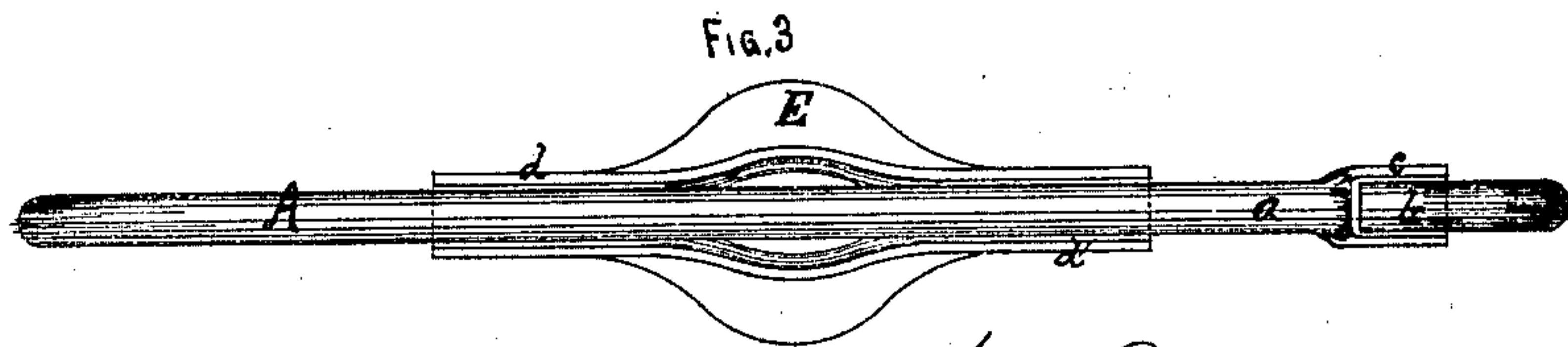
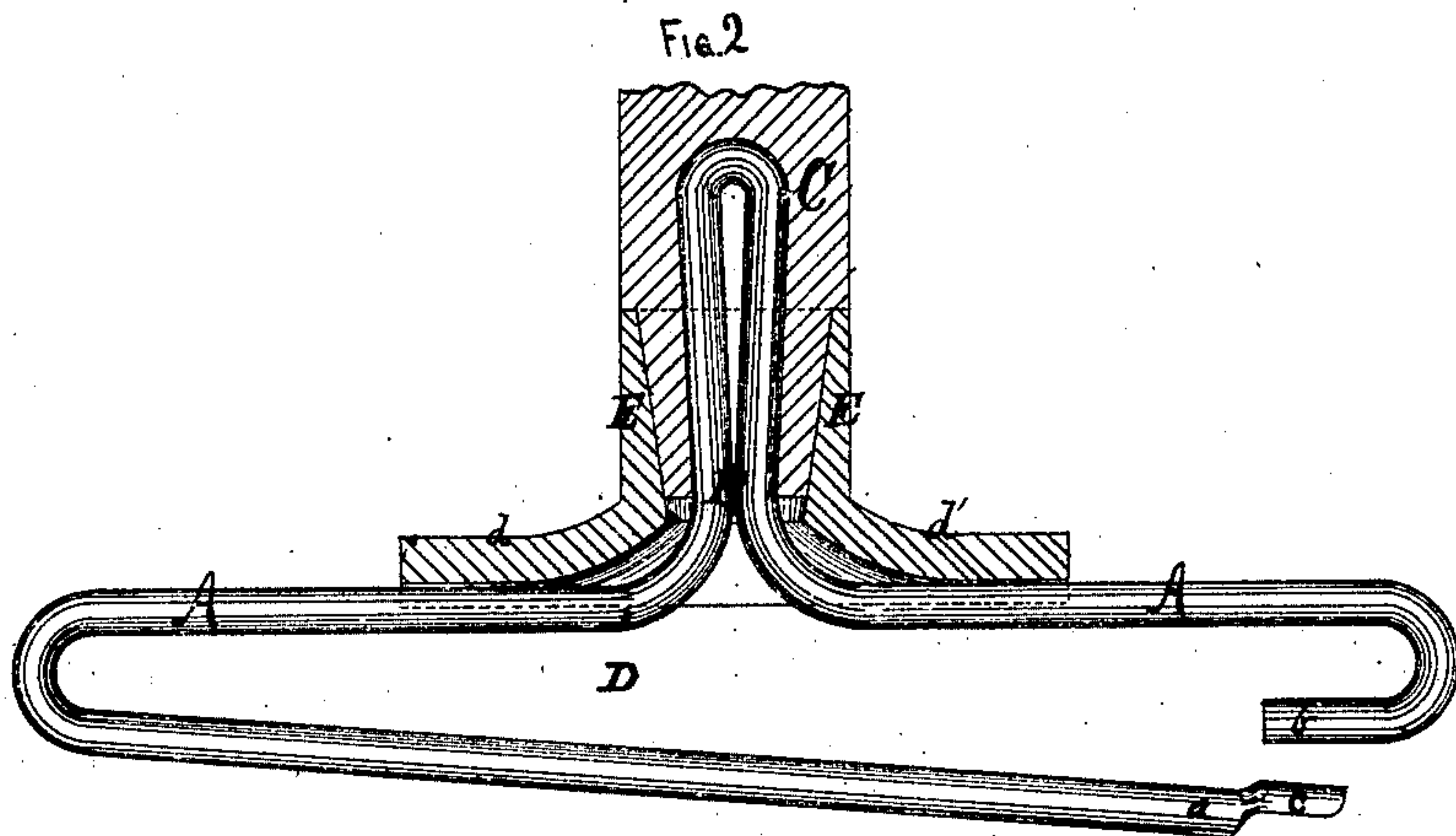
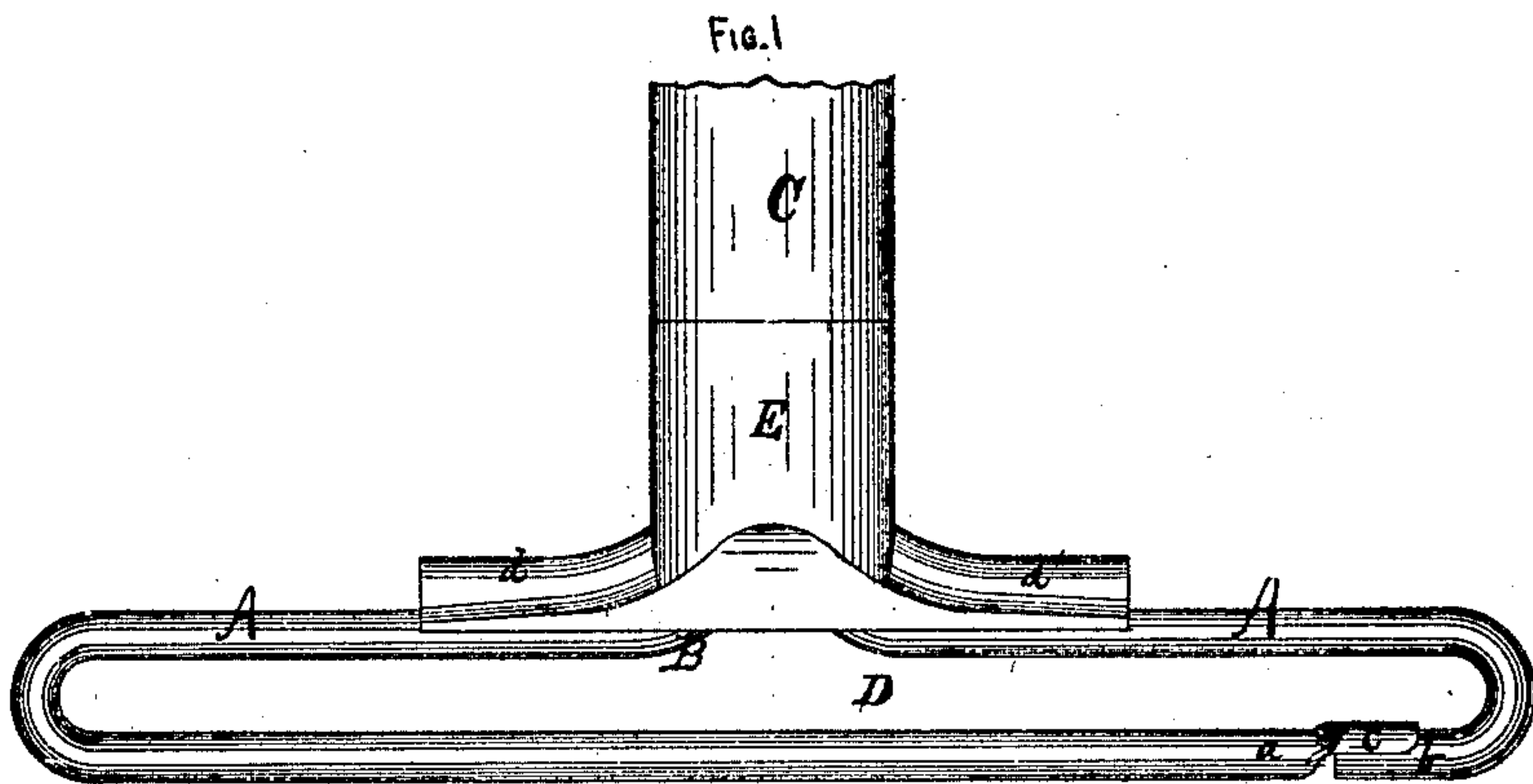


W. F. Valentine.

Mop Head.

No. 108,304.

Patented Oct. 11, 1870.



Witnesses.

C. N. Woodward
J. H. Drake

W. F. Valentine Inventor.

J. Fraser & Co. atty
Buffalo, N.Y.

United States Patent Office.

WILLIAM PIERCE VALENTINE, OF BUFFALO, NEW YORK, ASSIGNOR TO
HIMSELF AND JOHN ROBERT DRAKE, OF SAME PLACE.

Letters Patent No. 108,304, dated October 11, 1870.

IMPROVEMENT IN MOP-HEADS.

The Schedule referred to in those Letters Patent and making part of the same.

I, WILLIAM PIERCE VALENTINE, of Buffalo, in the county of Erie and State of New York, have invented certain Improvements in Mop-Heads, of which the following is a specification.

Nature and Objects of the Invention.

My invention consists in the special form and construction of the wire and ferrule constituting the mop-head, as hereinafter described, and the connection of said head with the handle.

General Description.

In the drawing—

Figure 1 is a side elevation of the mop-head.

Figure 2, a similar view, partly in section, with the locking device unclosed.

Figure 3 is a bottom plan.

A is the holder, made of a single piece of wire, bent in an oblong shape, except the central part B, which is bent up double in the form of a wedging-loop, forming the shank which enters the handle G.

The longest end *a* of the holder, which is the under side, overlaps the shortest end *b*, at a point between the center and end, and a catch or lock, *c*, is formed by stamping the end *a* into a semicircular groove or socket, so that when it is sprung inwardly it fits over the short end *b*, as clearly shown in the drawing.

This forms a complete self-springing and self-locking device.

The space D holds the material that composes the mop, which is easily inserted, by unspringing the lock, and then closing the same again.

The more mop-stuff put in the tighter it holds.

E is a cast-iron ferrule, having cross-arms or braces *d d*, one on each side, which are provided with grooves on the under side, which sets over the wire-holder, and prevents any bending or twisting out of place.

The inside of the ferrule is made conical, flaring upward, so that when the loop or shank of the holder is in position, inside, its sides are nearly parallel with the inner sides of the ferrule.

This is a special feature of my invention, the object of which is to hold the wooden handle on, so that it cannot be withdrawn, and do away with any other fastening.

It is accomplished as follows:

A small hole, smaller than the diameter of the top of the loop, is bored into the handle; the top of the shank or loop is placed opposite the hole, and strong pressure applied to the ferrule and shank, the latter being forced into the hole, and any expansion that the hole receives, the ferrule, which is forced over the end of the handle, overcomes, and the wood is forced around the lower and narrow part of the loop, which now acts as an inverted wedge, and holds the handle rigidly in place.

I claim a special advantage in the peculiar wedging form of the loop or shank, and its connection with the wood of the handle, as thereby I dispense with any other fastening, except the collar E, which, when driven in place, sets the wood around the narrow part of the shank, as before described.

The constant expansion of the loop in its socket has a tendency to keep it always tight, and to increase the size of the upper instead of the lower end of the socket or tube, in which it fits, so that there is no danger of its becoming loose, especially as the wood is constantly kept swelled by the water, which remains after use.

This loop or double head, forming the shank, is much more effectual than would be two loose ends fitting in the socket, as it retains its stiffness to a greater degree, and is not so liable to get bent out of place and thereby get detached.

It also enables the loose ends of the single piece of wire to come on the opposite side, to form the lock *c b*, as before described.

I know of no method of connection like this, where the loop sets directly in the wood, and the latter is tightened around the loop by the application of the ferrule.

The whole mop is lighter and more durable, does away with screws, slides, ears, and all fastenings, and is not liable to break.

It also does away with all castings, except the ferrule.

It is the easiest to take hold of and wring, and, from being so compact and narrow, will work around and in corners where other mops will not enter.

The shank and holder can be made in two pieces, but I prefer it in a single piece, as shown.

Claims.

I claim as my invention—

1. The mop-head made from a single piece of wire, so bent as to produce an unbroken wedge-shaped loop, B, for the shank, and overlapping-lock *b c*, for the junction of the ends, as herein shown and described.

2. The ferrule E, with its bracing-arms *d d* and conical opening in the center, substantially as and for the purpose hereinbefore set forth.

3. The unbroken wedge-shaped shank B, connected directly with the wood of the handle G, resting in a similarly-shaped socket in the wood, and held by the cross-armed ferrule or collar E, arranged as described, and operating in the manner and for the purpose specified.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

W. P. VALENTINE.

Witnesses:

J. R. DRAKE,

C. N. WOODWARD.