

G. M. BEARD.

BRAKE SHOE.

APPLICATION FILED APR. 28, 1908.

915,408.

Patented Mar. 16, 1909.

Fig. 1.

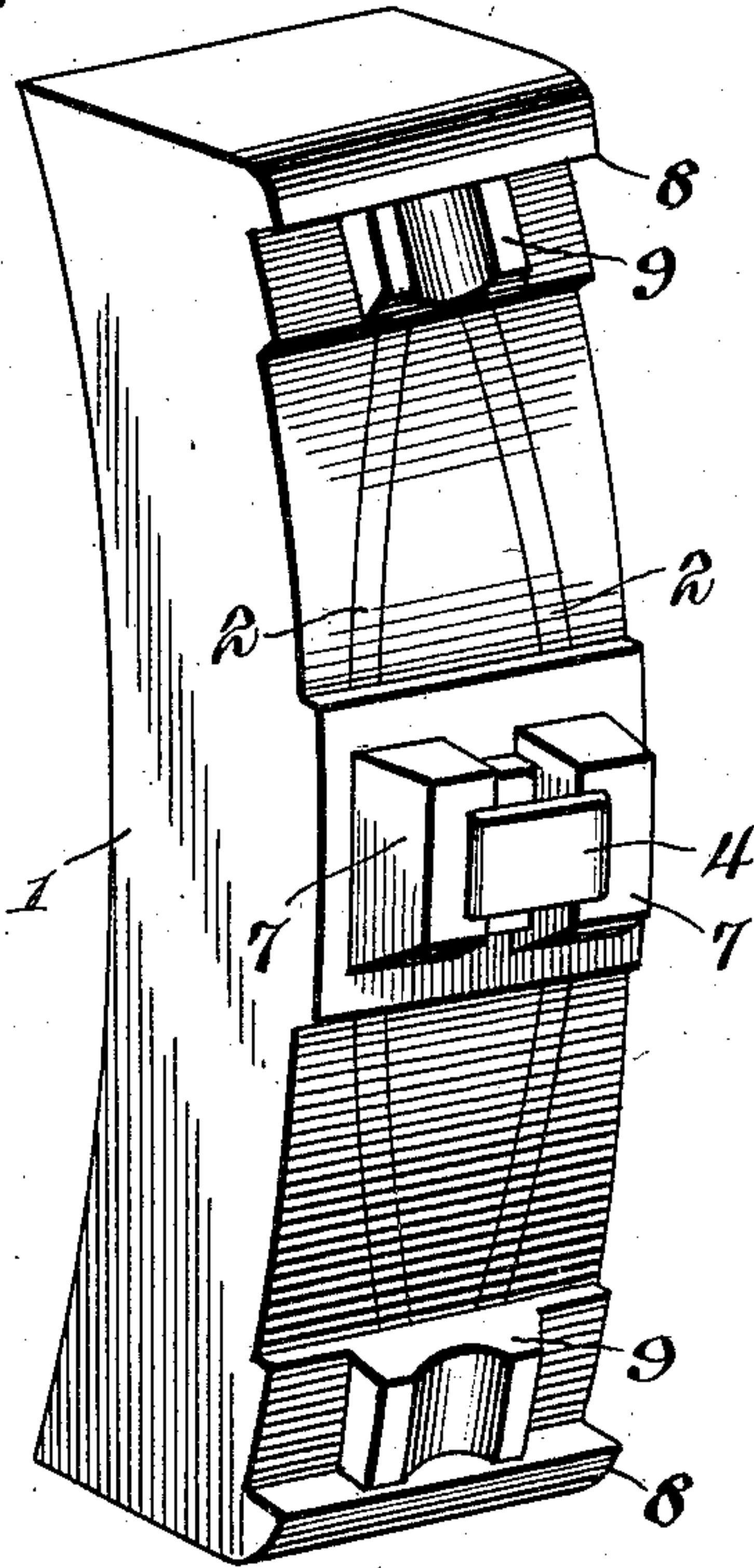


Fig. 2.

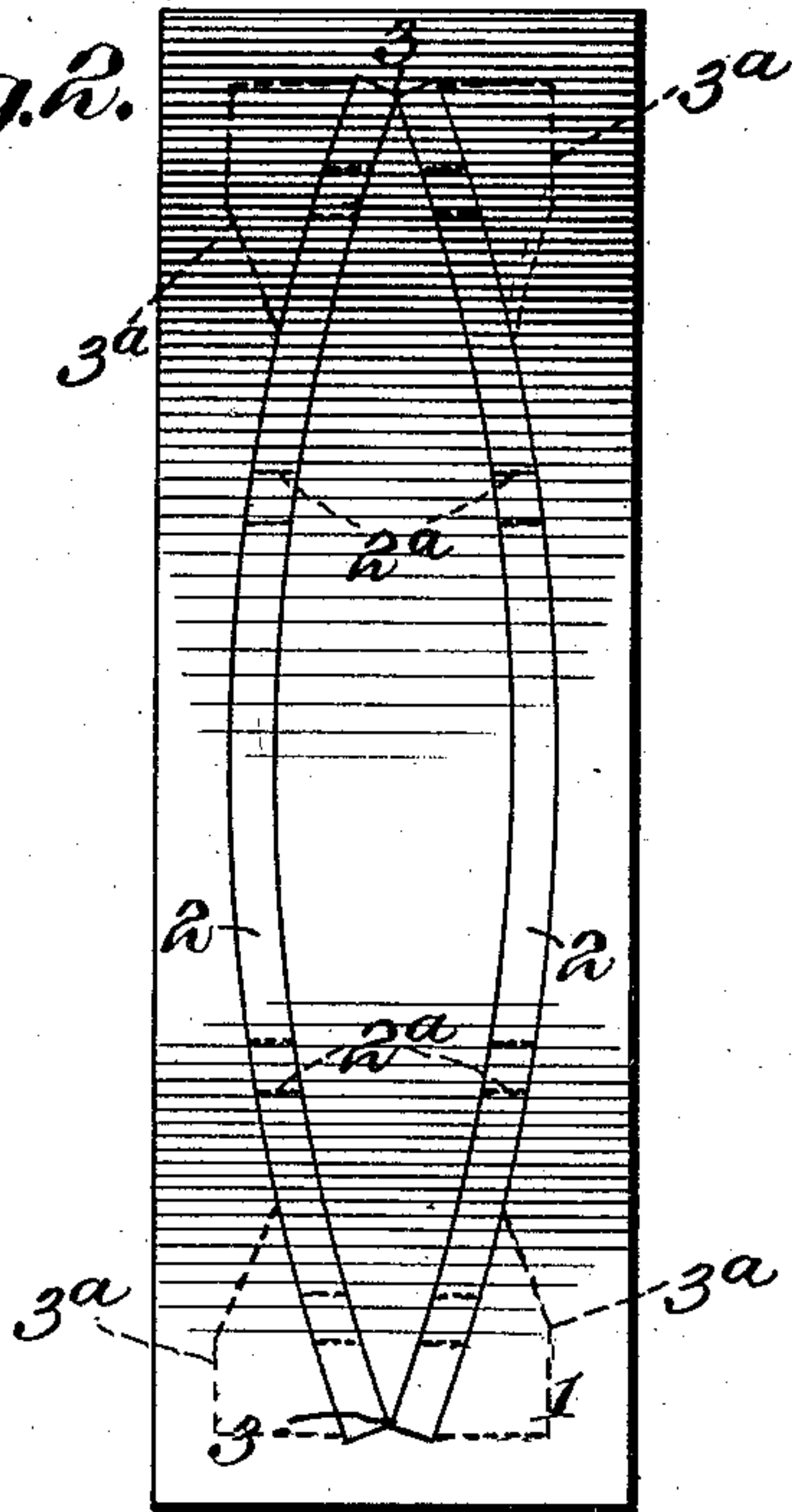


Fig. 3.

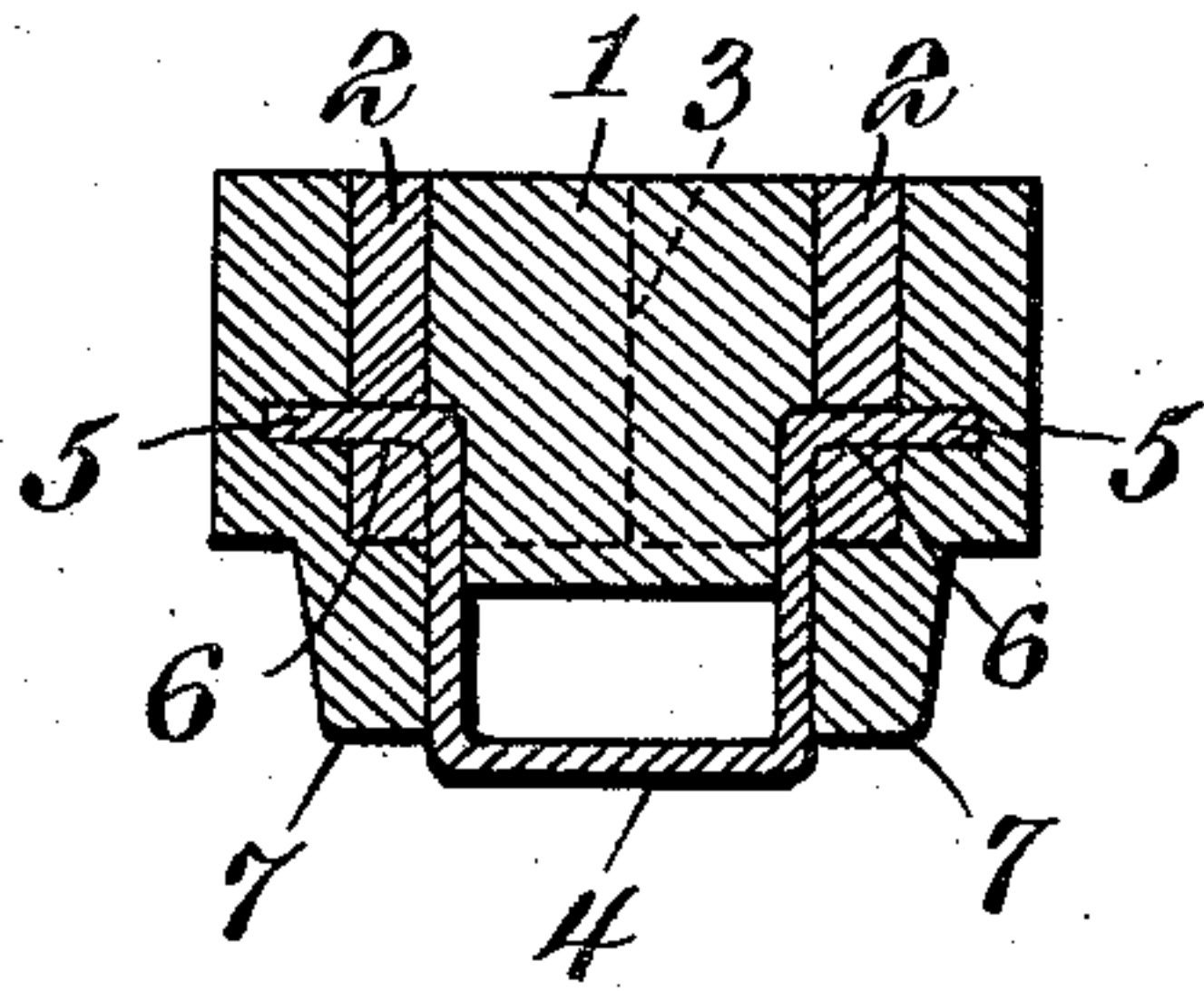
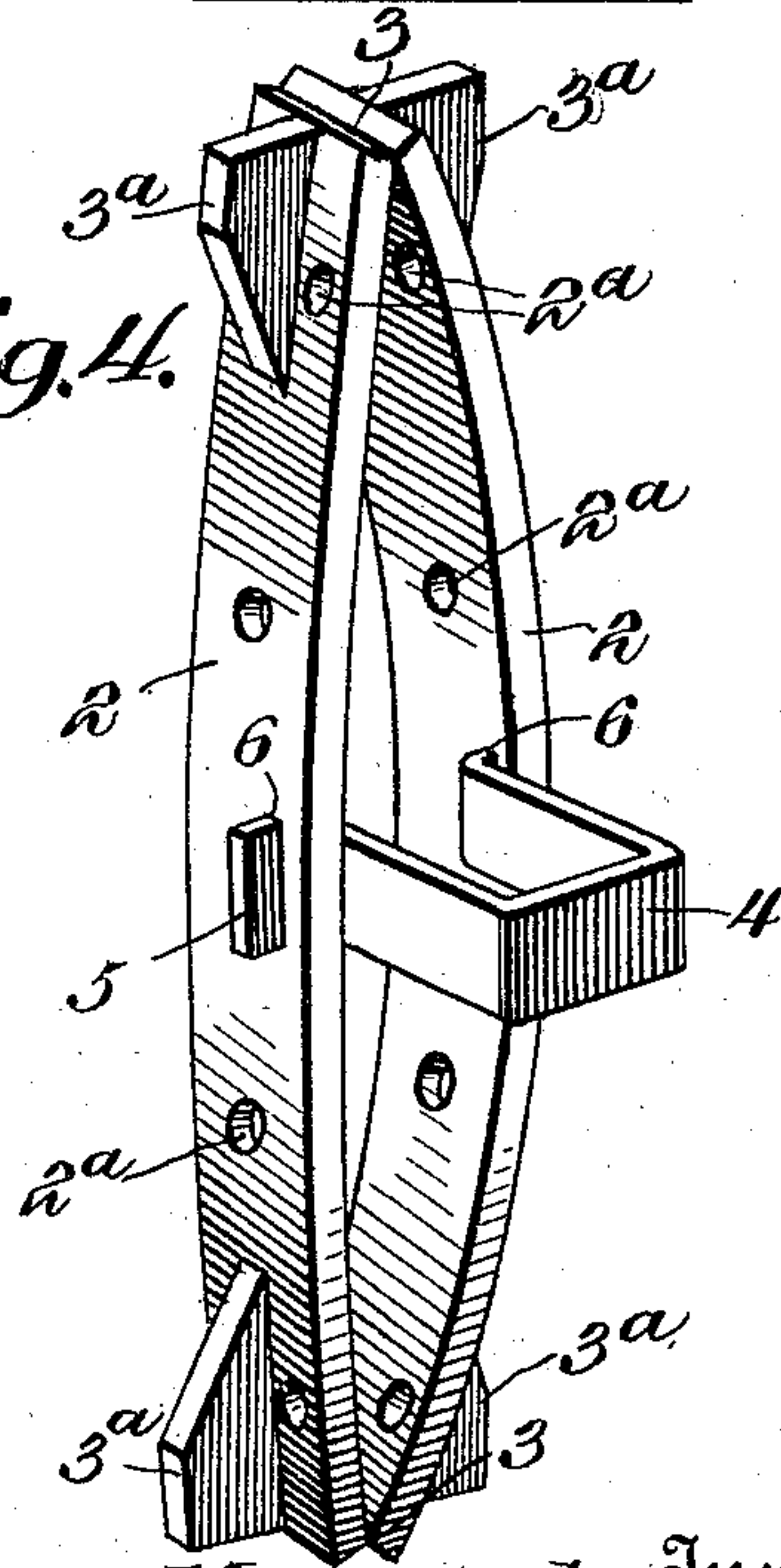


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE MALDEN BEARD, OF HANOVER, PENNSYLVANIA.

BRAKE-SHOE.

No. 915,408.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed April 28, 1908. Serial No. 429,663.

To all whom it may concern:

Be it known that I, GEORGE MALDEN BEARD, a citizen of the United States, residing at Hanover, in the county of York and State of Pennsylvania, have invented a new and useful Brake-Shoe, of which the following is a specification.

The invention relates to improvements in brake shoes.

10 The object of the present invention is to improve the construction of brake shoes, and to provide a simple and comparatively inexpensive one, designed for use on locomotives and various kinds of cars and possessing increased wearing qualities and having means for preventing it from breaking.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims here-
20 to appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a perspective view of a brake shoe, constructed in accordance with this invention. Fig. 2 is a front elevation of the same. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of the reinforcing or strengthening bar and the connecting yoke.

35 Like numerals of reference designate corresponding parts in all the figures of the drawing.

The body 1 of the brake shoe is designed to be constructed of hard cast metal commonly employed in the manufacture of brake shoes for locomotives, railway cars, etc. In order to strengthen the shoe and prevent the same from breaking or cracking when applied to a locomotive, car, or the like, the cast iron body is reinforced by a pair of wrought iron or malleable bars or members 2, extending longitudinally of the brake shoe and having the body portion
45 passed around it. The bars or members 2, which are of a width corresponding with the thickness of the body portion of the brake shoe, have their front and rear edges exposed at the front and back of the brake shoe. The bars or members are bowed laterally
55 from each other and are curved longitudi-

nally to conform to the configuration of the brake shoe. The front edges of the bars or members are concavely curved and their rear edges are convexly curved.

The terminals 3 of the bars or members are fitted together, and are provided at their outer convex faces with projecting lugs or flanges 3^a, which are adapted to reinforce the extreme ends of the brake shoe to prevent the same from breaking off. These lugs or flanges 3^a, which are of a thickness substantially the same as that of the bars or members, are arranged at the median lines of the bars or members and have straight outer edges, and are provided with inner tapering portions, as clearly illustrated in Fig. 4 of the drawing. The side faces of the lugs or flanges are arranged in planes substantially at right angles to the planes of the inner and outer side faces of the bars or members. The said bars or members are connected at an intermediate point by a yoke 4, consisting of parallel sides and a connecting transverse portion. The inner or front terminals 5 of the sides are bent laterally to form transverse lugs, which extend through slots 6 of the bars or members. The slots 6 are located near the rear edges of the bars or members at points intermediate of the ends of the same, and the lugs project beyond the outer faces of the said bars or members and are embedded in the body of the brake shoe. The yoke, which projects rearwardly from the body of the brake shoe, forms an eye for the attachment of brake mechanism (not shown), and the sides of the eyes are reinforced by opposite bosses or enlargements 7. In casting the brake shoe, a small core is placed in the yoke to prevent the eye from being filled with cast iron, and the bars or members are provided at intervals with openings 2^a to permit the cast metal to flow through the bars or members. Those portions of the cast metal at the inner and outer faces of the bars or members are united at intervals by the portions extending through the openings 2^a.

The brake shoe is provided at its rear face with projecting terminal stop flanges 8, and is equipped with recessed lugs or portions 9 to interfit with the brake head. The yoke connects the reinforcing bars or members and facilitates the assembling of the parts in the mold.

Having thus fully described my invention, 110

what I claim as new and desire to secure by Letters Patent, is:—

1. A brake shoe including a cast metal body portion, reinforcing bars or members embedded in the body of the brake shoe and extending longitudinally thereof, said bars or members being of a width corresponding to the thickness of the brake shoe and having their front and rear side edges exposed at the front and rear faces of the said body, and a yoke connecting the bars or members at points between the said front and rear side edges and partially embedded in the cast metal body portion.

2. A brake shoe including a cast metal body, and reinforcing bars or members embedded in the body and bowed laterally and having their terminals fitted together.

3. A brake shoe including a cast metal body, and reinforcing bars or members embedded in the body and bowed laterally and having their terminals fitted together, said bars or members being of a width corresponding to the thickness of the brake shoe and extending entirely through the same and exposed at the front and rear faces thereof.

4. A brake shoe including a cast metal body, longitudinal reinforcing bars or members embedded in the body and provided between their ends with slots, and a yoke connecting the said bars or members and having its sides embedded in the body and provided with terminal lugs fitted in the slots of the said bars or members.

5. A brake shoe including a cast metal body portion, reinforcing bars or members embedded in the body portion and extending longitudinally thereof and provided between

their side edges with opposite slots, and a yoke connecting the side bars or members and having its terminals projecting outwardly and extending through the slots of the said bars or members and embedded in the cast metal body portion.

6. A brake shoe including a cast metal body portion, a longitudinal reinforcing bar or member of a width corresponding to the thickness of the brake shoe and having its front and rear side edges exposed at the front and rear faces of the body and provided at its ends with laterally projecting lugs or flanges.

7. A brake shoe including a cast metal body portion, and reinforcing bars or members embedded in the body and bowed longitudinally and having their terminals fitted together, said bars or members being provided at their outer sides with projecting terminal lugs or flanges arranged to reinforce the extreme end portions of the brake shoe.

8. A brake shoe including a cast metal body portion, and reinforcing bars or members embedded in the body and bowed longitudinally and having their terminals fitted together, said bars or members being provided at their outer sides with projecting lugs or flanges having their side faces arranged in planes substantially at right angles to the side faces of the bars or members.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE MALDEN BEARD.

Witnesses:

JOHN U. SNIVELY,
OSCAR R. BOWMAN.