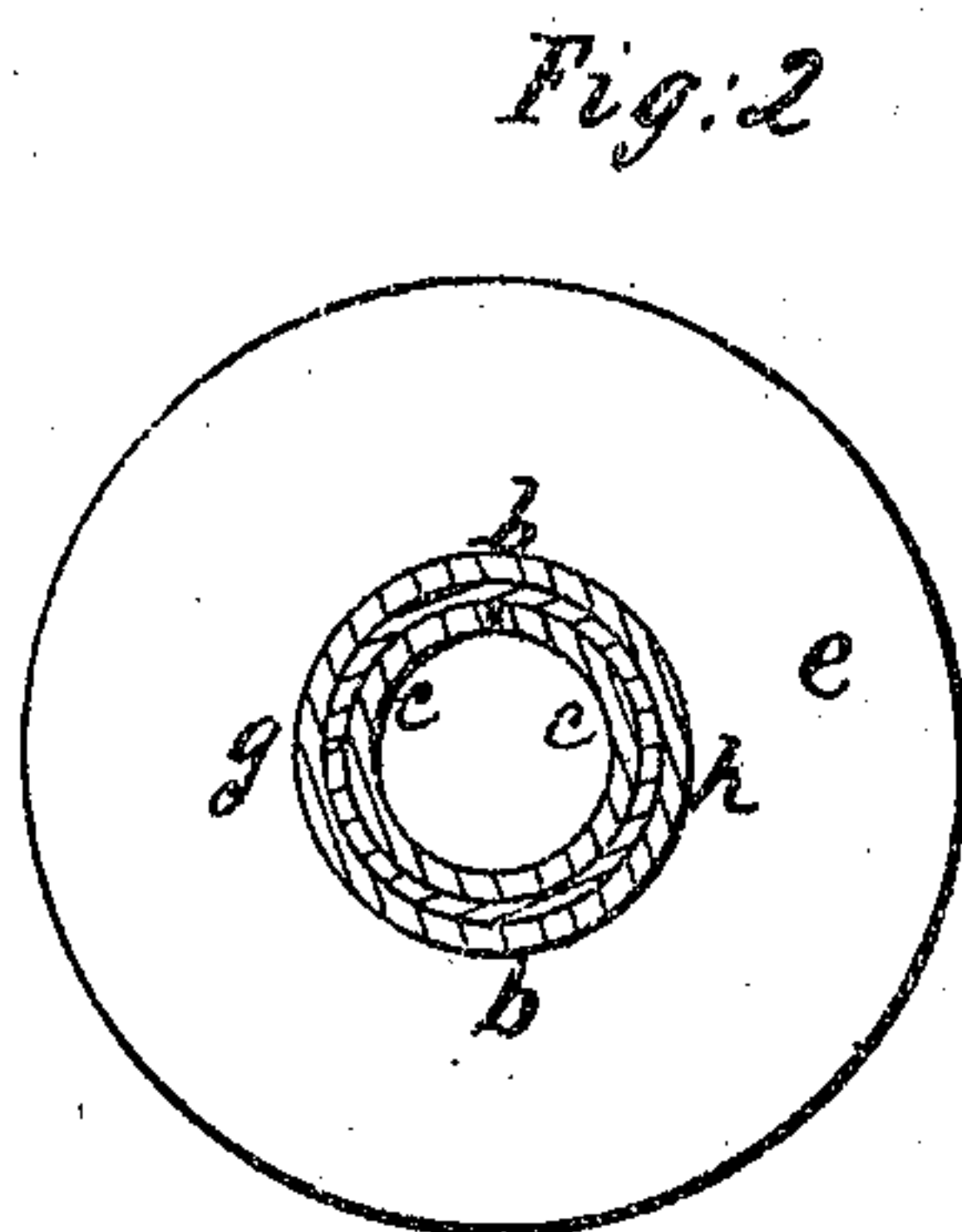
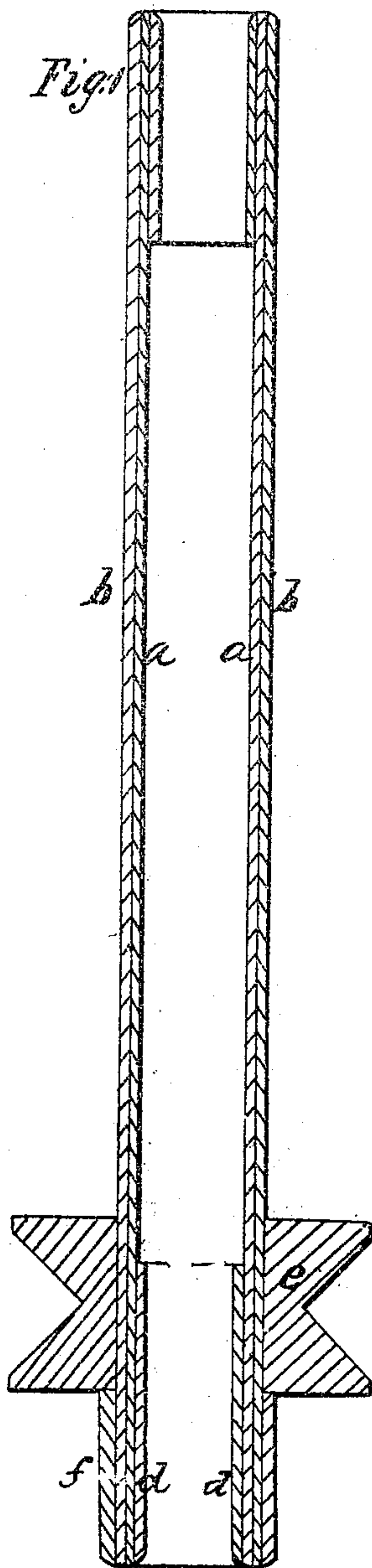


D. D. Allen.

Spinning Frame Tube.

N^o 29,451.

Patented Aug. 7, 1860.



Witnesses

J. W. Coombs
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Inventor

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UNITED STATES PATENT OFFICE.

D. D. ALLEN, OF SOUTH ADAMS, MASSACHUSETTS.

TUBE FOR SPINNING-FRAMES.

Specification of Letters Patent No. 29,451, dated August 7, 1860.

To all whom it may concern:

Be it known that I, D. D. ALLEN, of South Adams, in the county of Berkshire and State of Massachusetts, have invented a new and
5 useful Improvement in Tubes for Spinning-Frames; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of
10 this specification, in which—

Figure 1, is a central longitudinal section of a tube constructed according to my invention. Fig. 2 is a transverse section of the same.

15 Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in the manufacture of the barrel of a spinning tube of two pieces of tinned iron plate rolled or other-
20 wise worked into tubular form, by placing one within the other and soldering them together in such manner as to form a solid tube; and in soldering bushings of copper into the ends of the inner tube to fit the
25 spindle. The tube thus constructed is much stronger and more durable than the cast iron tubes commonly employed and is much better balanced, as the cast iron tubes which have to go through the tedious process of
30 drilling throughout their whole length are seldom perfectly true, for the least open place in the tube leads the drill astray and many tubes are lost or spoiled in the drilling from this cause.

35 To enable others to construct the tubes according to my invention I will proceed to describe it with reference to the drawings.

40 *a*, is the inner shell, and *b*, the outer shell of tinned plate of which the barrel of the tube is composed, *c*, *d*, are the two bushings of copper.

45 *e*, is the whirl fitted to the exterior of the tube, and *f*, is a ferrule of copper fitted and soldered to the exterior of the tube below the whirl.

The two shells *a*, and *b*, are rolled or otherwise worked up to a cylindrical shape by any of the means commonly employed in making tubes from sheet metal, their
50 edges being brought nearly close together and *a*, being made to fit tightly into *b*.

The bushes *c*, and *d*, are made of pieces of sheet copper rolled up or otherwise formed

like the shells *a*, and *b*, with their edges nearly meeting or of copper tubing, and 55 fitted snugly into the ends of the shell *a*, and the ferrule *f*, is made in a similar manner and fitted snugly over the lower end of the shell, and the whirl *e*, is made of cast iron and fitted snugly over the shell *b*, 60 above the ferrule *f*. In putting the shells together care is taken to bring their joints on opposite sides as shown at *g*, *h*, Fig. 2, and the joints in the bushings *c*, and *d*, and ferrule *f*, do not meet the joints in the 65 shells. When the parts are thus put together, they are dipped first into muriate of tin and afterwards into melted solder, which enters the joints between the edges of the shells, bushings and thimbles, and finds 70 its way between the two shells and between the whirl, ferrule and bushings, and the shells, and immediately after being taken from the melted solder they are placed in a swage and by that means the parts are 75 compressed tightly together and their edges closed up, so that all are combined in such a manner as to constitute a solid tube. The bushings are then ground out or otherwise manipulated to remove the solder from their 80 interior and the exterior of the tube turned in a lathe or otherwise finished up for the same purpose and to make them true and smooth. The copper bushings fitting the spindle are very durable making the tubes 85 wear longer than when constructed in any other way.

I do not confine myself to the mode herein described of soldering the parts of the tube together. 90

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Constructing the barrel of the tube of two pieces of tinned plate iron fitted together and united by soldering substantially 95 as herein described.

2. In combination with the barrel composed of two shells of tinned iron plate, the copper bushings applied and soldered within the inner shell substantially as herein described. 100

D. D. ALLEN.

Witnesses:

F. O. SAYLES,
IRA ALLISON.