

(No Model.)

2 Sheets—Sheet 1.

G. MONTEITH.
HUB BAND.

No. 474,754.

Patented May 10, 1892.

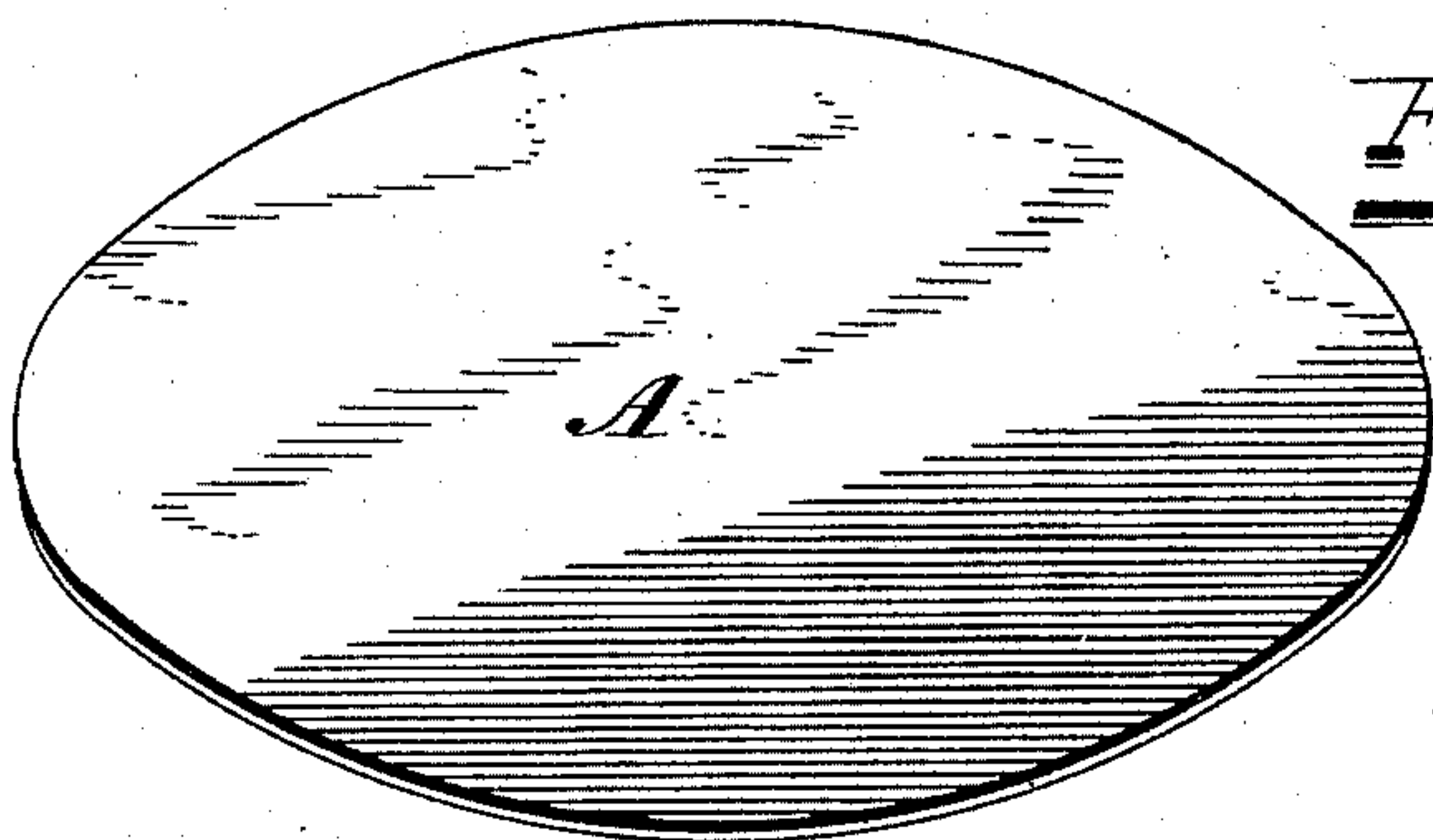


Fig. 1.

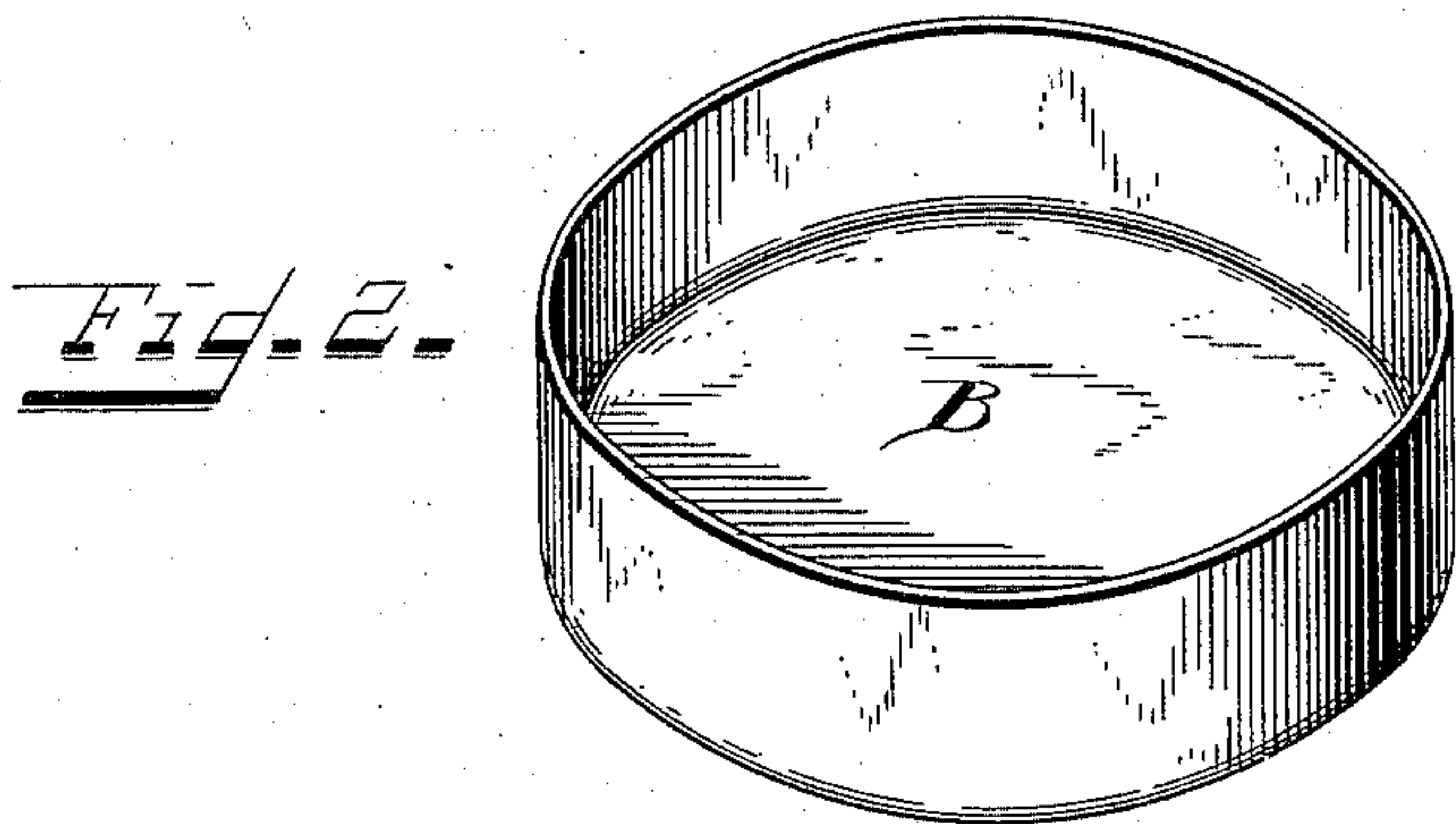


Fig. 2.

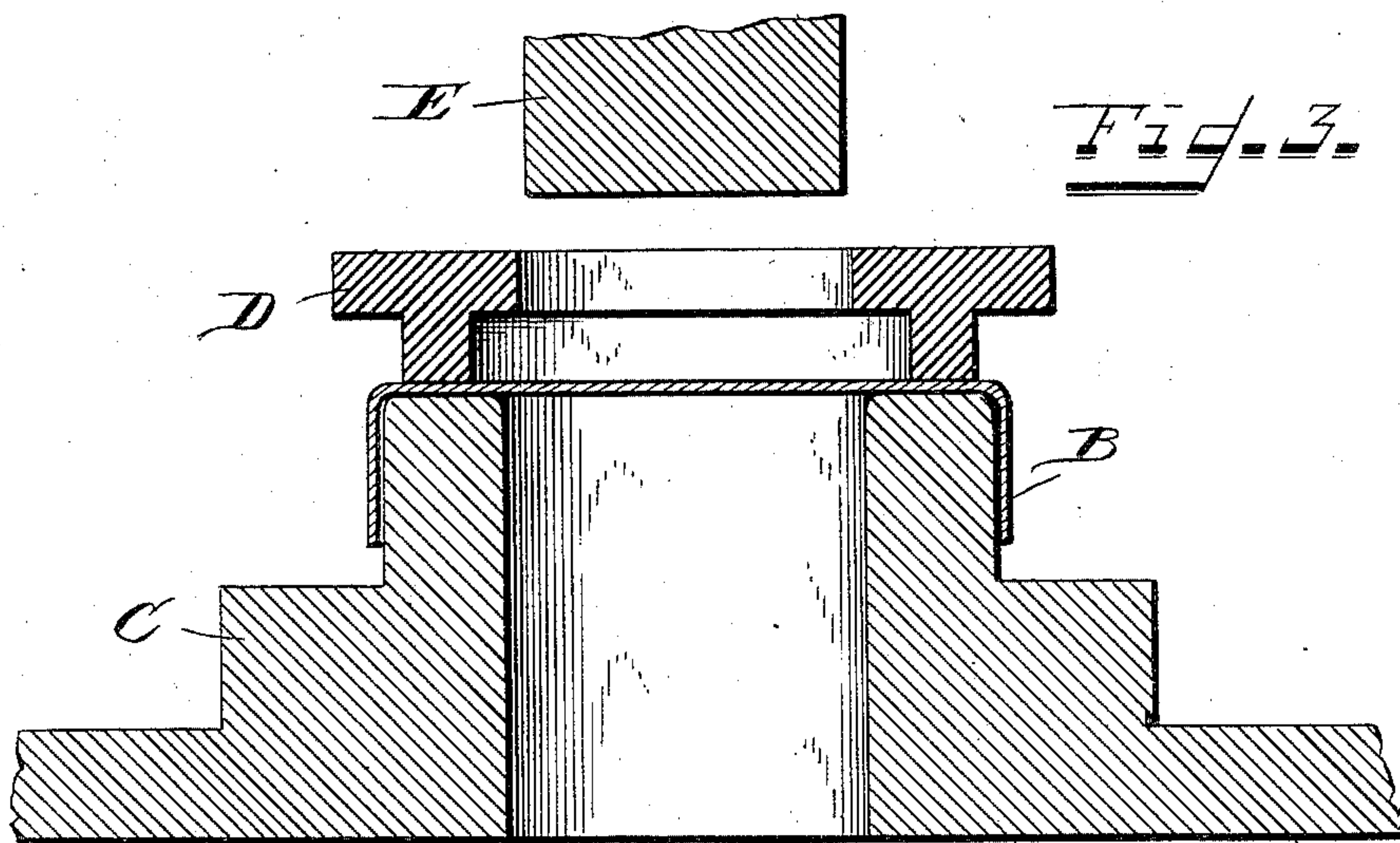


Fig. 3.

Witnesses.
J. Thomson & Co.
George Heidmar

Inventor.
George Monteith
by Stewart Allen
Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

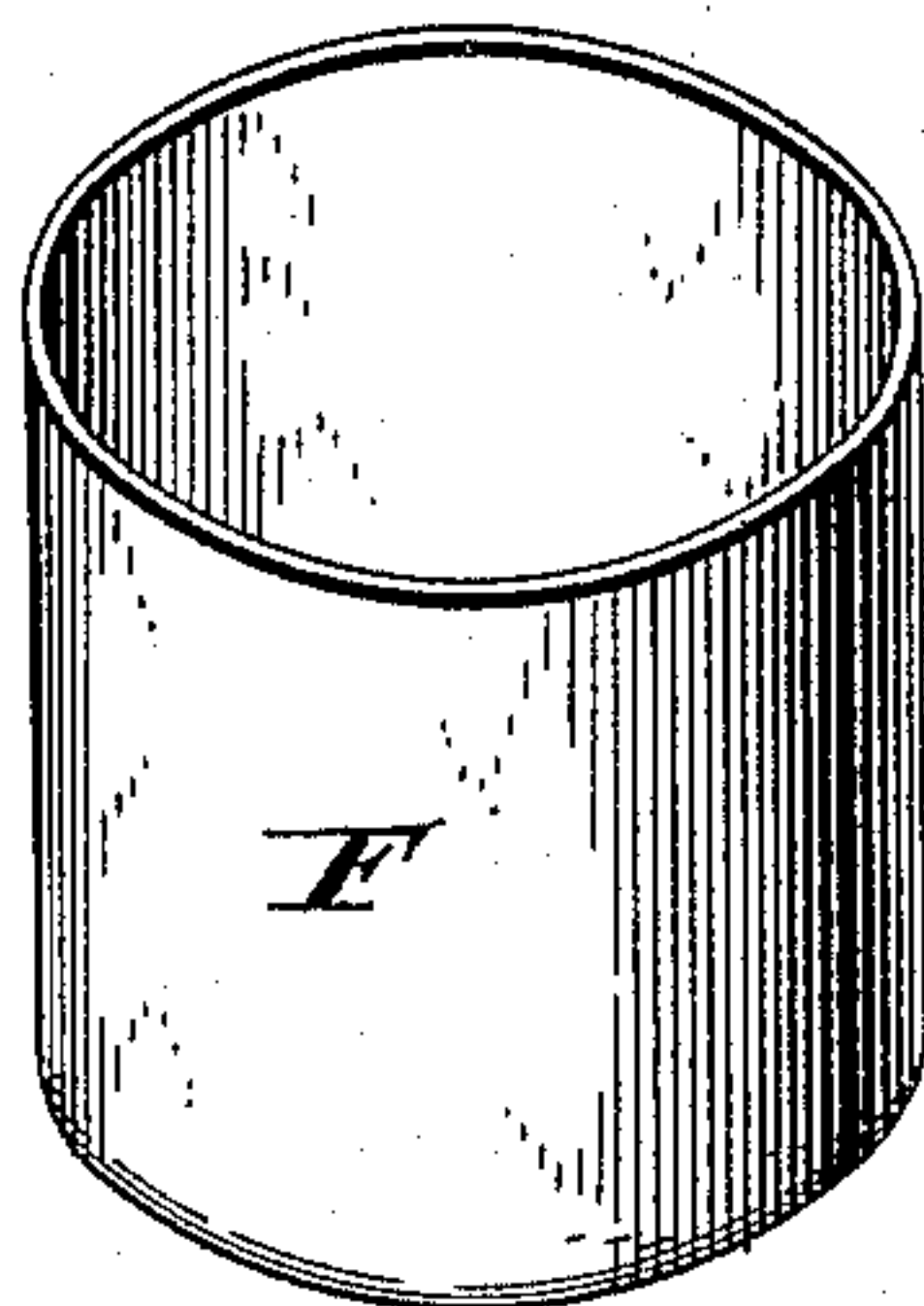


Fig. 5.

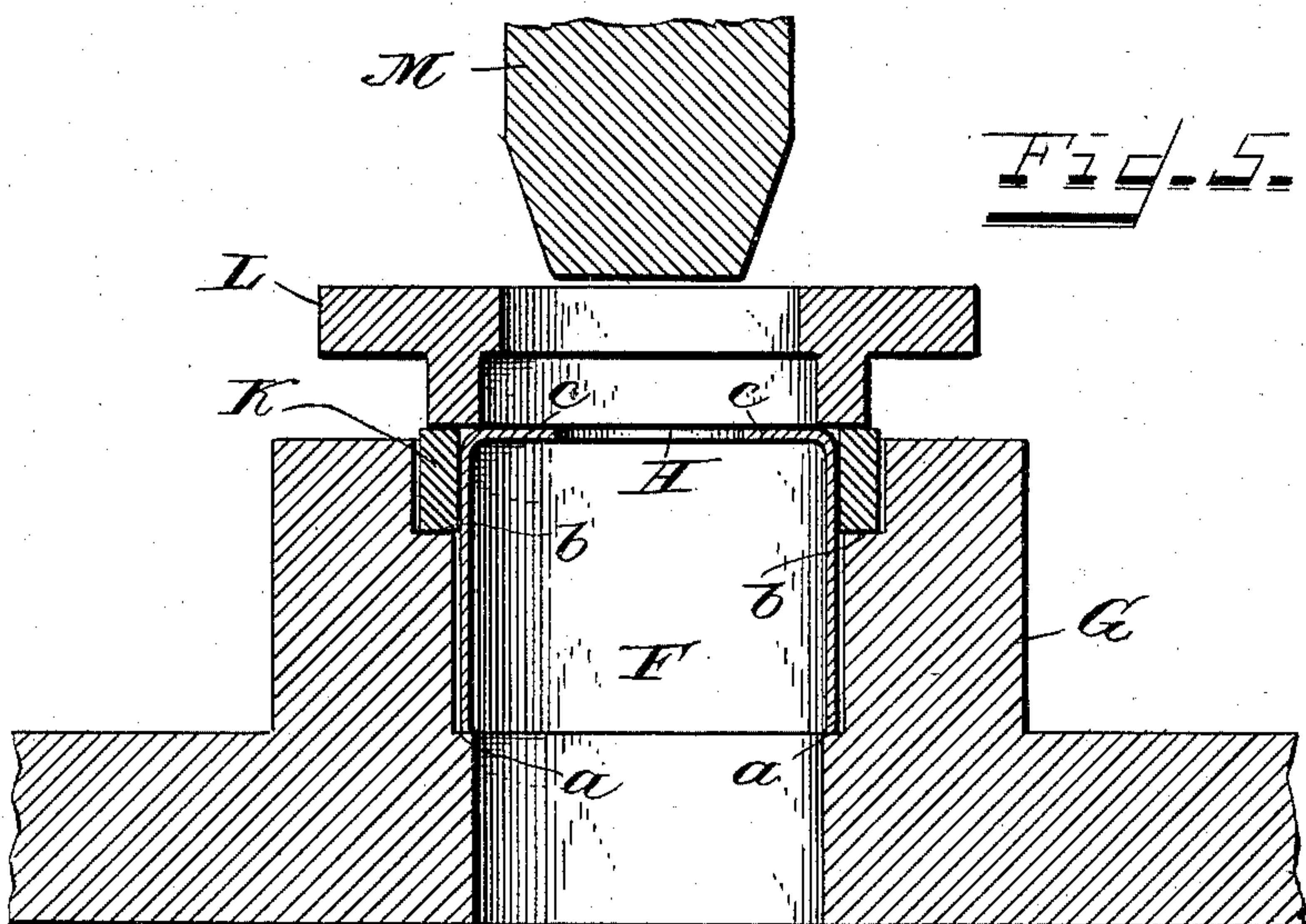
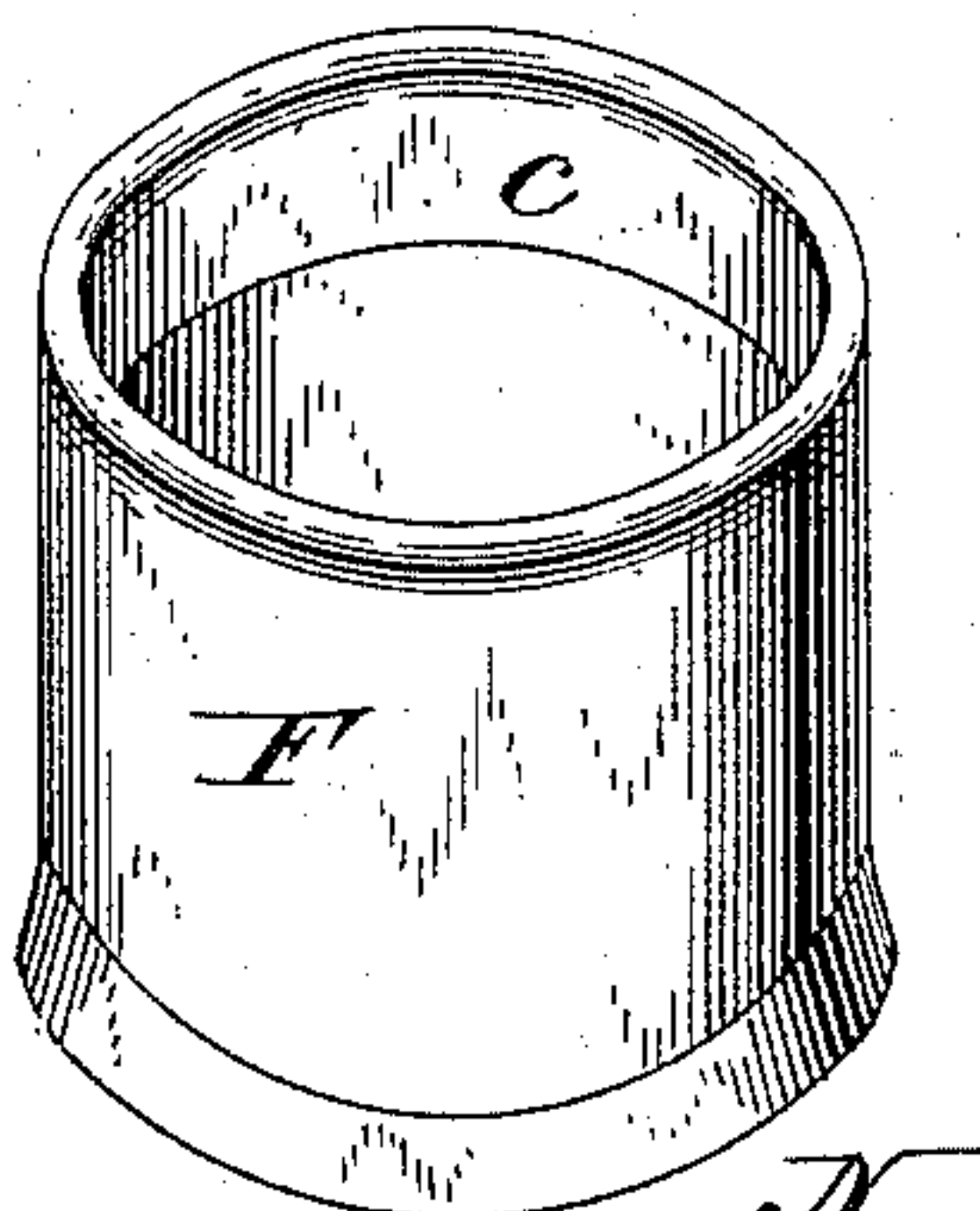


Fig. 6.



Witnesses.
J. Thomson Cross
George Heidman

Inventor.
George Monteith
by Stein & Allen
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE MONTEITH, OF CINCINNATI, OHIO.

HUB-BAND.

SPECIFICATION forming part of Letters Patent No. 474,754, dated May 10, 1892.

Application filed December 7, 1891. Serial No. 414,264. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MONTEITH, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hub-Bands, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in hub-bands for vehicles, and has for its object the production of a hub-band of wrought metal instead of cast, and one in which the outer end of the band is turned inward to give additional strength to the point of the band, and in which any necessity for an ornamental lining is done away with.

In wrought-metal bands as heretofore constructed in order to give proper finish to the band it has been usually necessary to provide an ornamental lining of thin sheet metal for the band, which lining has been attached to the band over an inner circular flange or in other ways. The outer ends of these bands have also been of the same thickness as the body of the band, and consequently have been very apt to become bent or twisted when accidentally striking or coming in contact with any obstacle.

It is the purpose of my invention to overcome these objections by constructing a band out of wrought metal in which the outer end is turned upon itself to give additional strength and in which the surface of the band can be readily polished or plated and no ornamental lining required. These bands are made from previously-prepared sheet-metal blanks pressed and cut in suitable dies to the proper shape, as will hereinafter be more particularly described.

In the accompanying drawings, Figure 1 is a perspective view of a circular blank of metal from which the band is prepared. Fig. 2 is a perspective view of the cup formed out of the blank in the first step of the process. Fig. 3 is a central vertical section of the die and part of the plunger employed in the second step in the process, and showing the band-cup of Fig. 2 in section. Fig. 4 is a perspective view of the cup formed in the die shown in Fig. 3. Fig. 5 is a central vertical section of the die and part of the plunger employed in

the last step of the process for turning over the outer edge of the band, and showing the band-cup of Fig. 4 in section. Fig. 6 is a perspective view of the hub-band complete.

Like letters of reference indicate identical parts in all the figures.

A, Fig. 1, is a circular blank of wrought metal, cut from a large sheet of similar metal by a suitable stamp. Out of this circular blank the hub-band is formed. The circular blank A is placed over a suitable die, and a plunger of the proper size presses this blank into the cup B, (shown in Fig. 2,) A being preferably cut from the larger sheet in the same operation and immediately before the plunger comes down to press the blank into the cup form. The cup B is then placed over a suitable female die C of such size and shape that the cup will just fit over the upper portion of the die with the sides of the cup downward.

D is a holding-ring placed on top of the die to hold the cup B firmly in place.

E is the lower portion of the plunger, which then comes down into the female die C and presses the cup B into the lengthened shape shown in Fig. 4; F, the diameter of the cup, being decreased and its depth increased. The cup B is reversed in forming the cup F, in order to throw the strain on the metal in opposite directions, as it is found that if it were attempted to form the cup F in one operation the metal becomes so strained that it is no longer serviceable for a hub-band, and is very apt to crack or break during the final operation. A circular opening is then cut in the bottom of this cup F, and the cup again reversed and placed in the female die G, Fig. 5, F being the cup and H the opening in the bottom, a flange *a* being formed in the die to support the cup and another flange *b* being also formed in the upper part of the die to hold a retaining spring-ring K, while above these parts is placed a holding-ring L, similar to the ring D, (shown in Fig. 3,) to hold the parts in place during the final operation. The plunger M, tapering at its lower end, then descends into the opening H in the cup F and turns the bottom portion *c* inward to form the point of the band. An inner rim N is then formed on the inner part of the band, and the hub-band is complete and ready for

use. It will be noticed that at each operation the cups formed are reversed for the next succeeding operation, as it is found that this is the only successful method of making the
5 band. . The reversing of the band - cups changes the strain on the metal and enables the production of a strong durable hub-band out of a circular blank of wrought metal.

I am aware that it is old to make a hub-
10 band out of previously-prepared seamless tubing or sheet metal, either with or without an inner flange upon which to attach an ornamental lining, and I do not claim such construction. In my band, however, the point
15 of the band is turned inward in order to strengthen the band and give it an ornamental appearance and to do away with the necessity for any ornamental lining, and at the same time the band is made of wrought metal,
20 and consequently is much less brittle and liable to break when being forced on the hub. The process of forming this band is also new, I believe, and consists of three operations, forming, first, a shallow cup; second, turning
25 this cup inside out and producing a deep nar-

row cup of the diameter of the finished hub-band, and then turning in the bottom of the last cup after first having made a circular opening in the bottom of the same.

Having thus described my invention, what
I claim, and desire to secure by Letters Patent, is—

1. A wrought - metal hub - band made of sheet metal and having the outer end turned over on itself to strengthen the point of the
35 band, substantially as shown and described.

2. The process of forming a wrought-metal hub-band, having its outer end turned over on itself, which consists in first forming a
40 shallow cup out of sheet metal, then pressing this cup wrong side out, reducing the diameter of the cup to the size of the finished band, and then turning in the bottom of the cup, substantially in the manner and for the purpose described.

GEORGE MONTEITH.

Witnesses·

THEO. KEMPER,
GEORGE HEIDMAN.