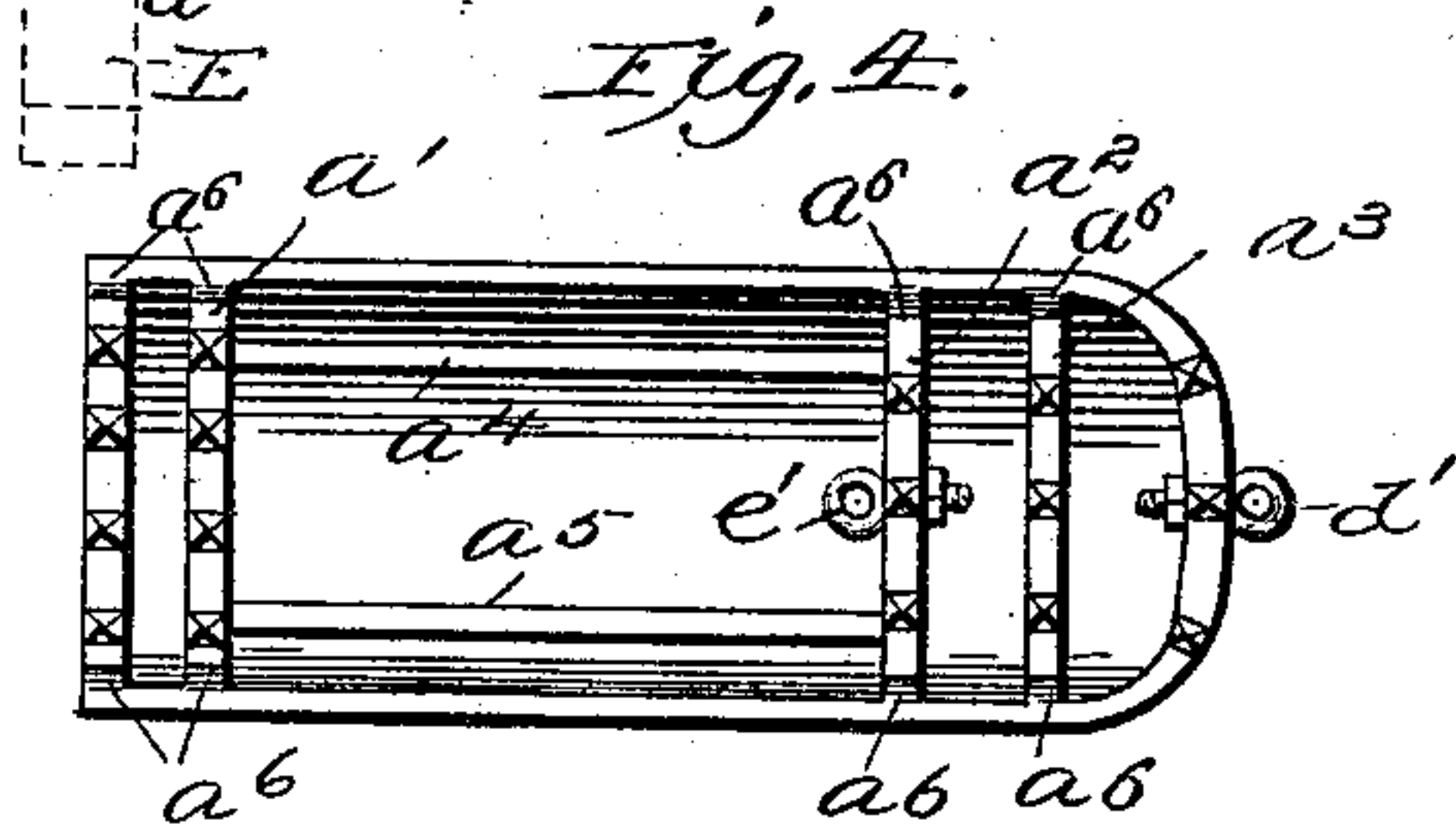
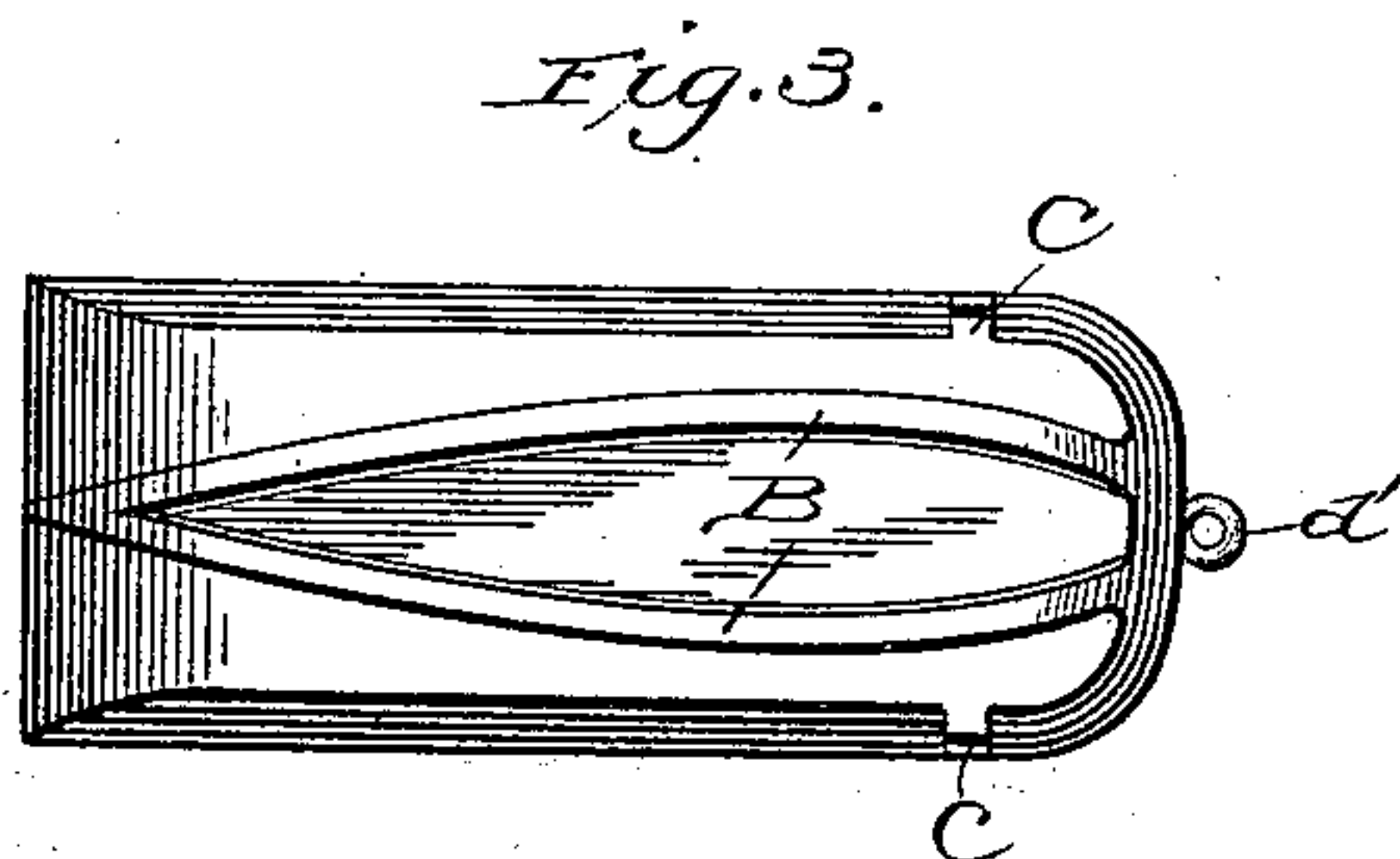
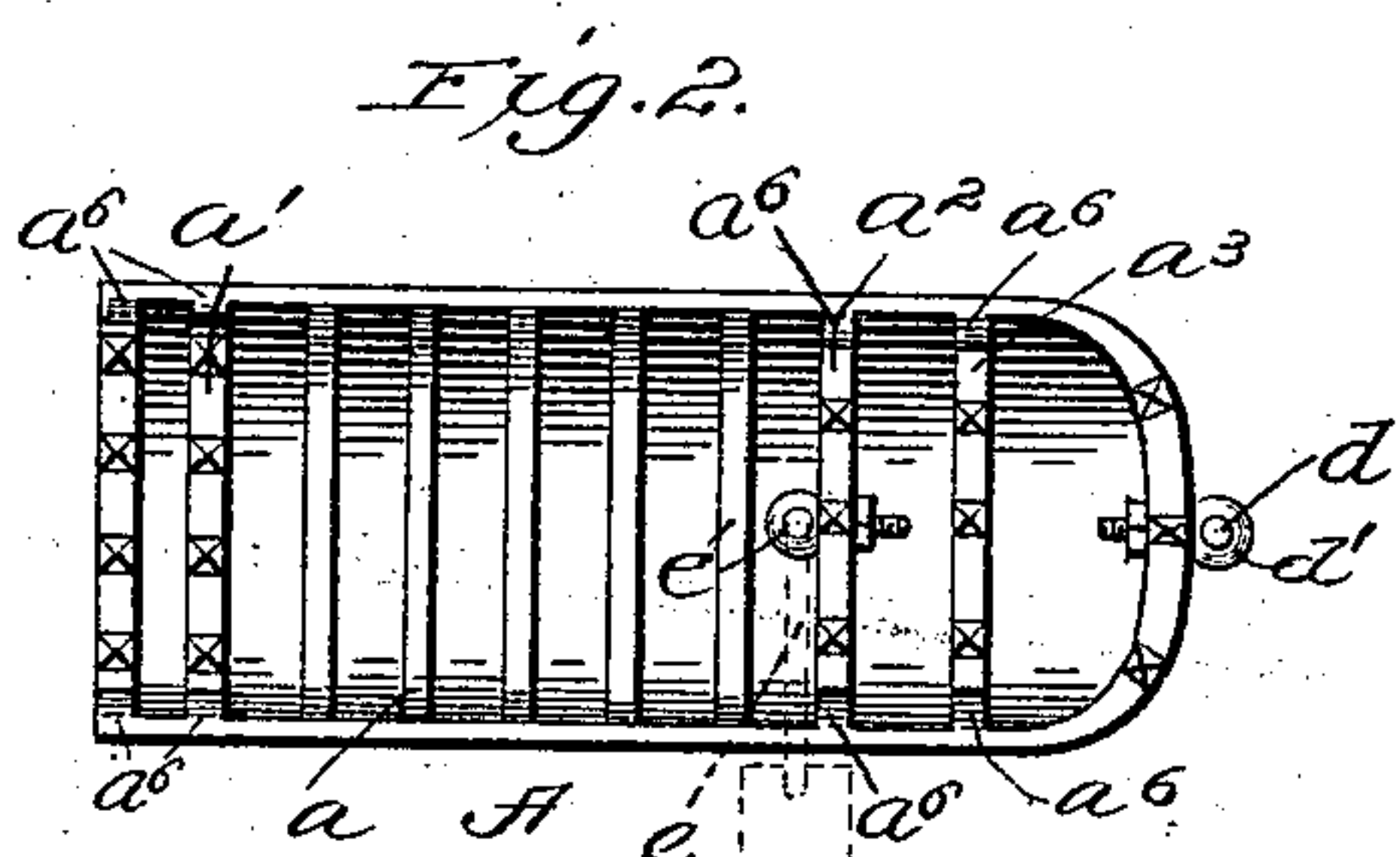
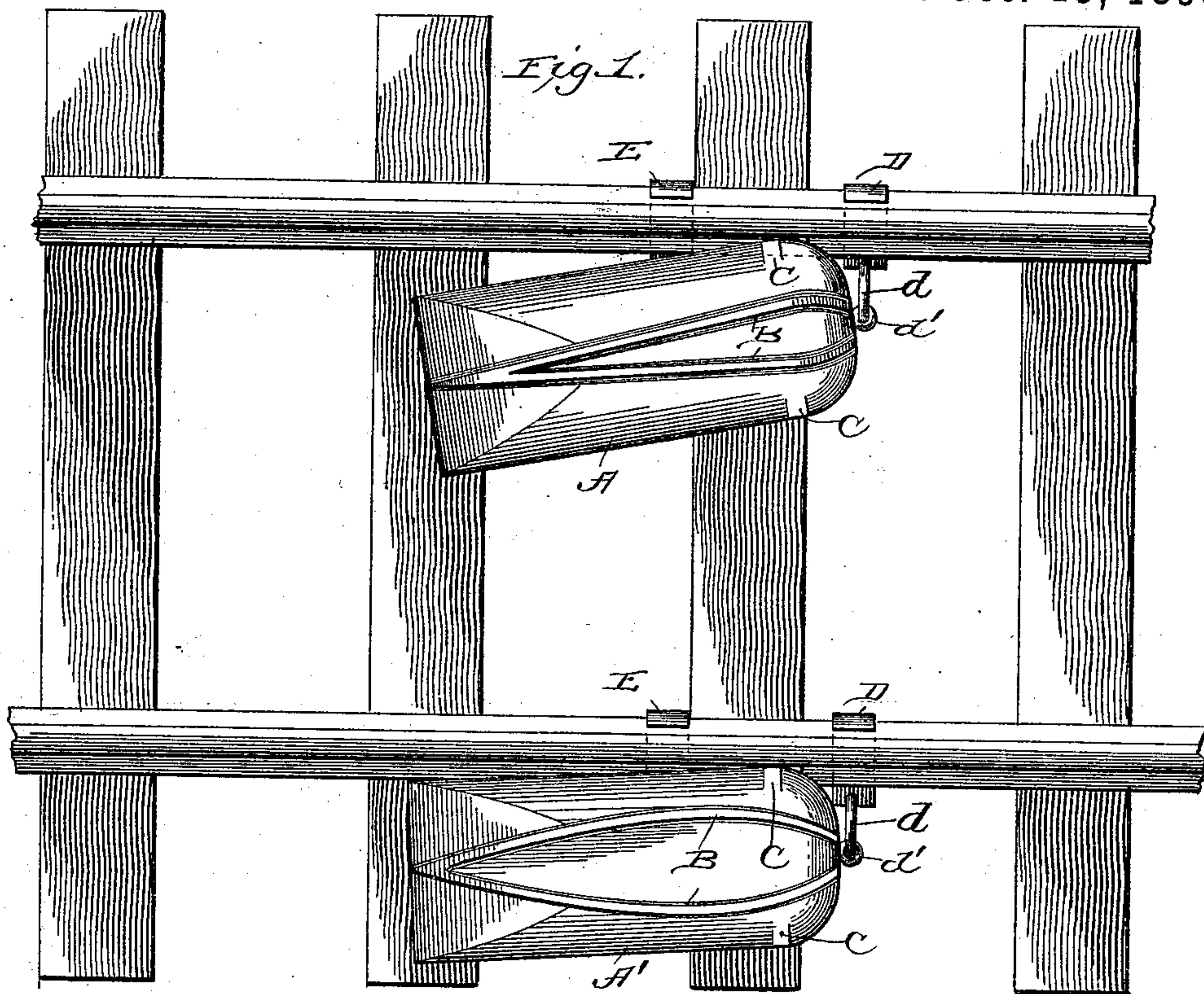


(No Model.)

J. RAGAN.  
CAR REPLACER.

No. 547,889.

Patented Oct. 15, 1895.



witnesses:

Garry D. Fisher.  
Herbert Bradley.

Inventor:  
John Ragan

by J. F. Beale  
Attorney.



# UNITED STATES PATENT OFFICE.

JOHN RAGAN, OF MULDOON, TEXAS.

## CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 547,889, dated October 15, 1895.

Application filed March 1, 1895. Serial No. 540,167. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN RAGAN, a citizen of the United States, residing at Muldoon, in the county of Fayette and State of Texas, have invented certain new and useful Improvements in Car-Replacers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-replacers.

The object of my invention is to provide a strong and compact skid of comparatively light weight to form the body portion of the car-replacer, and which shall be especially adapted to raise the car-wheels above the track, deflect them toward the rails until the tread of the wheels is suspended over the ball of the rails from an inclined surface terminating in a rounded end, over which the wheels move until they meet the track.

It is also my object to provide means for resisting the endwise and sidewise thrust or pressure of the wheel and the liability heretofore of tilting the skid endwise or turning it sidewise.

In the accompanying drawings, forming a part of this specification, Figure 1 is a top plan view showing my car-replacer applied to the inner and outer rails. Fig. 2 is a bottom plan view of the same. Figs. 3 and 4 show a modification of the skid.

Referring more particularly to the drawings, A A' denote the body portions or skids of my car-replacer. Said skids are arc-shaped in cross-section, except at the forward end or toe, and are reinforced upon the under side by a series of arched cores  $a$  cast integral therewith and crossing from side to side under the crown of the skid at intervals of about three inches.

$a'$   $a^2$   $a^3$  denote three supplemental cores, two of which are arranged near the rear end and one near the toe of the skid, and are provided with teeth which engage the ties and serve to give an additional bearing-surface and hold upon the same. The cores  $a^2$   $a^3$  are deeper and project below the sides of the skid and have beveled side edges. The skids are of a length to rest upon adjoining ties, and by having two series of teeth at each end I not only obtain a firmer hold upon the tie

but am also enabled to afford bearing-surfaces provided with teeth adapted for different gages, as where the ties are wider apart than usual or where the skids are arranged at an angle, which is generally the case with the skid for the inside rail. The skids have oval or sloping sides extending from the ribs B to the outer side edges of the skid and a rounded rear end provided with teeth on its under side. The toe or forward end of the skid is provided with teeth on its under side, and its upper side is beveled and forms an inclined surface up which the car-wheel mounts.

B B denote two ribs formed integral with the skid, meeting at the center of the toe and diverging from this point, extending nearly to the rear end of the skid, where they curve inwardly and extend over the rounded rear end portion of the same. The skid A is designed for the inside rail, and the ribs B B in this form diverge in nearly a straight line from the toe until they reach a point near the rear end of the skid, about four-fifths of its length from the toe. The skid A' for the outside rail is formed in all respects like the skid A, excepting the ribs B B, which are preferably made higher and have the point of greatest divergence farther forward at a point about two-thirds the length of the skid from the toe and approached nearer to the sides of the skid. My object in curving the rear ends of the ribs B B inwardly is to prevent crowding or jamming the wheels between the rail and ribs near the rear end of the skid.

C C denote two shoulders formed in the sloping sides near the rear end of the skid and are adapted to fit under the ball of the rail and bear against the web thereof.

D and E denote rail-clamps adapted to fit under and grasp the base of the rail, and are provided with links  $d$  and  $e$ , which engage with eyebolts  $d'$  and  $e'$ . The clamp D is secured to the extreme rear end of the skid by an eyebolt  $d'$ , which passes through the rear end wall thereof at the center and is secured in this position by a nut on the under side of the skid, as shown in Fig. 3. Said clamp is thus adapted to grasp the rail in rear of and to one side of the skid and is more accessible and readily applied in this position. The clamp E is secured in a similar manner to the



core  $a^2$  and is adapted to clamp the rail at the intersection of the rail and forward end of the rear tie, thus preventing an endwise as well as lateral movement of the skid. By linking the clamps to the center of the skid they are adapted to be used upon either side. This feature of my invention is important, as my skids may be made in duplicate and reversible, and I may use either form shown in Fig. 1 as adapted to both rails.

In the modification shown in Figs. 3 and 4 instead of the body of the skid being arc-shaped in cross-section it is nearly rectangular, and instead of using the sloping sides I use beveled sides and a flat top. The under side of the skid is hollowed out and reinforced by cores  $a^2$   $a^3$  and longitudinal cores  $a^4$   $a^5$ . The latter are arranged immediately under the flat surface of the skid upon which the car-wheels bear.

In operation my car-replacer is applied to the inside of one and to the outside of the other rail. The skid is applied to the inside rail at an angle, while the skid for the outside rail is about parallel therewith. Both skids fit snugly to the rail at the rounded corners of the rear end and their lower side edges project over and bear upon the base of the rail over the spike-heads. This is effected by means of the cores  $a'$   $a^2$   $a^3$  projecting below the side edges of the skid and having their outer side edges  $a^6$  beveled upwardly. Thus the skid bears upon the rail and through the cores  $a^2$   $a^3$  upon the ties. By first placing the rear end clamp under the rail with the rear end abutting the rail and turning the skid in position said clamp will bind the rear end of the skid more firmly to the rail. The skids being in position the derailed car-wheels strike the forward inclines of the skids and are elevated by the same above the rail. The car-wheel flanges take the ribs B and deflect the wheels toward the rails which lie at the foot of the inclined or sloping sides of the skid. The flange of the outside wheel takes the rib and the tread of the wheel bears on top of the same. This wheel is deflected toward the outside track by the diverging rib, and when it reaches a point about two-thirds the length of the skid from the toe, (the point of nearest approach of rib and rail,) where

the rib curves inwardly, the tread of the wheel drops from the rib onto the sloping sides of the skid and over the rounded end to the ball of the rail, while the flange drops inside. The inside wheel rides lengthwise over the skid on its flange, the inside or back part of which impinges against the rib and deflects the wheel to the rounded end of said body, where the tread of the wheel will be suspended over the ball of the rail. The further movement of the wheel will drop the tread on the rail, while the flange will pass over the rounded end and down the inclined side and drop inside the rail.

Having shown and described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A car replacer formed in one piece consisting of an oblong hollow skid reinforced upon its under side by a series of cores cast integral therewith, supplemental toothed cores projecting below the side edges of the skid and beveled at each end, sloping sides terminating below the ball of the rail, and ribs diverging from the center of the toe to the top of the slope of said sloping sides near the rear end of the skid and curved inwardly, substantially as shown and described.

2. A car replacer for outside rail consisting of an oblong hollow skid reinforced upon its under side by a series of toothed transverse cores and two longitudinal cores arranged upon each side of the skid under the bearing surface for the wheels, a flat top and beveled sides and ribs diverging from the center of the toe and running rearwardly to a point about two-thirds the length of the skid where they curve inwardly and extend over the rounded rear ends of the same.

3. In a reversible car replacer the combination of the skid and the clamp linked to the rear end thereof at the center, and the clamp linked to the core  $a^2$  and adapted to clamp said skid to either rail, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN RAGAN.

Witnesses:

J. W. STODDARD,  
BEN HOPPER.