

No. 771,197.

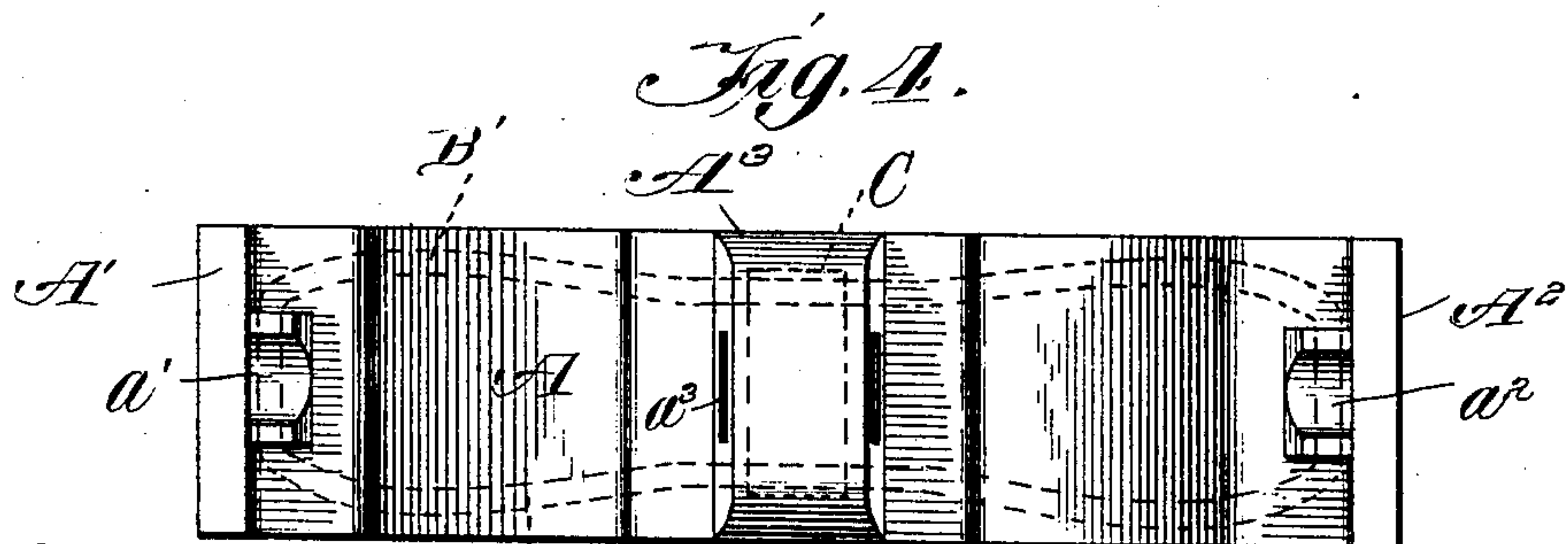
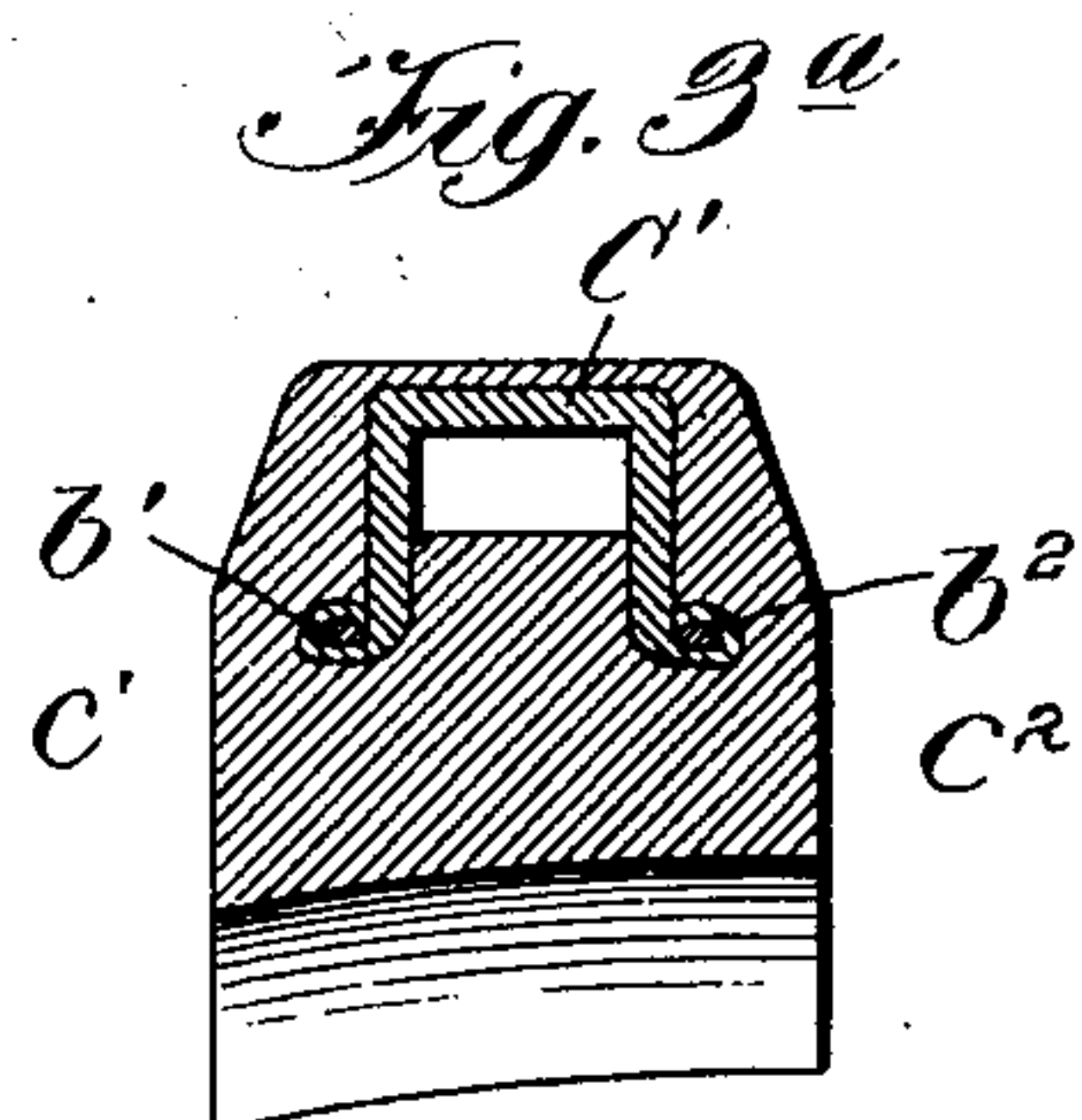
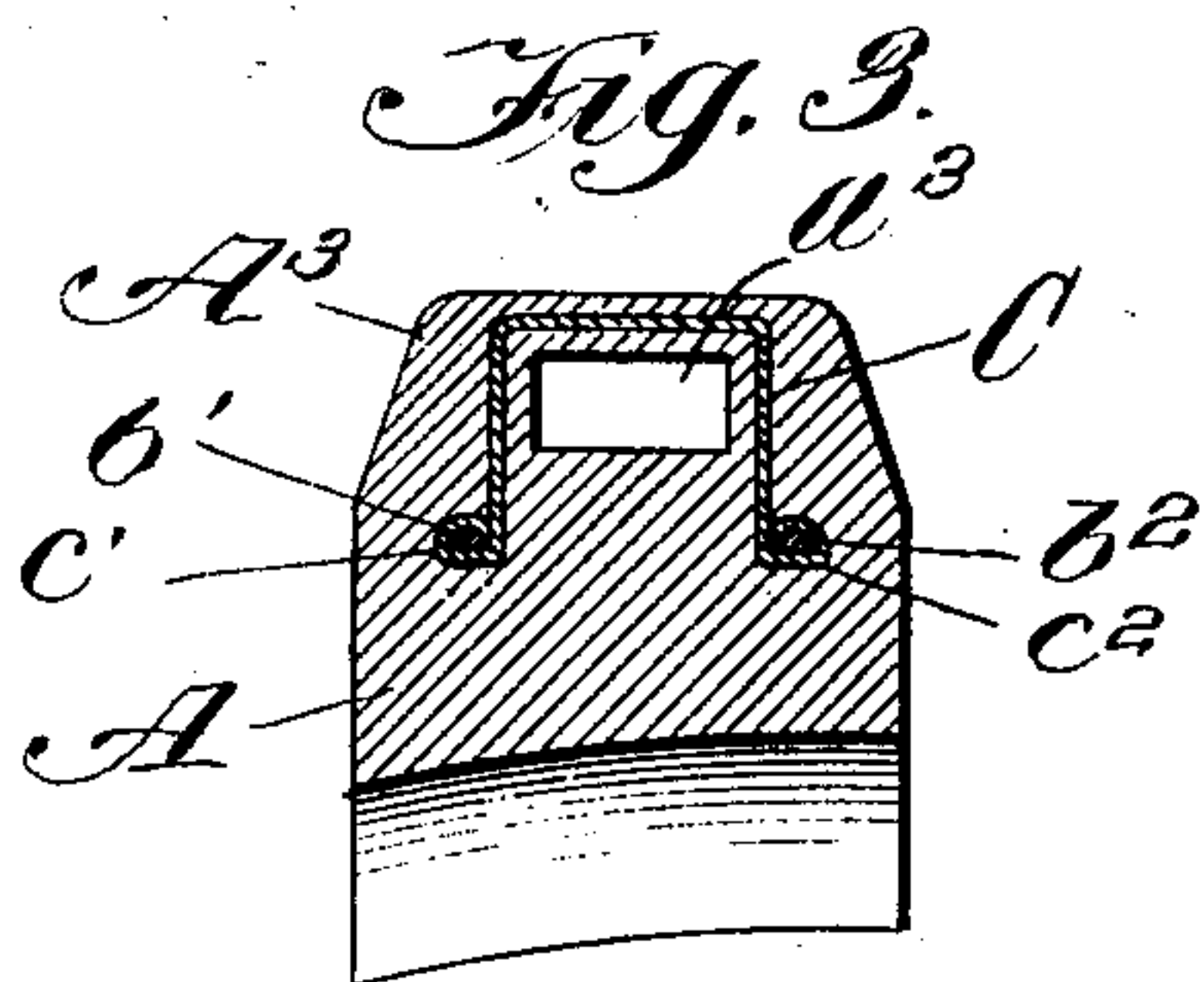
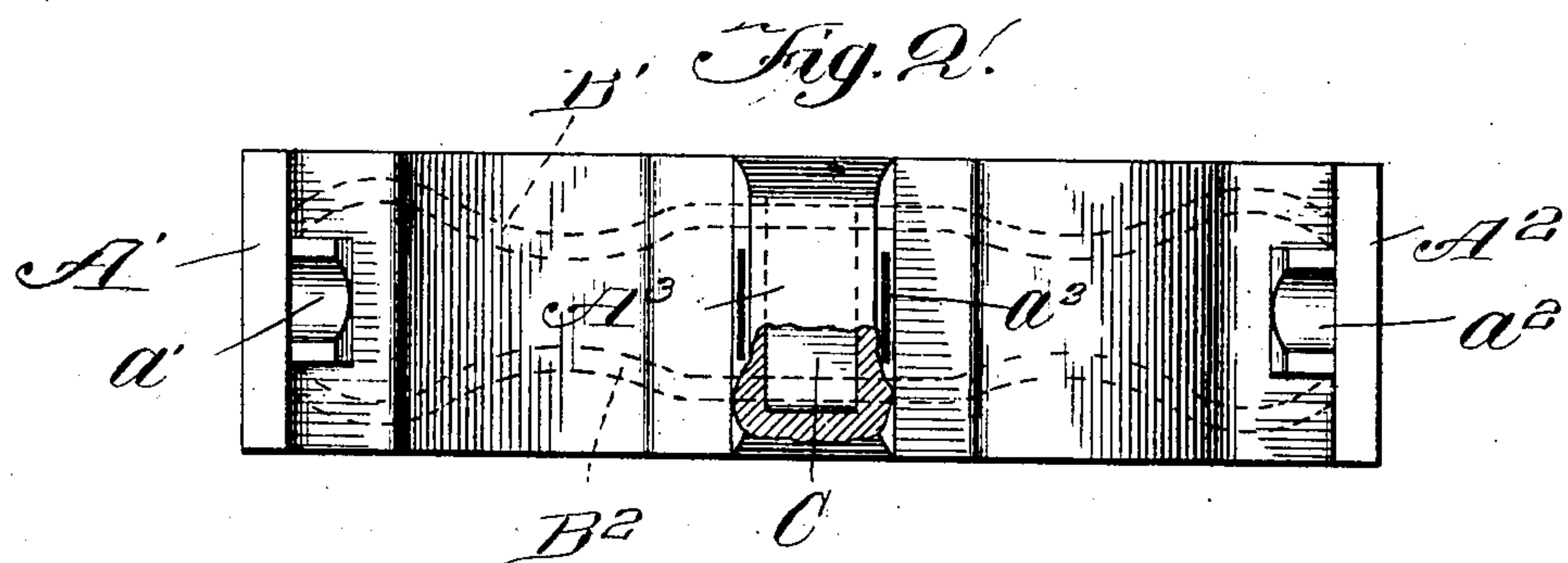
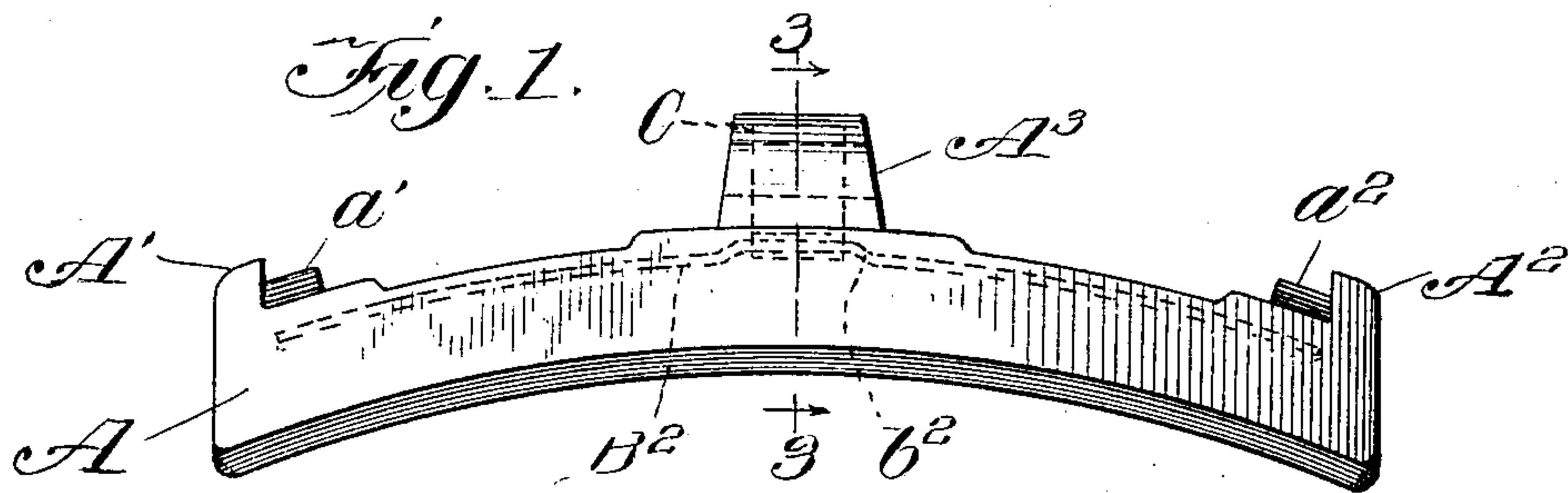
PATENTED SEPT. 27, 1904.

H. L. WINSLOW.

BRAKE SHOE.

APPLICATION FILED FEB. 9, 1904.

NO MODEL.



Witnesses
H. S. Gaither
C. C. Cunningham

Inventor:
Horace L. Winslow
by Lambdin Wilkerson
Attorneys.

UNITED STATES PATENT OFFICE.

HORACE L. WINSLOW, OF CHICAGO, ILLINOIS.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 771,197, dated September 27, 1904.

Application filed February 9, 1904. Serial No. 192,801. (No model.)

To all whom it may concern:

Be it known that I, HORACE L. WINSLOW, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Brake-Shoes; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the invention, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates in general to brake-shoes, and more particularly to that type of brake-shoes in which strengthening-inserts of tough and ductile material are embedded in the cast metal of the shoe adjacent to the back thereof and in the key-lug.

It is well known that when cast-metal brake-shoes wear thin through usage they frequently break and become disengaged from the brake-head, thereby not only destroying the shoes, but sometimes causing accident by falling on the track and derailing the car. It also frequently occurs that brake-shoes are ruined by the cast-metal key-lug breaking either in shipping or in use.

The primary object of my invention is to provide a brake-shoe the durability of which is increased both by embedding rods in the cast metal of the shoe near the back thereof to tie the shoe together should it become broken and by embedding a metal strap of tough and ductile material in the key-lug, the ends of the strap being secured to the rods, thereby firmly anchoring the strap and preventing it from being torn from the shoe should the cast-metal key-lug break, the anchoring of the strap being preferably rendered more secure by employing rods bent in a plane parallel to the back of the shoe.

A further object of my invention is to provide a brake-shoe which will be simple in construction, inexpensive in manufacture, and durable in use.

My invention will be more fully described hereinafter with reference to the accompanying drawings, in which the same is illustrated as embodied in a convenient and practical form, and in which—

Figure 1 is a side elevation; Fig. 2, a plan view, part of the cast-metal key-lug being broken away; Fig. 3, a sectional view on line 3 3, Fig. 1; Fig. 3^a, a view similar to Fig. 3, showing a modification; and Fig. 4, a view similar to Fig. 2, showing a slightly-different arrangement of the tie-rods.

Similar reference characters are used to designate similar parts in the several figures of the drawings.

Reference-letter A designates a brake-shoe made of cast-iron and provided with the usual end lugs A¹ and A² and intermediate lug A³, by means of which the shoe is adapted to be attached with a key to the brake-head. *a' a'* designate the usual projections which are straddled by the ends of the brake-head.

Referring more particularly to Figs. 1, 2, and 3, B¹ and B² designate tie-rods extending longitudinally through the shoe and located adjacent to the back thereof. These tie-rods are preferably semicircular in cross-section, as indicated in Fig. 3, in order that they may be located near the back of the shoe and at the same time be securely retained therein by reason of the cast metal surrounding the upper curved surface thereof. C designates a strap embedded in the key-lug and extending around the key-opening *a*³ therein. Such strap is formed of any tough and ductile material—such, for instance, as steel, malleable or wrought iron. The ends *c*¹ and *c*² of the strap C are bent around intermediate portions *b*¹ and *b*² of the tie-rods, as clearly shown in Fig. 3, thereby securely anchoring the strap in the body of the brake-shoe. The intermediate portions of the tie-rods are preferably offset upwardly toward the back of the shoe in order that the surrounding metal of the ends of the strap may be located in a plane farther from the wearing-surface of the shoe than the tie-rods, thereby permitting the shoe to be used until it is almost entirely worn away without exposing the ends of the strap to frictional wear. While the reinforcing-strap is preferably embedded in the surrounding cast-metal key-lug, it may be made sufficiently thick to itself serve as the top of the lug, as shown in Fig. 3^a, in which event the cast metal merely extends along the

outer side surfaces of the strap. The tie-rods B' and B² may, if desired, be arranged as indicated in Fig. 4, or, in fact, in any positions within a plane parallel and adjacent to the back of the shoe. By giving the tie-rods the irregular dispositions shown in Figs. 2 and 4 the liability of them being stripped out of the body of the shoe in case the cast-metal lug breaks is reduced to a minimum.

From the foregoing description it will be observed that I have invented an improved brake-shoe the longevity of which is increased by embedding a reinforcing-strap in the cast-metal key-lug and anchoring such strap to tie-rods extending in irregular paths through the cast-metal body of the shoe adjacent to the back thereof, so that the shoe may be almost entirely worn away by usage without liability of its either becoming detached from the brake-head by reason of the key-lug breaking or by reason of the body of the shoe breaking through excessive thinness.

While I have described more or less precisely the details of construction, I do not wish to be understood as limiting myself thereto, as I contemplate changes in form, the proportion of parts, and the substitution of equivalents as circumstances may suggest or render expedient without departing from the spirit of my invention.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A brake-shoe comprising a body portion and key-lug cast integral therewith, a reinforcing metallic strap extending around the opening through said lug, and a pair of rods inserted in the body of the shoe near the back thereof to which the ends of said strap are secured.

2. A brake-shoe comprising a body portion and key-lug cast integral therewith, a reinforcing metallic strap extending around the opening through said lug, and a pair of rods semicircular in cross-section inserted in the body of the shoe with their curved surfaces near the back thereof to which the ends of said strap are secured.

3. In a brake-shoe comprising a body portion and key-lug cast integral therewith, a pair of rods inserted in the body of the shoe near the back thereof, the portions of said rods adjacent to said lug being offset toward the back of the shoe, and a reinforcing-strap extending around the opening through said

lug the ends of which extend beneath the offset portions of said rods.

4. A brake-shoe comprising a body portion and key-lug cast integral therewith, a pair of rods semicircular in cross-section inserted in the body of the shoe with their curved surfaces near the back thereof, the portions of said rods adjacent to said lug being offset toward the back of the shoe, and a reinforcing-strap extending around the opening through said lug the ends of which extend beneath the flat surfaces of said offset portions of the rods.

5. A brake-shoe comprising a body portion and key-lug cast integral therewith, a pair of bent rods extending lengthwise of the shoe and located near the back side of the body thereof, a reinforcing metallic strap extending around the opening through said lug and having its ends secured to said rods.

6. A brake-shoe comprising a body portion and key-lug cast integral therewith, a pair of bent rods semicircular in cross-section inserted in the body of the shoe with their curved surfaces near the back thereof, and a reinforcing metallic strap extending around the opening through said lug the ends of which are secured to said rods.

7. A brake-shoe comprising a body portion and a key-lug cast integral therewith, a pair of bent rods inserted lengthwise in the body of the shoe near the back thereof, the portions of said rod adjacent to said lug being offset toward the back thereof, and a reinforcing metallic strap extending around the key-opening through said lug and having its ends extending beneath the offset portions of said rods.

8. A brake-shoe comprising a body portion and key-lug cast integral therewith, a pair of bent rods semicircular in cross-section inserted lengthwise in the body of the shoe and having their curved surfaces near the back thereof, the portions of said rods adjacent to said lug being offset toward the back of the shoe, and a reinforcing metallic strap extending around the opening through said lug the ends of which surround the offset portions of said rods.

In testimony whereof I sign this specification in the presence of two witnesses.

HORACE L. WINSLOW.

Witnesses:

GEO. L. WILKINSON,
C. C. CUNNINGHAM.