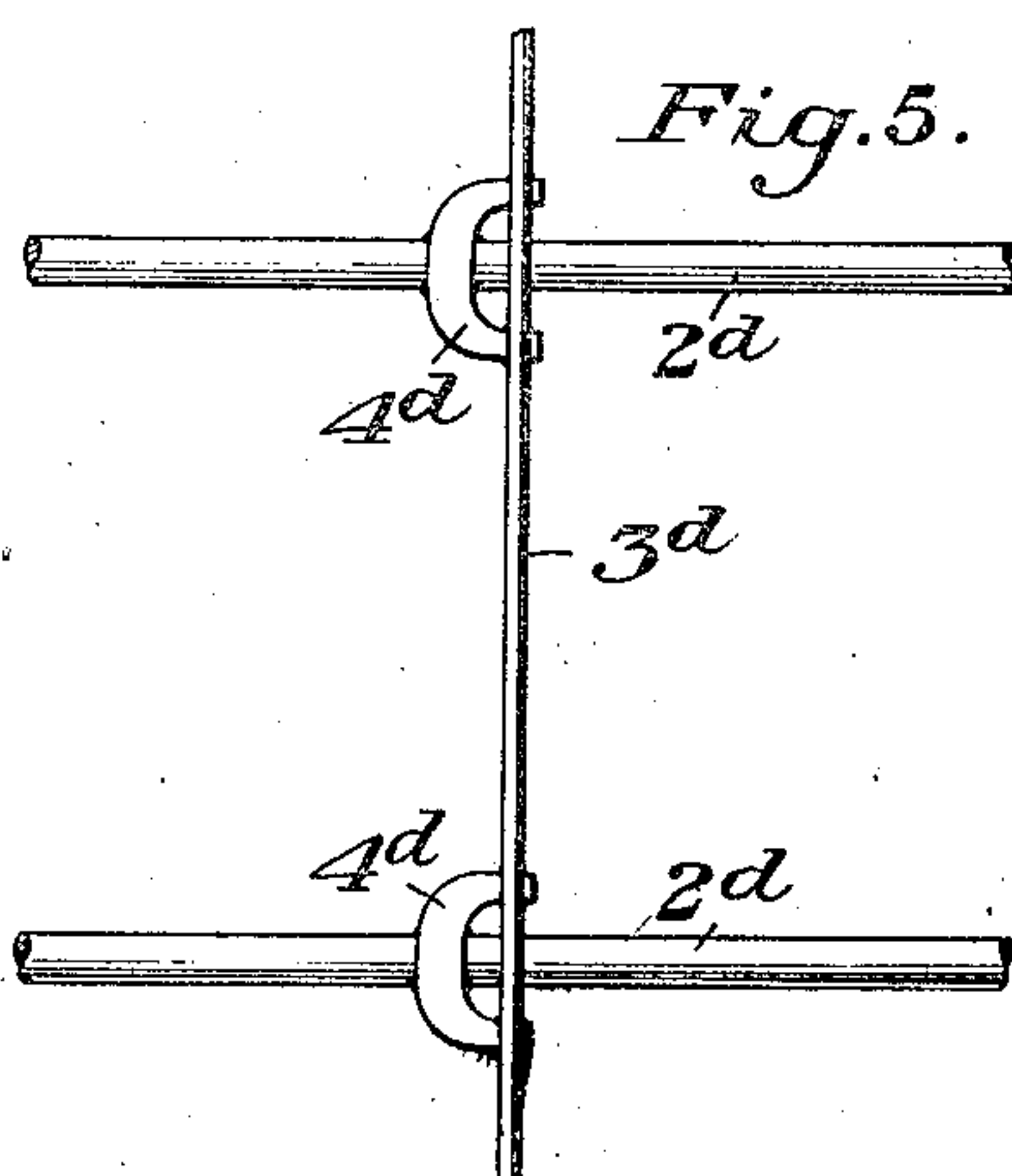
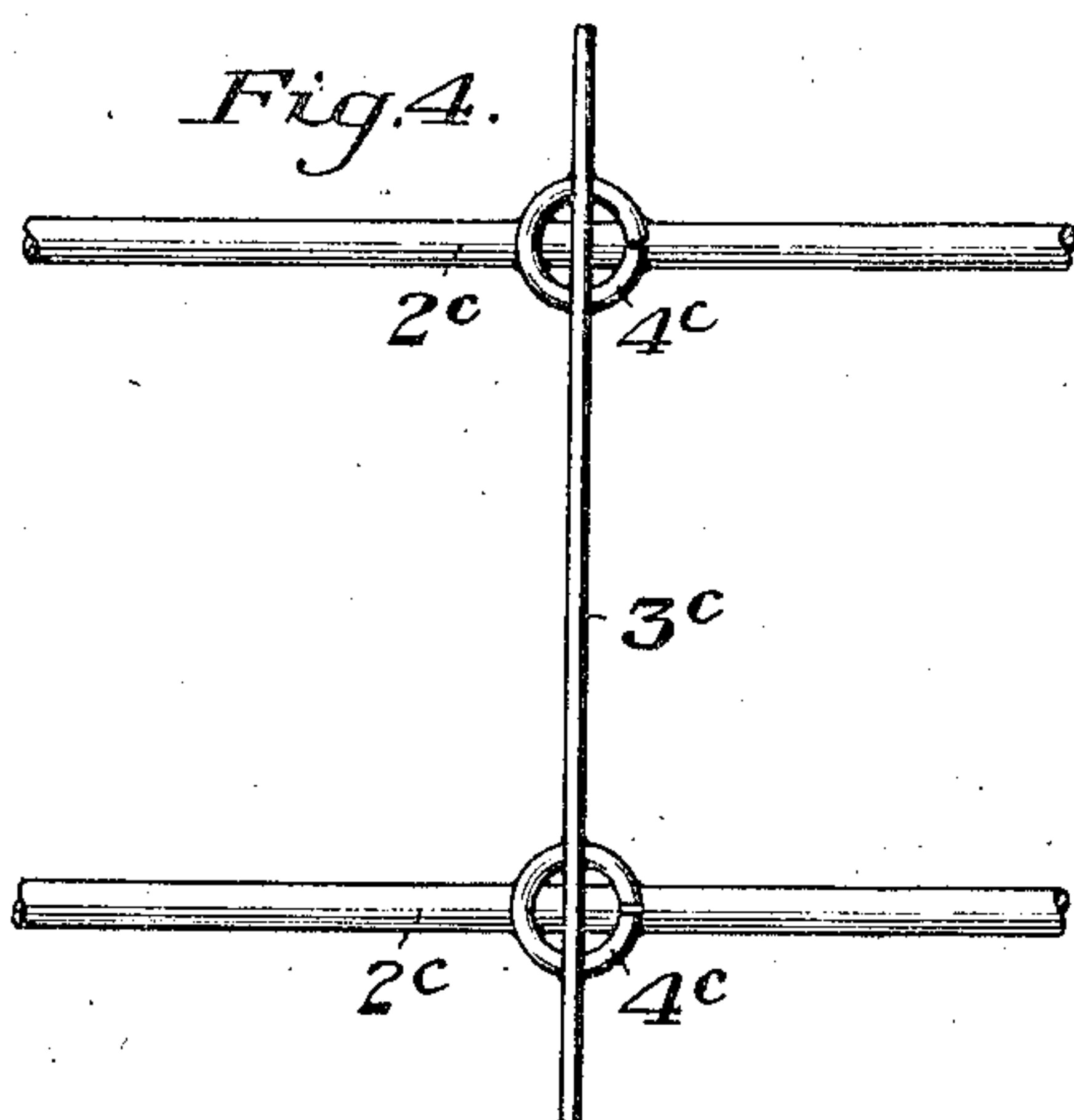
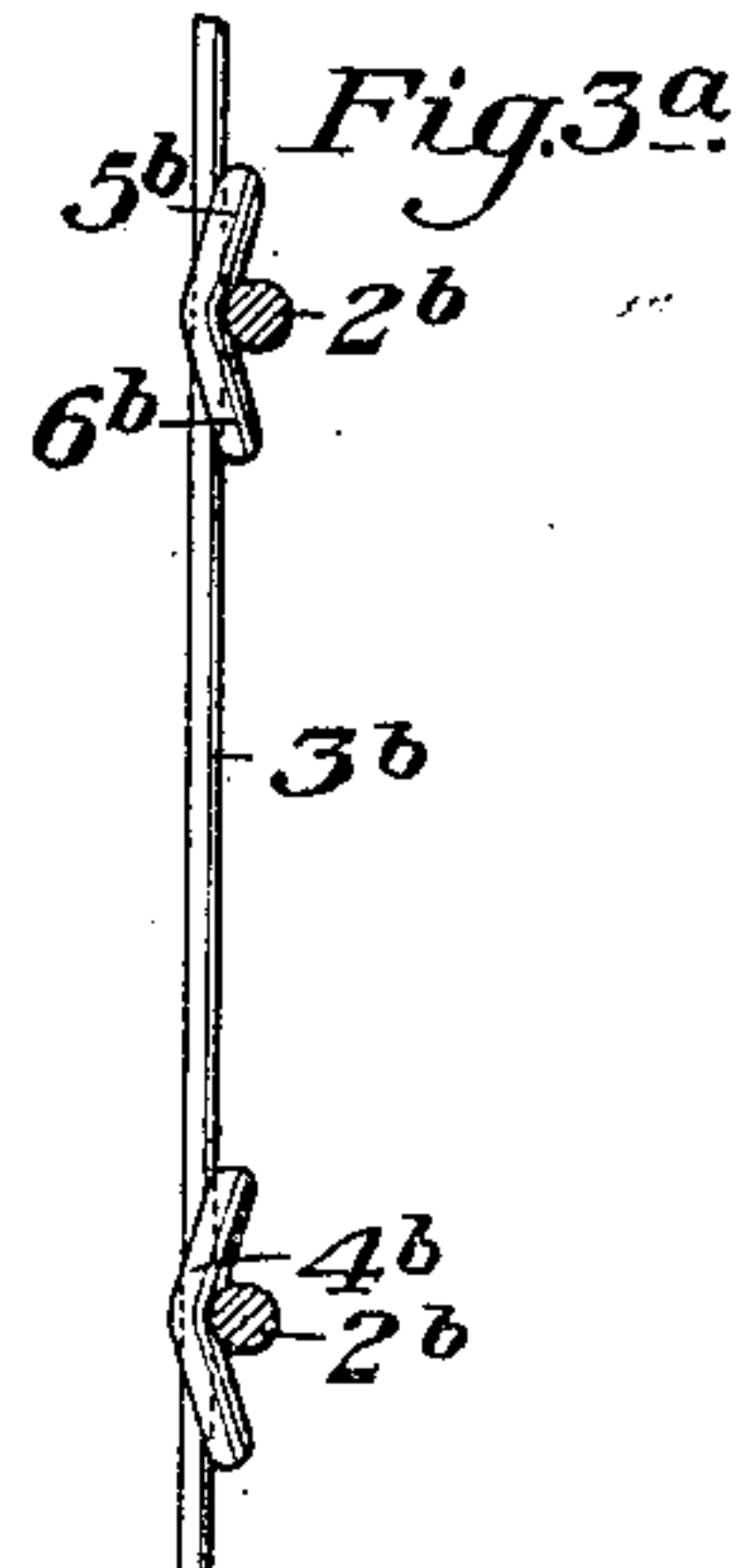
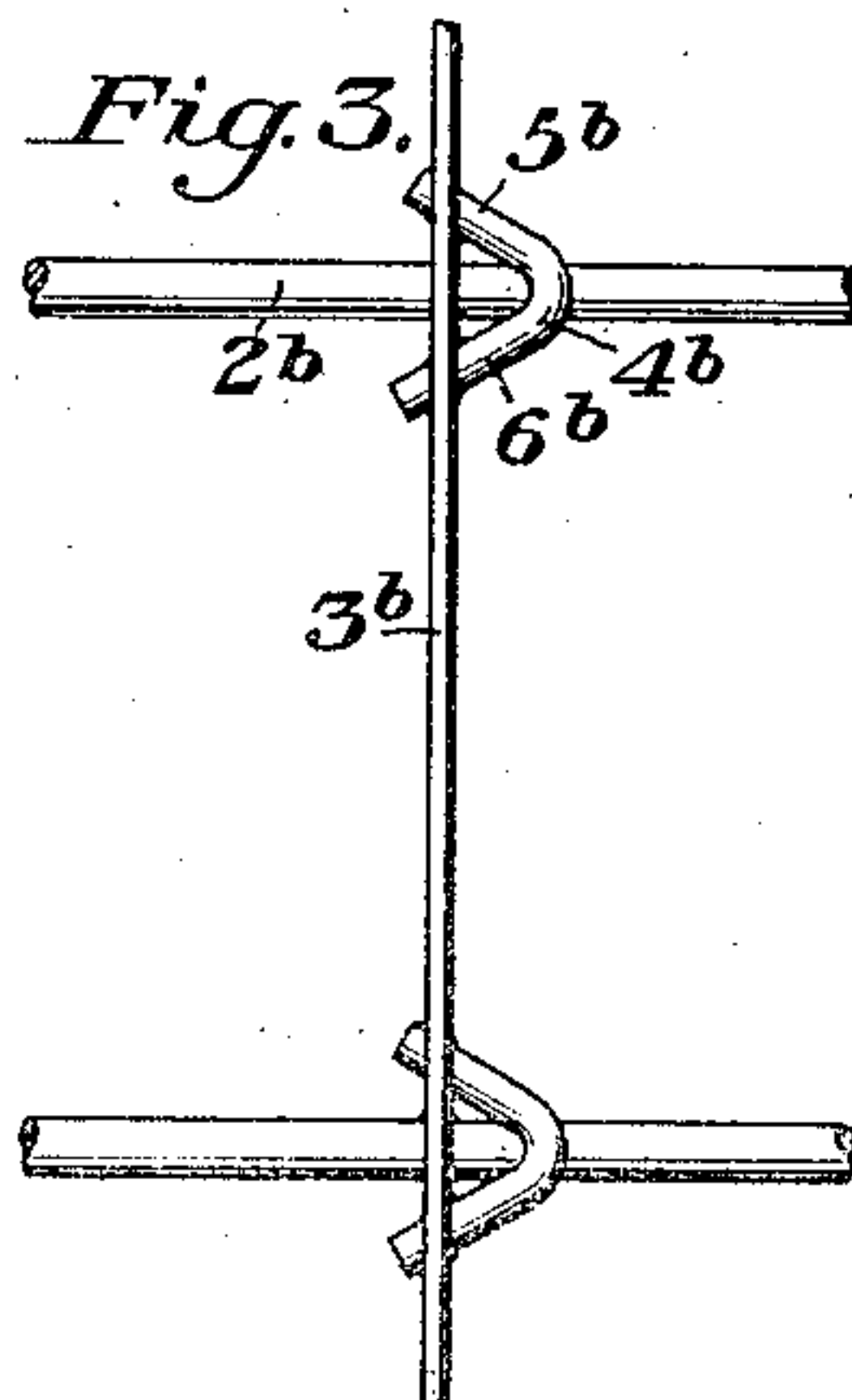
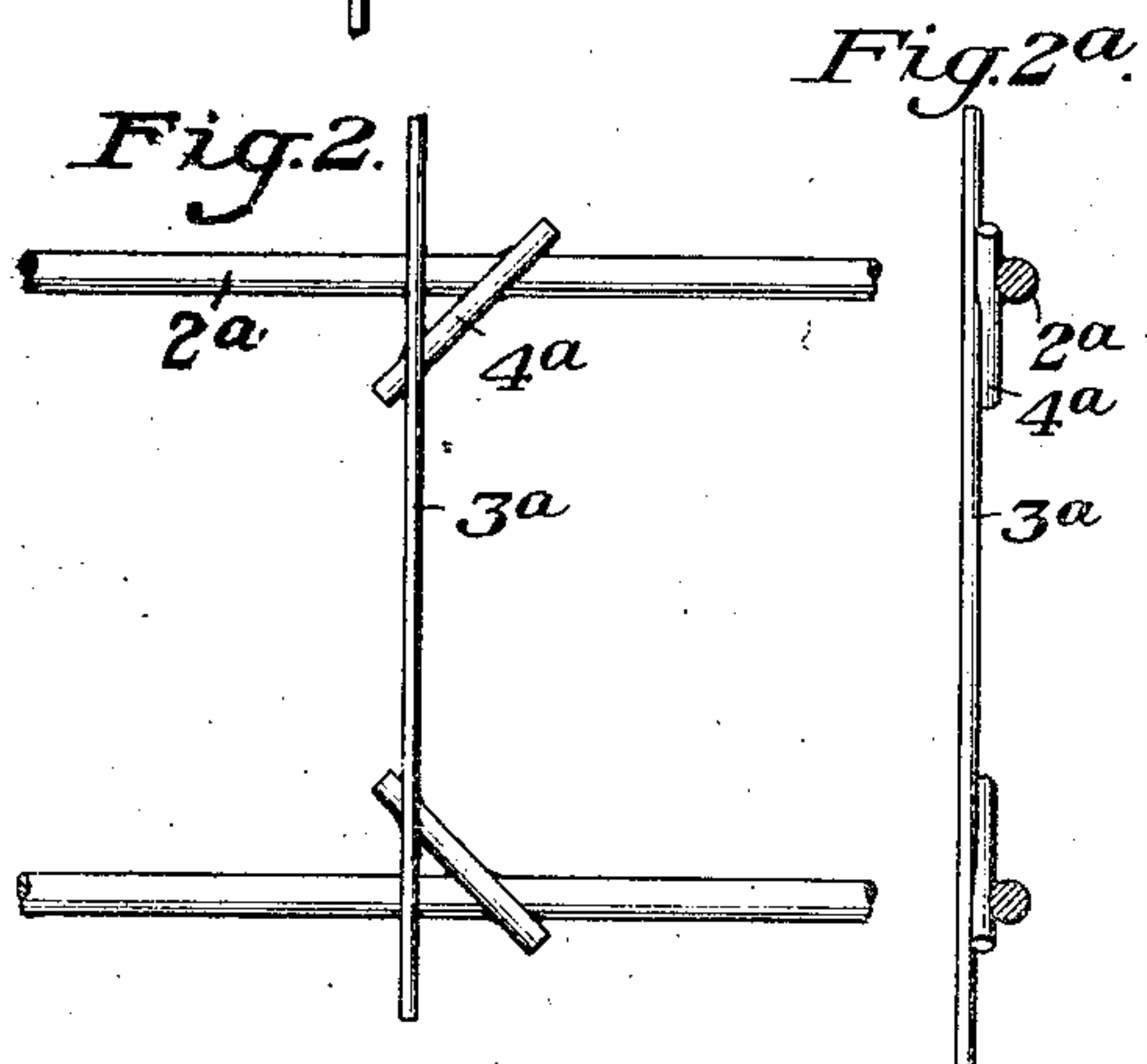
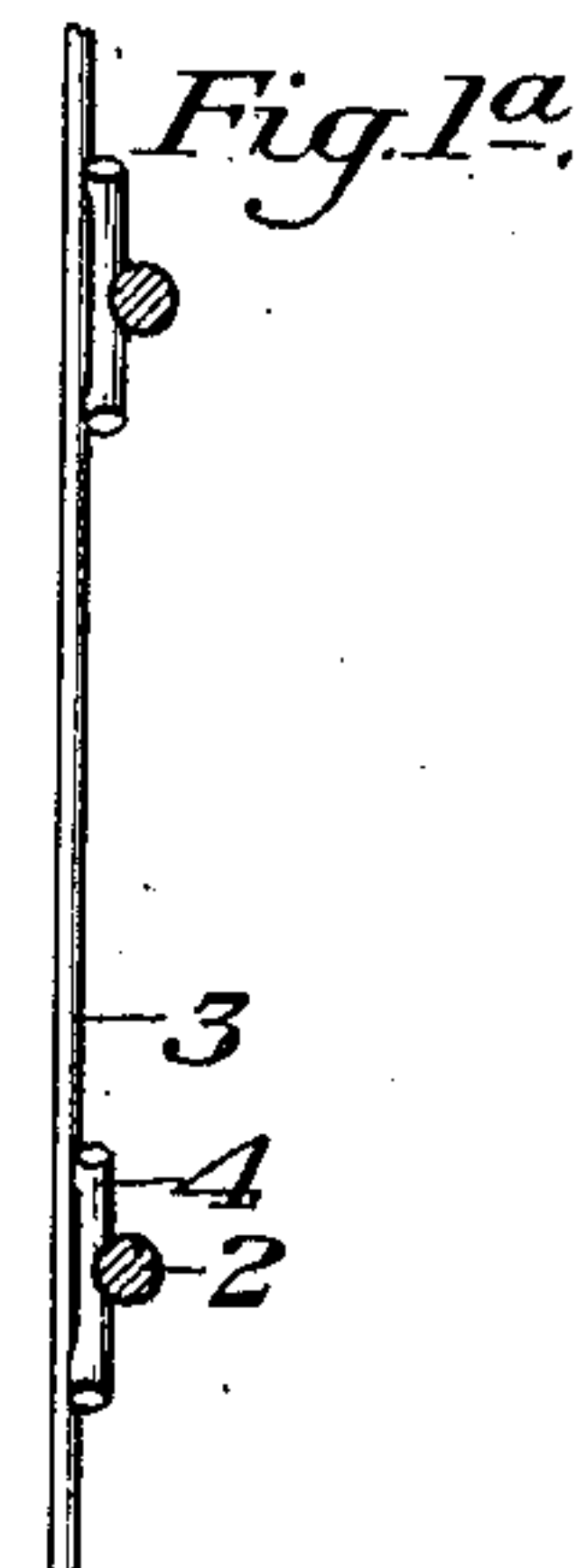
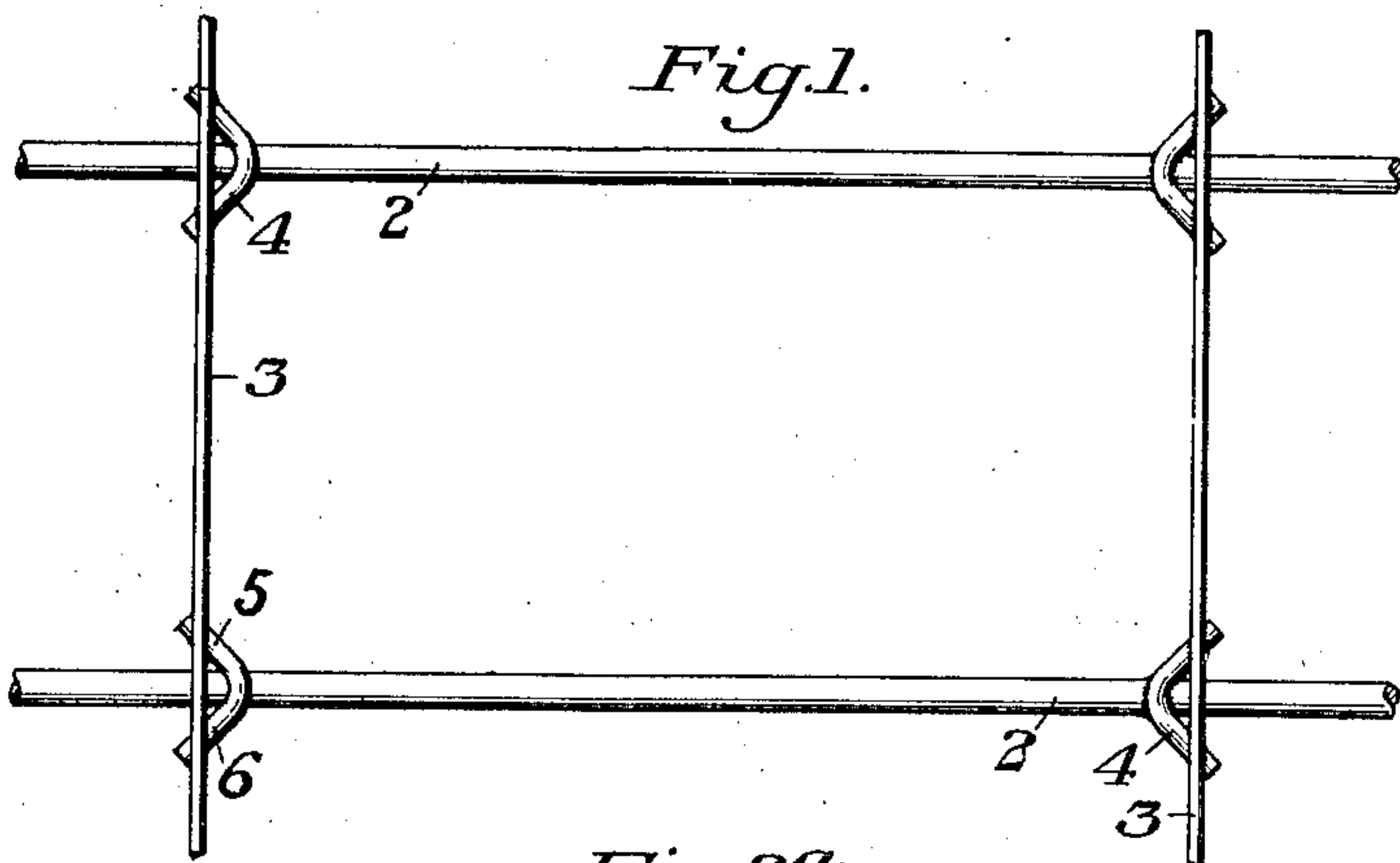


H. E. WHITE.  
WIRE FABRIC.  
APPLICATION FILED FEB. 18, 1909.

955,110.

Patented Apr. 12, 1910.



WITNESSES

R. A. Balderson  
L. L. Libentere

INVENTOR

H. E. White,  
by Dabner, Byrnes & Panneder,  
his Attys.



# UNITED STATES PATENT OFFICE.

HERBERT E. WHITE, OF YOUNGSTOWN, OHIO, ASSIGNOR TO THE GENERAL FIRE-  
PROOFING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF OHIO.

## WIRE FABRIC.

955,110

Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed February 13, 1909. Serial No. 478,551.

*To all whom it may concern:*

Be it known that I, HERBERT E. WHITE, of Youngstown, in the county of Mahoning and State of Ohio, have invented a new and useful Improvement in Wire Fabric, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 1<sup>a</sup> are detail views showing one method of joining the cross wires in accordance with my invention; and Figs. 2, 2<sup>a</sup>, 3, 3<sup>a</sup>, 4 and 5 are similar views showing other forms of the invention.

My invention relates to the manufacture of welded wire fabric, wherein some of the wires are of much smaller diameter than other wires to which they are welded.

In using electric welding for wire fabrics, it has been found that where it is attempted to weld a relatively small wire to a relatively large wire, the smaller wire will burn or melt away before the larger wire has been brought to the melting temperature. In certain wire fabrics, especially those employed for concrete reinforcing, it is very desirable to use relatively large wires extending in one direction and relatively small wires which connect them and hold them in position.

My invention is designed to overcome the difficulty with electric welding in such fabrics, and to provide for the satisfactory welding of a relatively small wire to a relatively large one.

To that end, the invention consists in connecting the larger with the smaller wire by means of an intermediate member which is properly proportioned so that it will become welded to both the larger and the smaller wire. The intermediate member may consist of a wire of a diameter intermediate between the two wires to be welded or it may consist of a member having different diameters—a larger diameter where it is welded to the larger wire and a smaller diameter where it is welded to the smaller wire.

In the drawing, referring to Figs. 1 and 1<sup>a</sup>, 2 represents the larger wire, 3 the smaller connecting wire, and 4 the intermediate wire of a diameter intermediate between that of the wires 2 and 3. In this form, the intermediate wire 4 is provided with later-

ally bent portions 5 and 6, to which the wire 3 is welded, while its intermediate portion is welded to the larger wire 2. Owing to the connecting wire 4 being of a size intermediate between the other wires, it may be satisfactorily welded to each by the ordinary electric welding process.

In Figs. 2 and 2<sup>a</sup>, I show another form of the invention, where 2<sup>a</sup> are the larger wires, 3<sup>a</sup> the smaller wires, and 4<sup>a</sup> the intermediate wires. In this case, the smaller wire 3<sup>a</sup> is welded to the intermediate wire 4<sup>a</sup> at one point only instead of at two points, as in the form of Fig. 1.

In Figs. 3 and 3<sup>a</sup>, I show a form similar to that of Fig. 1, except that the legs 5<sup>b</sup> and 6<sup>b</sup> of the intermediate wire 4<sup>b</sup> are bent downwardly from the plane of the larger wires 2<sup>b</sup> to bring the plane of the smaller wires 3<sup>b</sup> closely to the plane of the larger wires.

In the form of Fig. 4, the intermediate wires 4<sup>c</sup> are in the form of rings or loops, being welded at two points to the larger wires 2<sup>c</sup> and at two points to the smaller wires 3<sup>c</sup>.

In Fig. 5, 2<sup>d</sup> is the larger wire, 3<sup>d</sup> the smaller wire, and 4<sup>d</sup> is the intermediate connector, consisting of a wire which is tapered toward each end, so that its larger portion is electrically welded to the larger wire 2<sup>d</sup>, while its reduced end portions are welded to the smaller wire 3<sup>d</sup>.

The advantage of my invention results from the use of the intermediate connector which is so proportioned that it may be properly welded by the ordinary electrical welding process to both wires. By means of this invention, a fabric may be made in which large wires may be used for carrying strains, such as in concrete reinforces, while the smaller wires may be used for joining and connecting them in place, thus reducing the expense and weight, and properly holding the large wires in position. In this way the ordinary electric welding may be applied to such fabrics.

By the term "wire" herein, I do not wish to be understood as limiting myself to wires of circular cross section, inasmuch as the wire may be circular or in the form of a flat strip or other cross-sectional shape.

Many changes may be made in the form and arrangement of the intermediate connector or connectors, as well as in the size

and arrangement of the wires, the meshes, etc., without departing from my invention.

I claim:

1. As a new article of manufacture, a wire  
5 fabric composed of intercrossing wires of  
different diameters, and connecting mem-  
bers at the intersections, said connecting  
members welded to both the crossing mem-  
bers and consisting of metal pieces having  
10 a cross section less than that of one of the  
cross members and greater than that of the  
other of said members; substantially as de-  
scribed.

2. As a new article of manufacture, a wire  
15 fabric composed of intercrossing wires of

different diameters, and connecting mem-  
bers at the intersections, said connecting  
members welded to both the crossing mem-  
bers and consisting of short pieces of wire  
having a cross section less than that of one 20  
of the cross members and greater than that  
of the other of said members; substantially  
as described.

In testimony whereof, I have hereunto set  
my hand.

HERBERT E. WHITE.

Witnesses:

CHAS. H. CARR,  
O. D. KAISER.