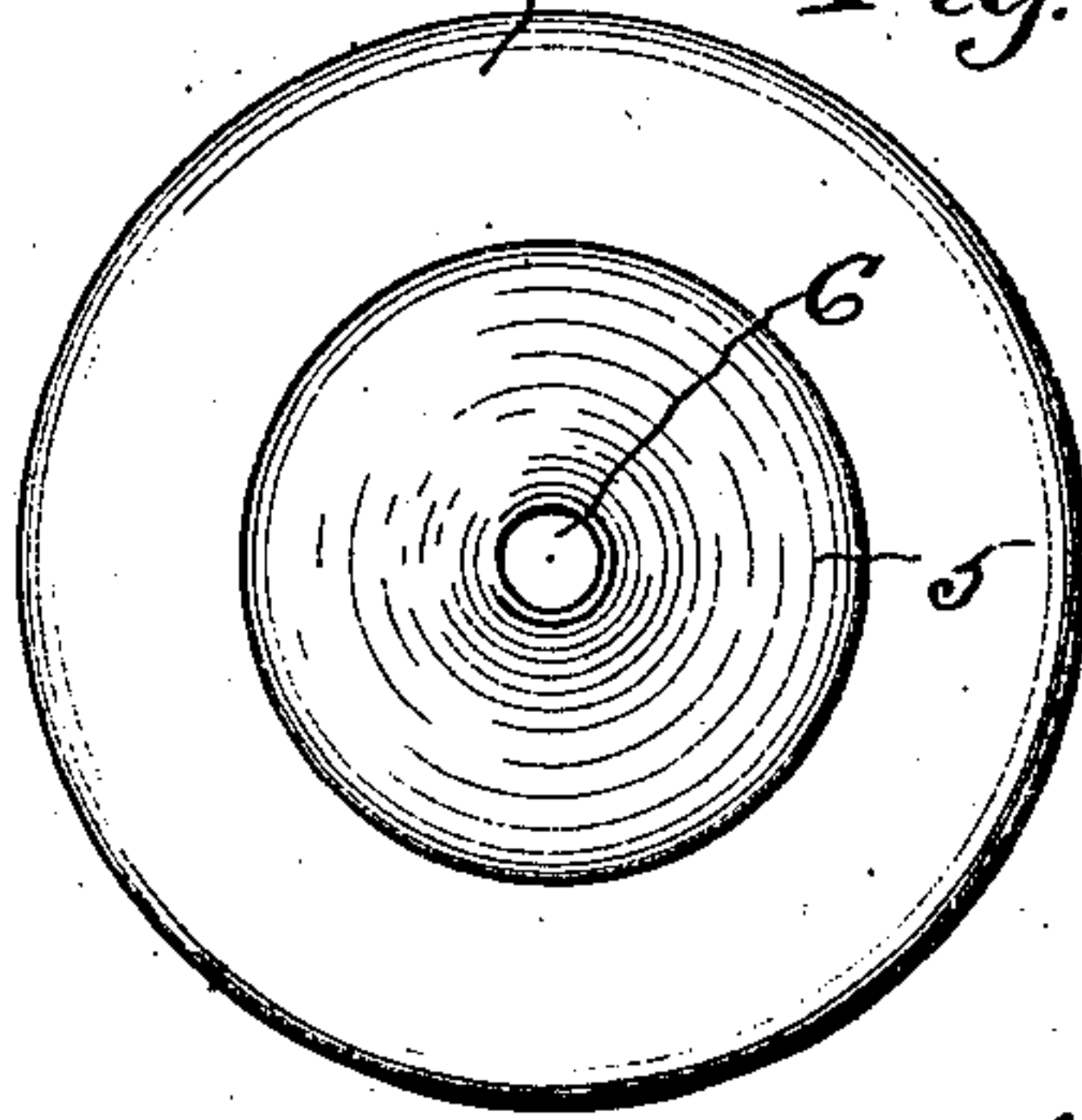


Fig. 7



Witnesses  
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# UNITED STATES PATENT OFFICE.

GEORGE J. CAPEWELL, OF HARTFORD, CONNECTICUT.

## METALLIC BUTTON.

SPECIFICATION forming part of Letters Patent No. 754,125, dated March 8, 1904.

Application filed November 18, 1901. Serial No. 82,703. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE J. CAPEWELL, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Metallic Buttons, of which the following is a specification.

This invention relates to the construction of those metallic buttons which have a large head and attached socketed shank and are designed to be fastened to an article of wearing-apparel by means of a metallic tack.

The object of the invention is to construct a light, strong, and attractive button from simple parts in a cheap manner.

The button which embodies the invention has a socketed flanged shank and a large thin head that is held to the end of the shank opposite the flange by beads that are produced each side of the opening through the head by transverse expansion of the shank under longitudinal compression. This button is formed by placing the flanged end of the hollow cylindrical shank upon an anvil and tightly clamping the lower portion of the shank between conforming-jaws, then after inserting the end of the shank through the central opening in the head applying pressure to the end of the shank and causing it to expand laterally inside of the head where it is not held by the jaws and also outside of the head.

Figure 1 is a central section of a rivet which is used to form the shank of a button which embodies this invention. Fig. 2 is a central section of a disk which is used to form the head of this button. Fig. 3 is a central section of the button parts and tools before the shank is compressed to expand the head-holding beads. Fig. 4 is a central section of the completed button shown as attached by a fastening-tack to the edge of the garment. Fig. 5 is a side elevation of the finished button. Fig. 6 is a plan showing the outer face of the head, and Fig. 7 is a plan showing the inner face and shank of the finished button.

The circular head 1 of this button is stamped to shape from sheet metal—such as iron, steel, or brass—with a central perforation 2. The outer face of the button is preferably depressed when it is stamped, so that the walls

of the central perforation incline toward each other—that is, the perforation is smaller in diameter on the outer face of the head than on the inner face.

The shank of the button may be a simple rivet 3, which has a smooth cylindrical stem 4, a flanged end 5, and a central socket 6. This shank is preferably made of soft iron, although it may be made of brass or other metal, and the stem, which has such a diameter that it will fit closely in the perforation through the head, is smooth and of practically uniform diameter—that is, has no shoulder.

In making this button the flanged end of the shank is placed upon an anvil or die-bed 7 and then the sides of the shank are tightly clamped in jaws or laterally-moving dies 8, which encircle the shank and are of such height that they only bind and hold a portion of the stem of the shank, leaving the upper end of the stem unprotected. The head is placed upon the stem and then the end of the stem is subjected to the pressure of a punch or longitudinally-moving die 9. The effect of the blows or pressure of the punch upon the end of the stem is to upset the end of the stem and form an annular swelling or a bead 10, that overlies the outer face of the head, and also to cause an expansion of the stem or formation of an annular swelling or a bead 11 underneath the inner face of the head. The stem is expanded each side of the head because the head prevents it from expanding where it encircles the stem, and the jaws or transverse dies prevent the stem from expanding where they hold. As a result of this method a very simple machine produces these light, strong, and cheap buttons rapidly and without waste. The heads can be stamped from cheap scrap-metal having suitable characteristics for taking the desired finish, and the shanks without shoulders are formed of desirable metal on an ordinary riveting-machine.

This button is applied to the face of an article of wearing-apparel where it is designed to be attached and then the shank 12 of a metallic tack having a large head 13 is thrust through the material of the wearing-apparel and driven into the central socket 6. The shank of this tack is forced very hard into

the central socket, so that the end of the tack, which is made slightly smaller than the socket on two sides, will be expanded and caused to bind against the walls of the socket, so as to  
5 hold the tack and button together. The tack is driven in very forcibly in order to expand the end, and the end of the shank of the button must be solid and anvil-like in order to cause this expansion or upsetting of the end  
10 tack.

I claim as my invention—

A metallic button having a long cylindrical shank that is solid at one end and has a smooth

bore extending but part way of the length of the shank from the other end with an integral  
15 flange at the open end of the shank, and solid beads of greater diameter than the diameter of the shank upset at the solid end of the shank, and a large thin head having a perforation that fits the shank between the upset beads at  
20 the solid end, substantially as specified.

GEORGE J. CAPEWELL.

Witnesses:

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