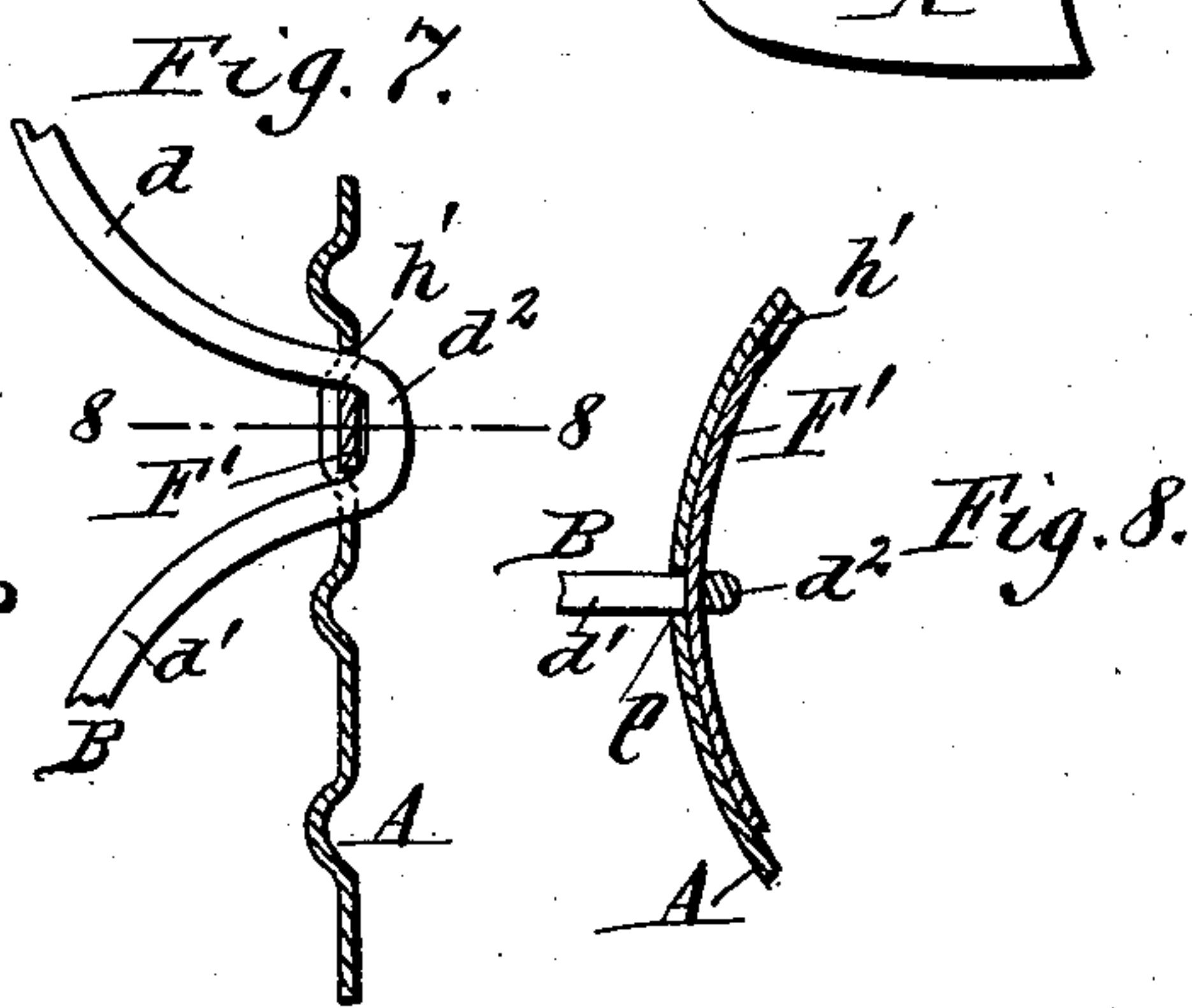
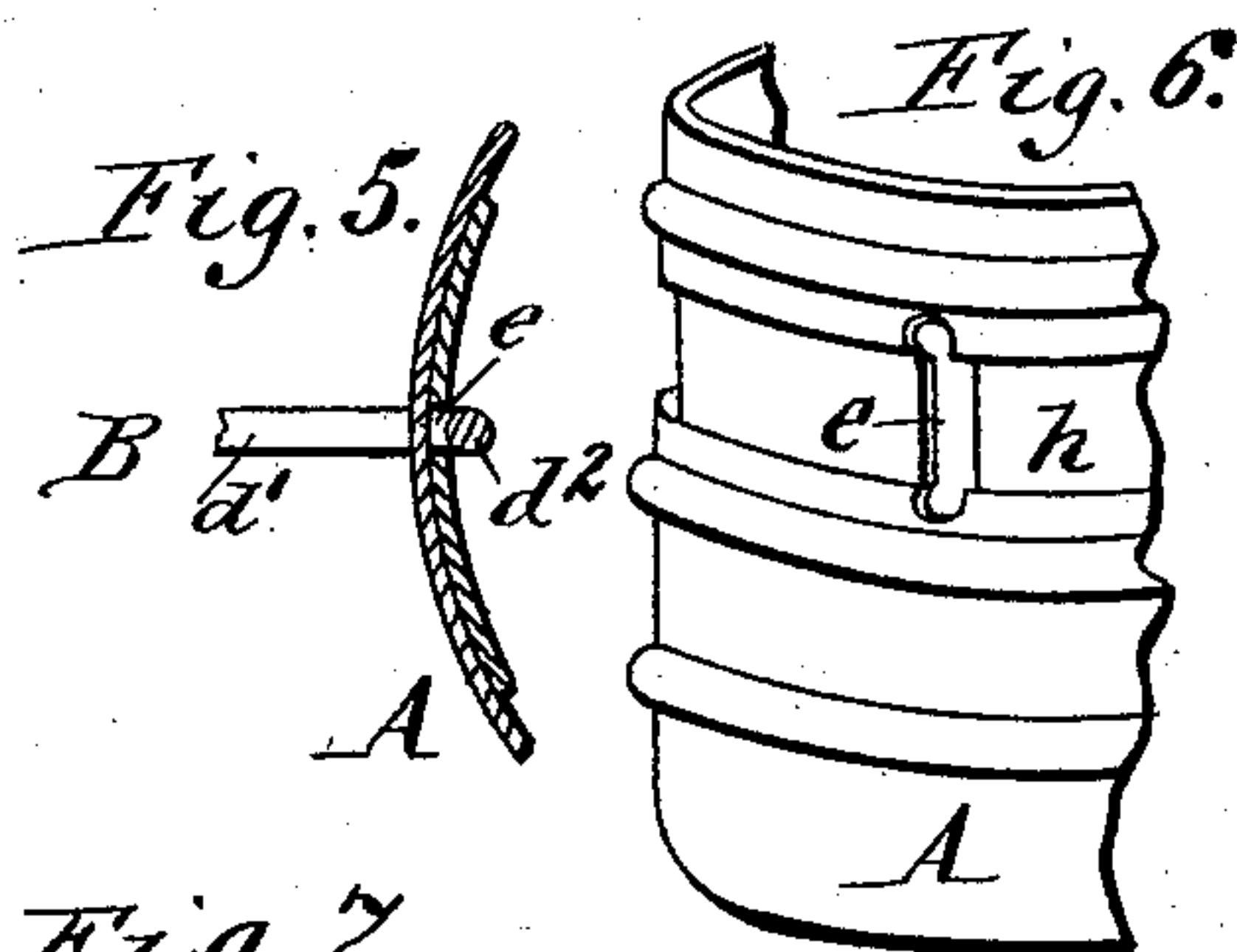
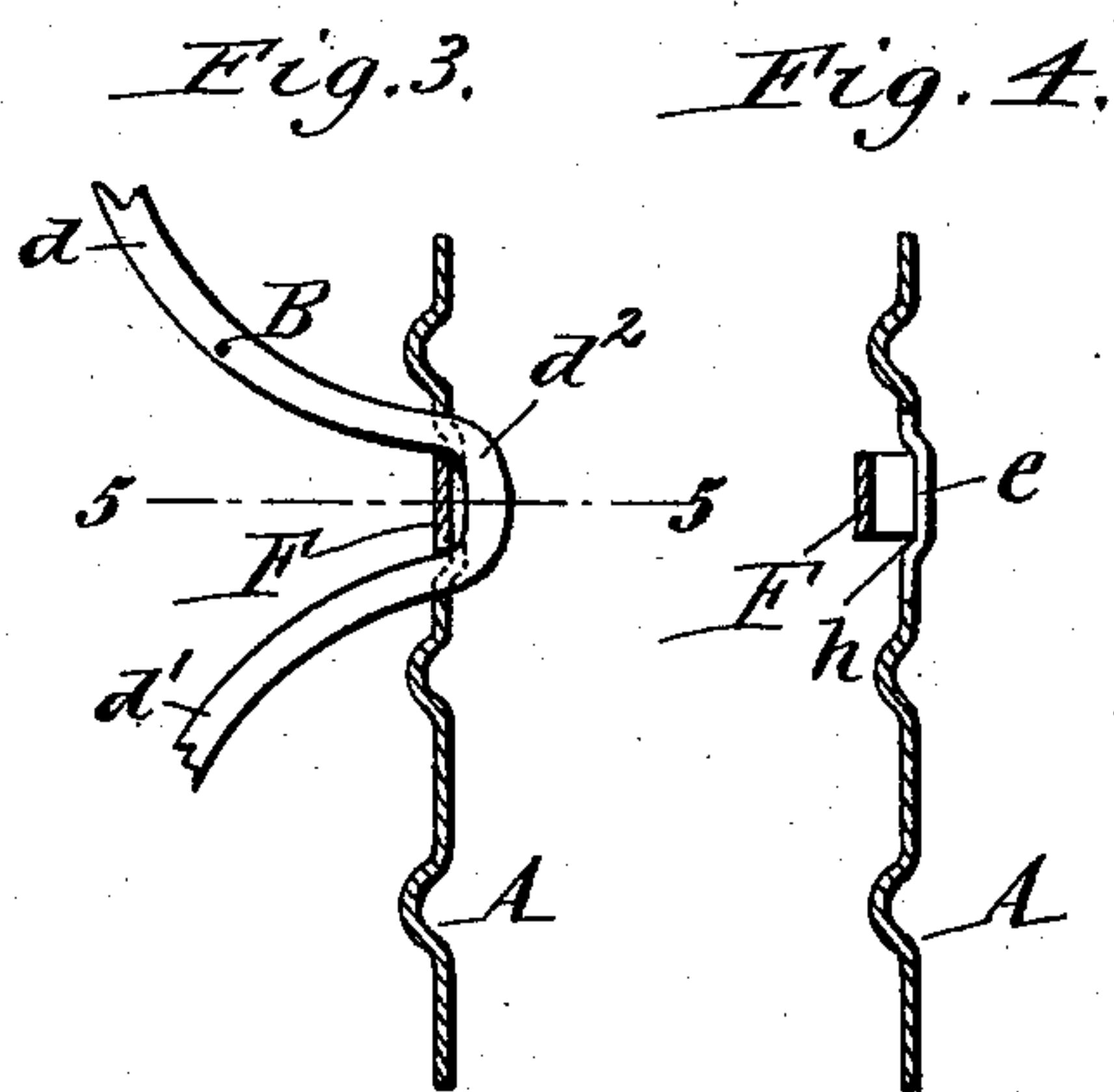
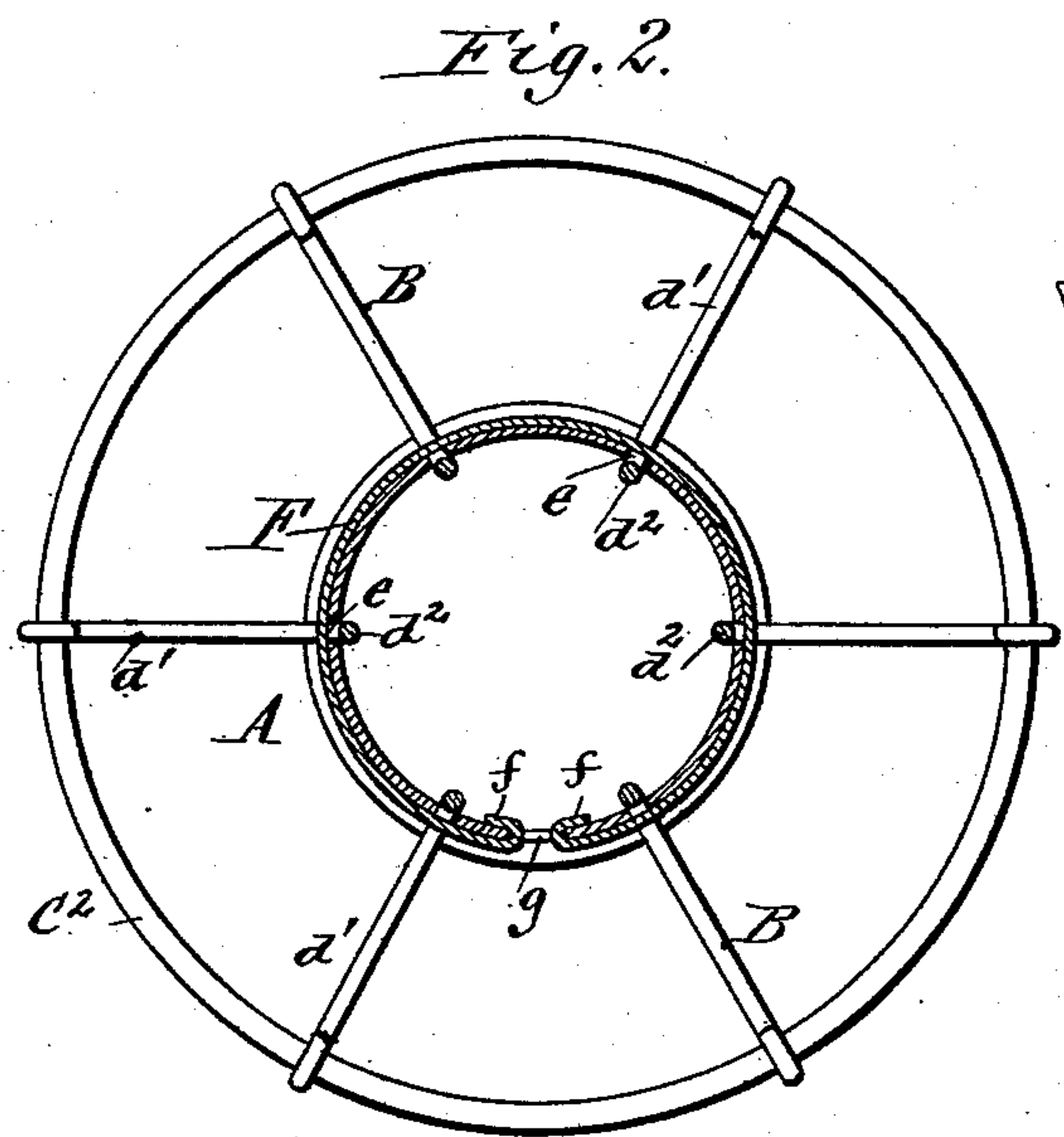
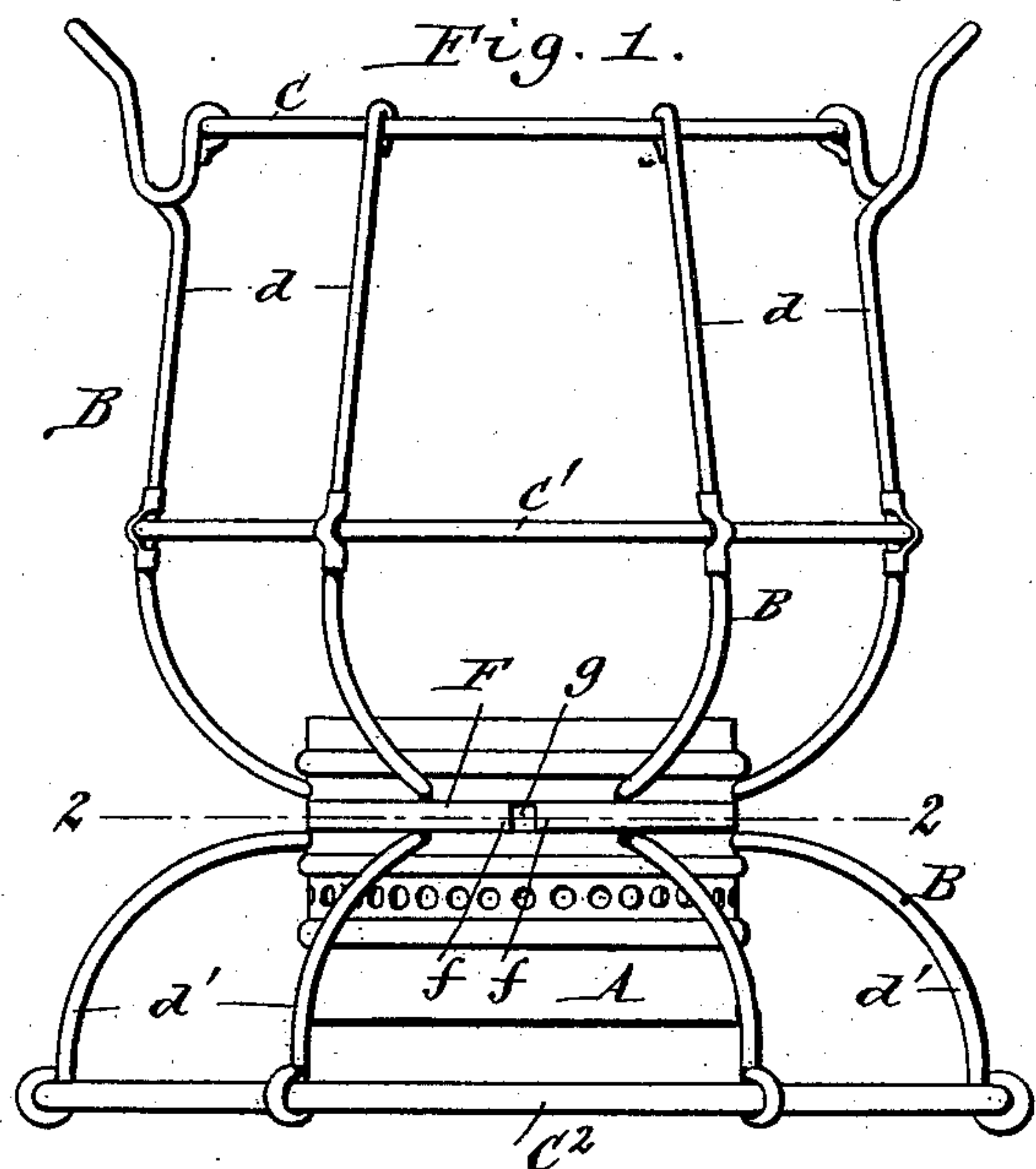


(No Model.)

C. L. BETTS.  
LANTERN FRAME.

No. 539,973.

Patented May 28, 1895.



WITNESSES:

Chas. F. Burkhardt.  
F. Gustav Wilhelm.

Chas. L. Betts INVENTOR.  
By Wilhelm H. Bonner.  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

CHARLES L. BETTS, OF BROOKLYN, ASSIGNOR TO THE R. E. DIETZ COMPANY,  
OF NEW YORK, N. Y.

## LANTERN-FRAME.

SPECIFICATION forming part of Letters Patent No. 539,973, dated May 28, 1895.

Application filed September 11, 1894. Serial No. 522,697. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES L. BETTS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Lantern-Frames, of which the following is a specification.

This invention relates to that class of lantern frames which contain upright guard wires the lower portions of which are secured to a collar or cylindrical body band of tin which surrounds the oil pot.

The object of my invention is to improve the means whereby the guard wires are secured to this collar.

In the accompanying drawings, Figure 1 is an elevation of a lantern-frame provided with my improvement. Fig. 2 is a horizontal section in line 2 2, Fig. 1. Fig. 3 is a vertical sectional elevation, on an enlarged scale, of the collar, one of the upright guard-wires, and the fastening band or strip arranged on the outside of the collar. Fig. 4 is a similar view with the guard-wire omitted. Fig. 5 is a horizontal section in line 5 5, Fig. 3. Fig. 6 is a fragmentary perspective view of the collar, showing one of the seats for the guard-wires. Fig. 7 is a vertical sectional elevation, on an enlarged scale, of the collar, one of the upright guard-wires, and the fastening band or hoop, the latter being arranged on the inside of the collar. Fig. 8 is a horizontal section in line 8 8, Fig. 7.

Like letters of reference refer to like parts in the several figures.

A represents the lower cylindrical band or collar of a lantern frame, B the upright guard wires, and C C' C<sup>2</sup> the horizontal guard rings connecting the latter.

The upright guard wires B are composed of upper portions  $d$  and lower portions  $d'$  which are connected by inwardly projecting bent portions  $d^2$  arranged opposite the collar A and secured thereto. The collar is provided with an opening or seat  $e$  for each upright guard wire B and the bent portion  $d^2$  of the wire is arranged in this opening or seat and secured therein by a horizontal fastening strip or band F which prevents the bent portion of the wire from leaving its seat.

In the construction of my improvement

represented in Figs. 1 to 6, the seat  $e$  for each upright wire has the form of an upright slot formed in the collar and of sufficient height to receive the bent portion  $d^2$  of the wire, and the horizontal fastening strip F is placed against the outer side of the collar and into the bights of the bent portions  $d^2$  and encircles the collar and is attached to the collar by having its ends  $f$  passed through an opening  $g$  in the collar and clinched on the inner side thereof. The collar is preferably provided on its outer side with a circular indentation or depression  $h$  of sufficient height and depth to receive the fastening band F.

In constructing a lantern frame the upright wires are placed with their bent portions in their seats and the fastening strip is applied to the outer sides of the collar and of the bent portions of the wires and attached to the collar as described. The frame is then dipped into molten solder for securing these parts together. The preliminary soldering or tacking is rendered unnecessary by this construction and the soldering is effected in one operation. This not only cheapens the construction but produces a stronger and more slightly connection. The fastening band strengthens the guard and prevents the wires from breaking away from the collar.

In the construction represented in Figs. 7 and 8 the horizontal fastening band or strip F' is applied to the inner side of the collar and between the latter and the bight of the bent portion of the wire which latter projects inwardly through the opening in the collar a sufficient distance to permit of the insertion of the fastening band or strip between the inner side of the collar and the wire. The annular depression or indentation  $h'$  for the reception of the fastening strip or band is formed in this construction on the inner side of the collar. In both constructions this depression or indentation serves as a seat for the fastening band or strip and prevents vertical displacement of the same on the collar.

I claim as my invention—

1. In a lantern frame, the combination with a collar provided with openings or seats, of upright guard wires having inwardly projecting bent portions which are seated in said openings or seats, and a fastening band which



is secured to the collar and passes across the several openings or seats of the collar and through the bights of the several guard wires, substantially as set forth.

5 2. In a lantern frame, the combination with a collar provided with an annular depression and openings or seats arranged in said depression, of upright guard wires having inwardly projecting bent portions which are  
10 seated in said openings or seats, and a fastening band arranged in said depression and passing across the several openings or seats therein and through the bights of the several guard wires, substantially as set forth.

25 3. In a lantern frame, the combination with a collar provided with openings or seats, of

upright guard wires having inwardly projecting bent portions which are seated in said openings or seats, and a fastening band arranged against the outer side of the collar, 20 said band passing across the several openings or seats in the collar and through the bights of the several guard wires, and having its ends passed through an opening in the collar and clinched against the inner side 25 thereof, substantially as set forth.

Witness my hand this 5th day of September, 1894.

CHARLES L. BETTS.

Witnesses:

OSCAR WARNER,  
ARTHUR H. ROGERS.