

(No Model.)

2 Sheets—Sheet 1.

W. McAUSLAND.
METALLIC SPUN ARTICLE.

No. 599,286.

Patented Feb. 15, 1898.

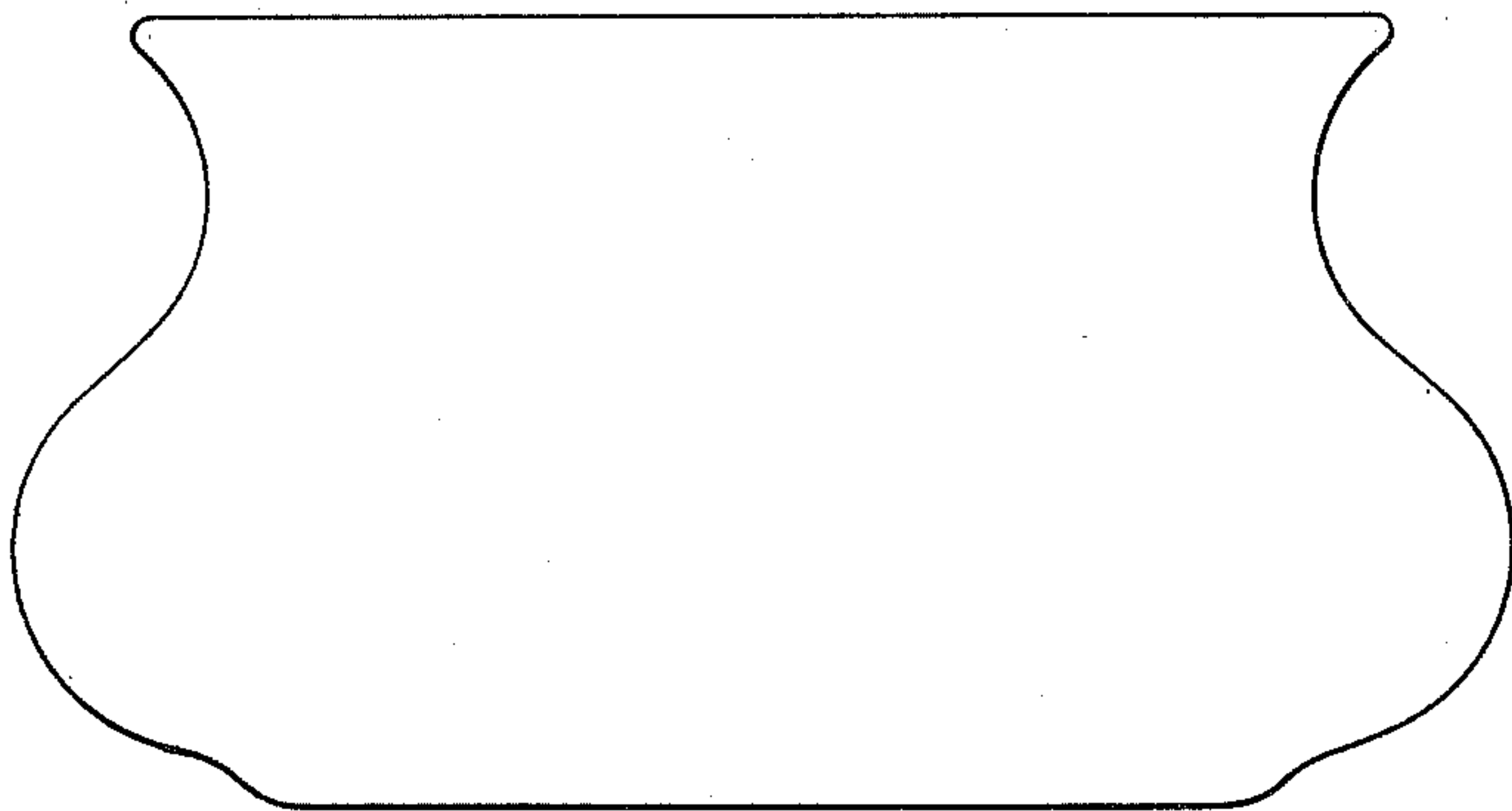


FIG. 1.

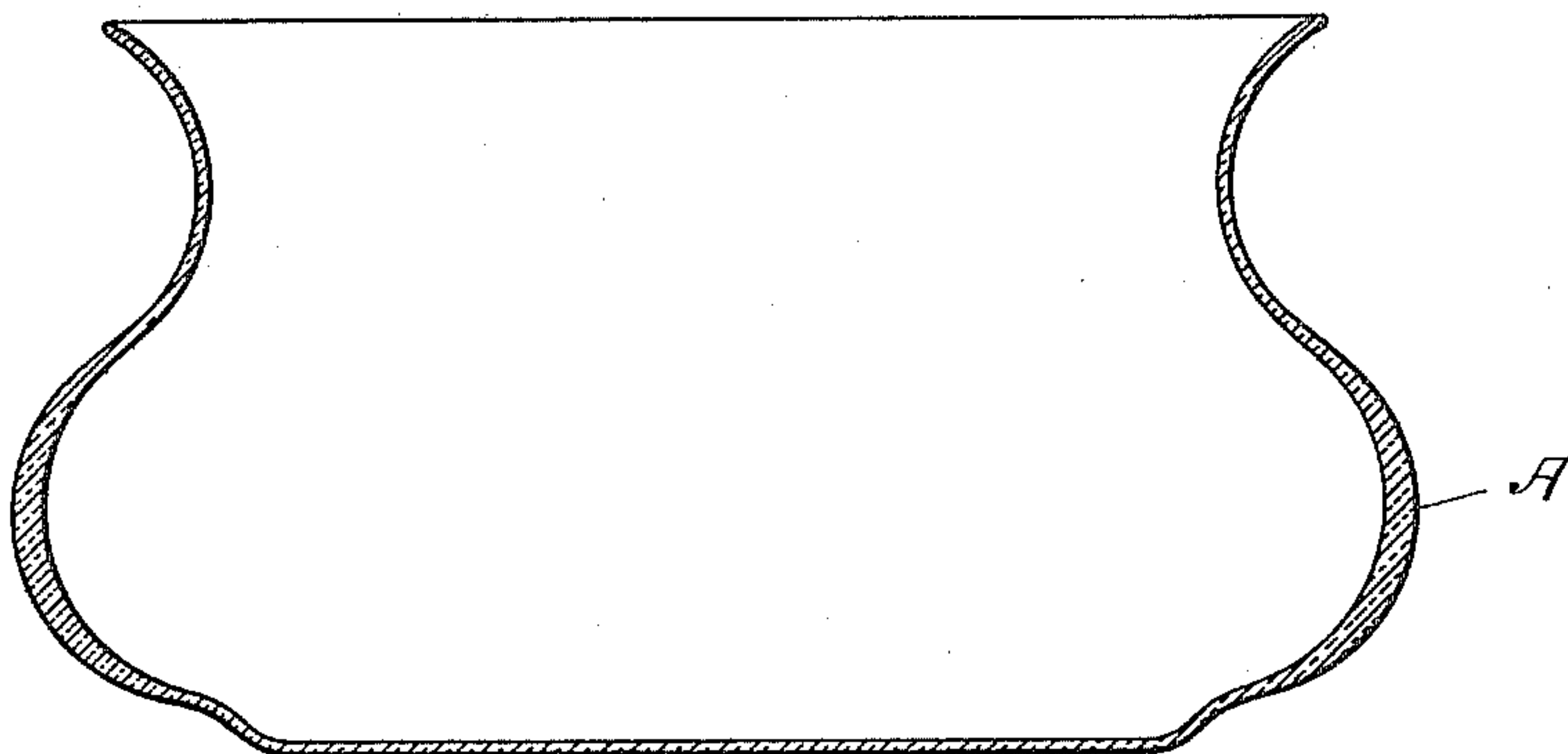


FIG. 2.

WITNESSES.

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Atty.

(No Model.)

2 Sheets—Sheet 2.

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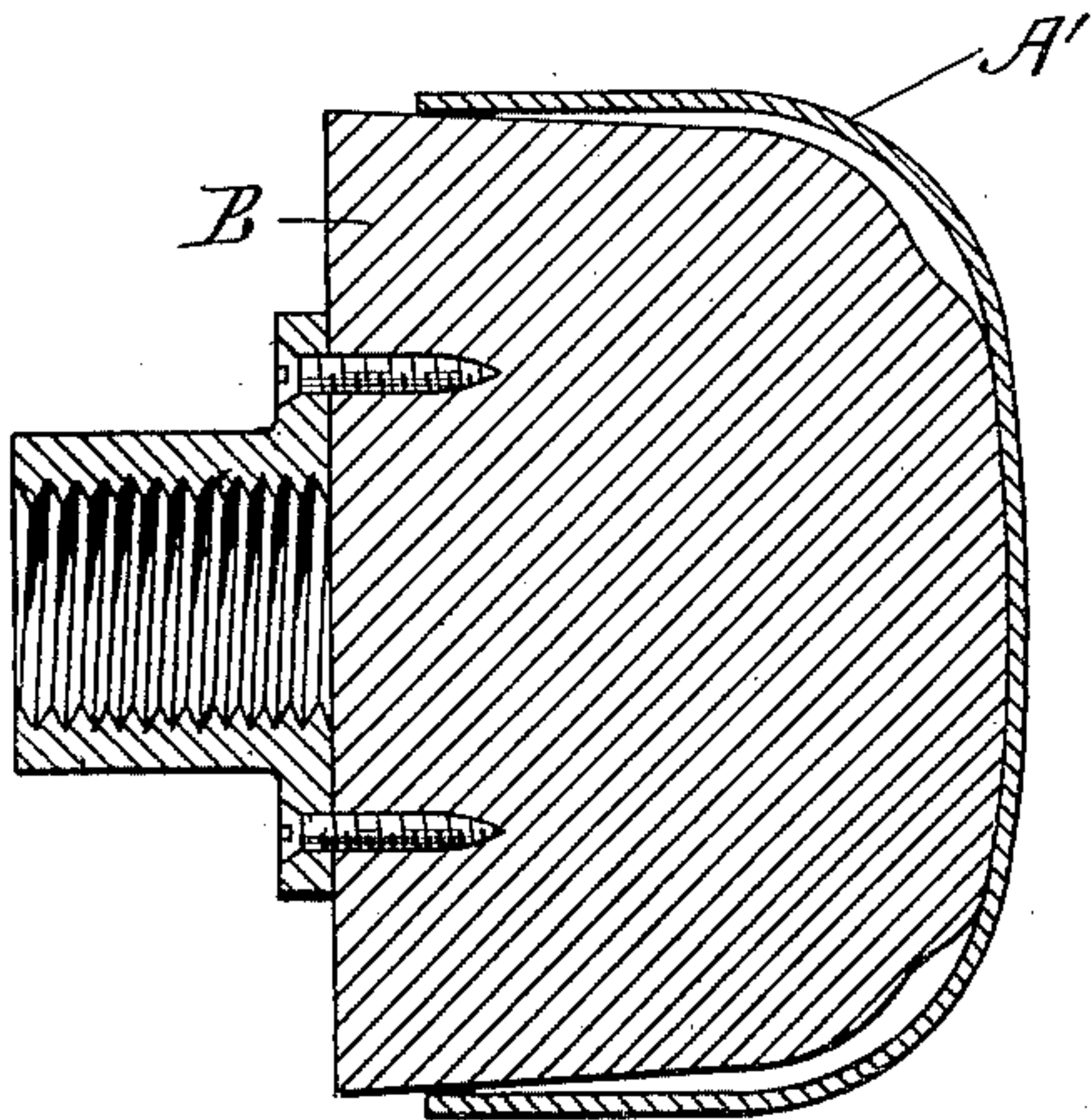


Fig. 3.

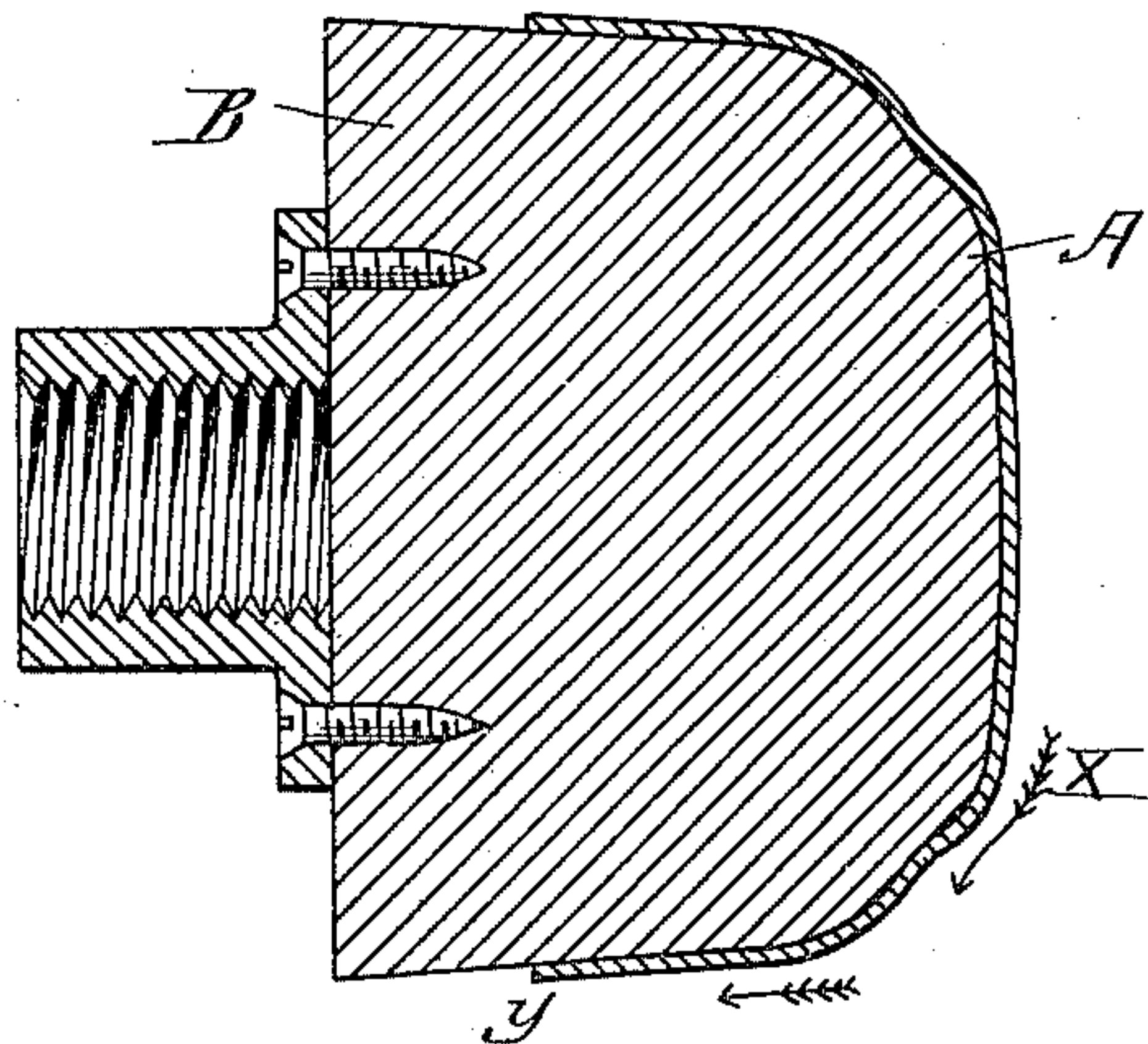


Fig. 4.

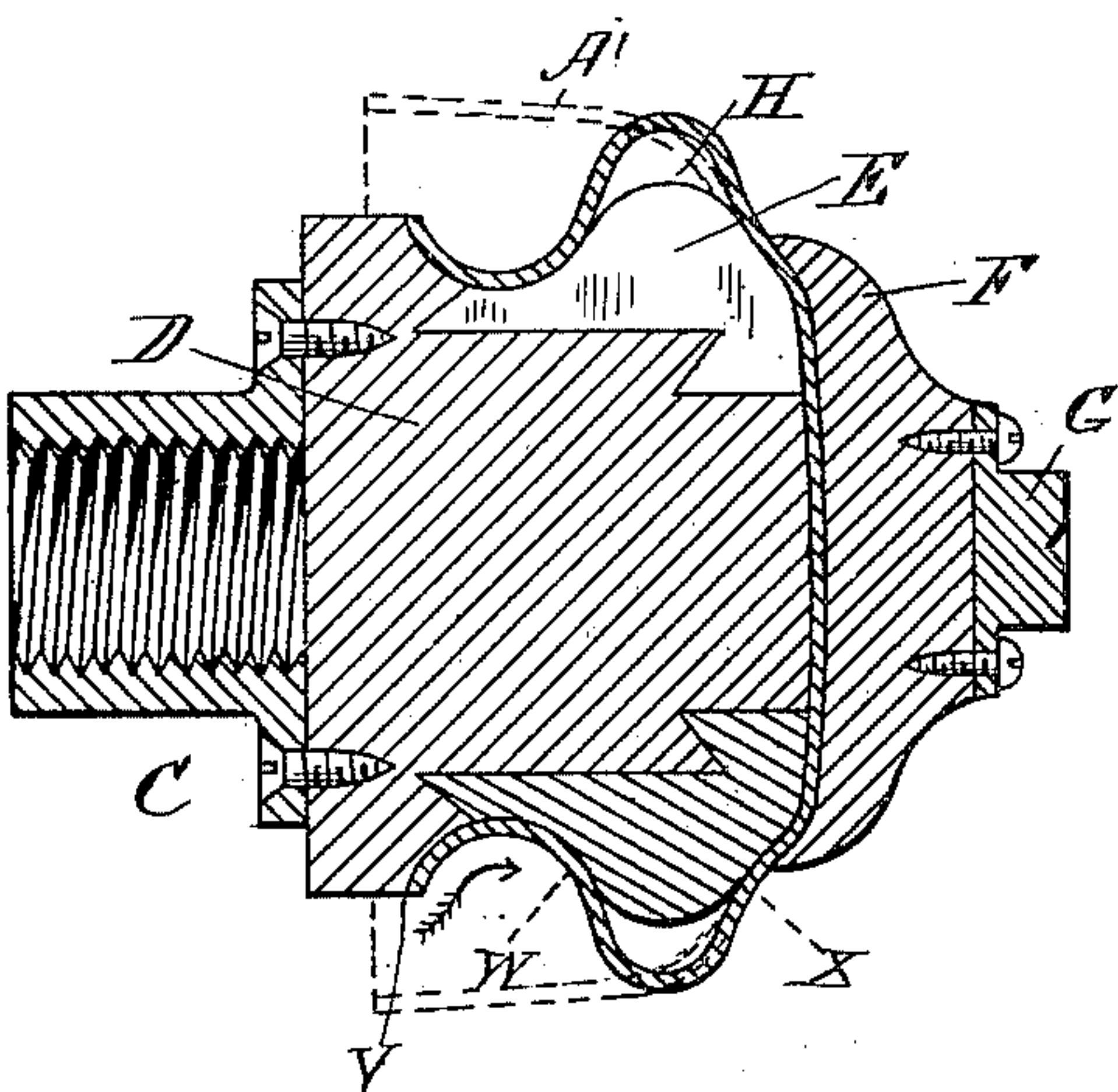


Fig. 5.

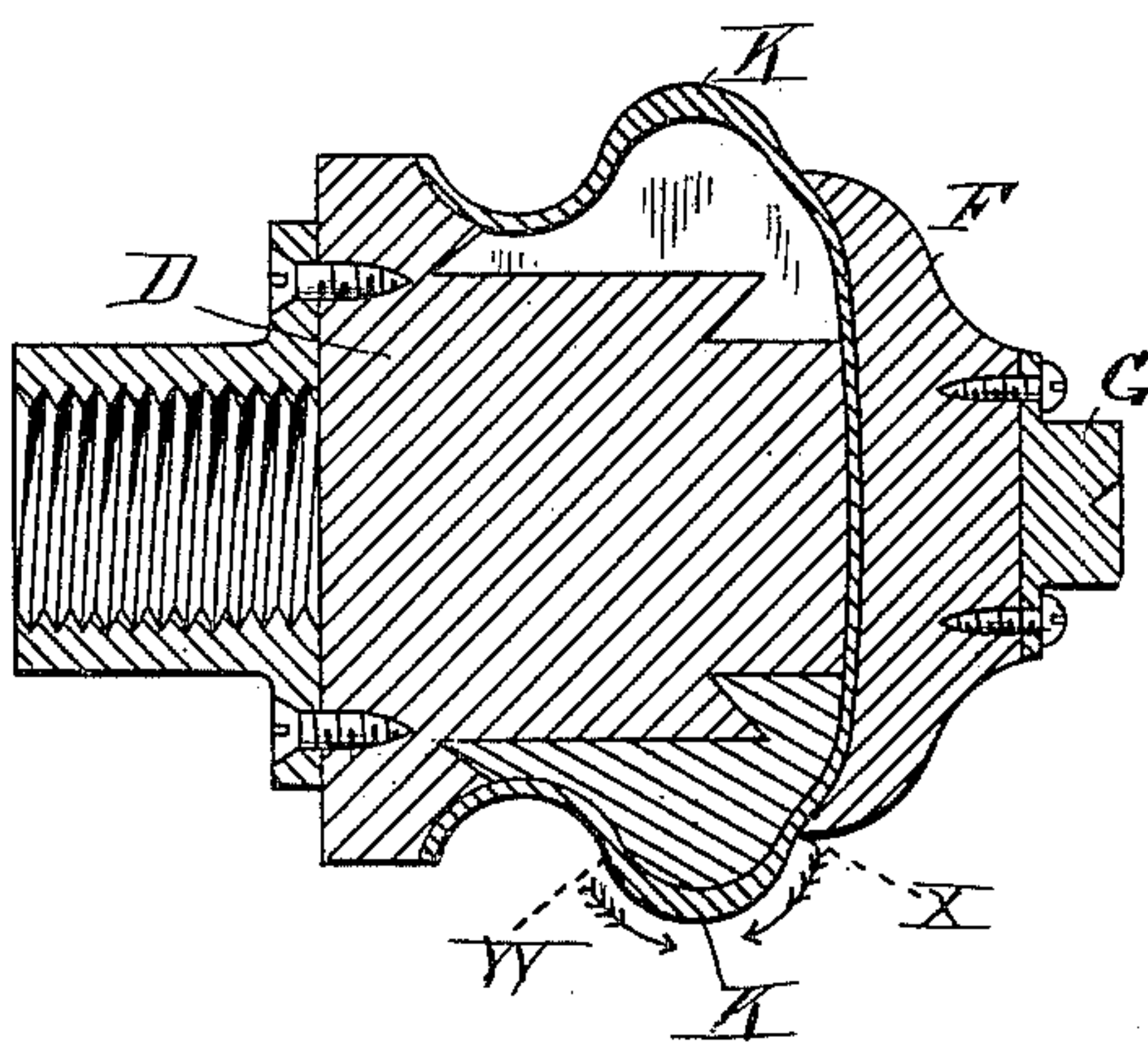


Fig. 6.

WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM MCAUSLAND, OF TAUNTON, MASSACHUSETTS, ASSIGNOR TO THE
REED & BARTON CORPORATION, OF SAME PLACE.

METALLIC SPUN ARTICLE.

SPECIFICATION forming part of Letters Patent No. 599,286, dated February 15, 1898.

Application filed July 1, 1895. Serial No. 554,530. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MCAUSLAND, a citizen of the United States, residing at Taunton, in the county of Bristol and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Metallic Spun Articles, of which the following is a specification.

In the accompanying drawings, Figure 1 is an elevation, and Fig. 2 a vertical section, of an article embodying my invention. Fig. 3 shows in section the preliminary operation of blocking the struck-up cylinder. Fig. 4 is a sectional view showing the prepared blank spun to the form of the solid chuck. Fig. 5 is a sectional view showing the article spun to form the bulge and with the walls of the article of uniform thickness on a sectional chuck; and Fig. 6 is a section of the same character of chuck, showing the final spinning operation.

In hollow-spun metallic articles for household use—such as sugar-bowls, tea sets, and the like—great trouble and annoyance have arisen from the fact that the article very soon becomes marred and dented. This is especially the case where the article is made of some soft metal, such as britannia, the exposed projecting portions becoming very quickly dented unless great care is taken. To avoid this difficulty, I have invented an improved article of which the prominently-exposed portions of the walls between the base and lip are thickened by means of a special process in spinning heretofore unused, and for which I have made application for Letters Patent of the United States, filed July 1, 1895, Serial No. 554,529.

In the drawings I have shown a receptacle suitable for sugar or other uses, and the section Fig. 2 shows the protruding portion A of the wall considerably thicker than any other part of the walls. This portion A of the article is the part particularly exposed to blows and most liable to become dented. By thickening the wall at this point I have found that great additional strength is given it; in fact, much more so than if the thickness of the whole article were uniformly increased, which would also add greatly to the

weight. Thus by thickening the wall at A, I can produce a strong light comparatively cheap article which it is almost impossible to dent by any ordinary use to which it might be subjected.

The method of producing the article is illustrated in Figs. 3, 4, 5, and 6. The first operation is to block or strike up from a flat disk of metal the cylindrical shell A', Fig. 3. The shell A' is next placed on the solid chuck B, as shown in Fig. 3, and spun so that its outline conforms to the form of the chuck B, as shown in Fig. 4. In this spinning the metal is worked, as shown by the arrows, from X to Y, or from the bottom upward. The shell A' is next placed on the sectional chuck C, Fig. 5, in the position shown by dotted lines. The chuck C has a central core D attached to the head-stock of the lathe, and the sectors E are rabbeted about the core D, so that their peripheries form a practically unbroken surface. With a core of this construction it will be evident that the same can be withdrawn after the article shall have been spun. The bottom of the shell A', on account of its first spinning, conforms to the end of the sectional chuck C, and it is held firmly thereto by bringing up against it the tail-piece F, which is provided with the tip G, arranged to turn upon the tail-stock of the lathe. The shell A' is thus held solidly upon the sectional chuck C, but allowed to turn freely with it. The shell A' upon the sectional chuck is next spun into the shape shown in solid lines in Fig. 5, the metal being worked from the edge toward the bottom, or from V to W, as indicated by the arrow. This is the opposite direction from that in which spinning is usually done, and causes the shell to conform to the die from V to W, while the metal from W to X protrudes beyond the chuck, as shown, in the form of a hollow bulge, as at H. Finally, without removing the article from the chuck the metal from W to X, forming the bulge, is spun down onto the chuck, as shown in Fig. 6, the metal being worked from both sides or ends toward the center, as indicated by the arrows. The metal by the operation described is thickened and compacted between W and X, as

at K, and the thickest and hardest part of the walls of the article are at its most vulnerable point, and an article capable of resisting a sharp blow or impact is obtained by
5 the use of the least quantity of metal.

I claim—

A hollow-spun vessel having its wall at its exposed points spun in opposite directions to

greater thickness than the other spun portion of its wall.

In witness whereof I have hereunto set my hand.

WILLIAM MCAUSLAND.

Witnesses:

BENJ. B. PIERCE,

L. A. HODGES.