

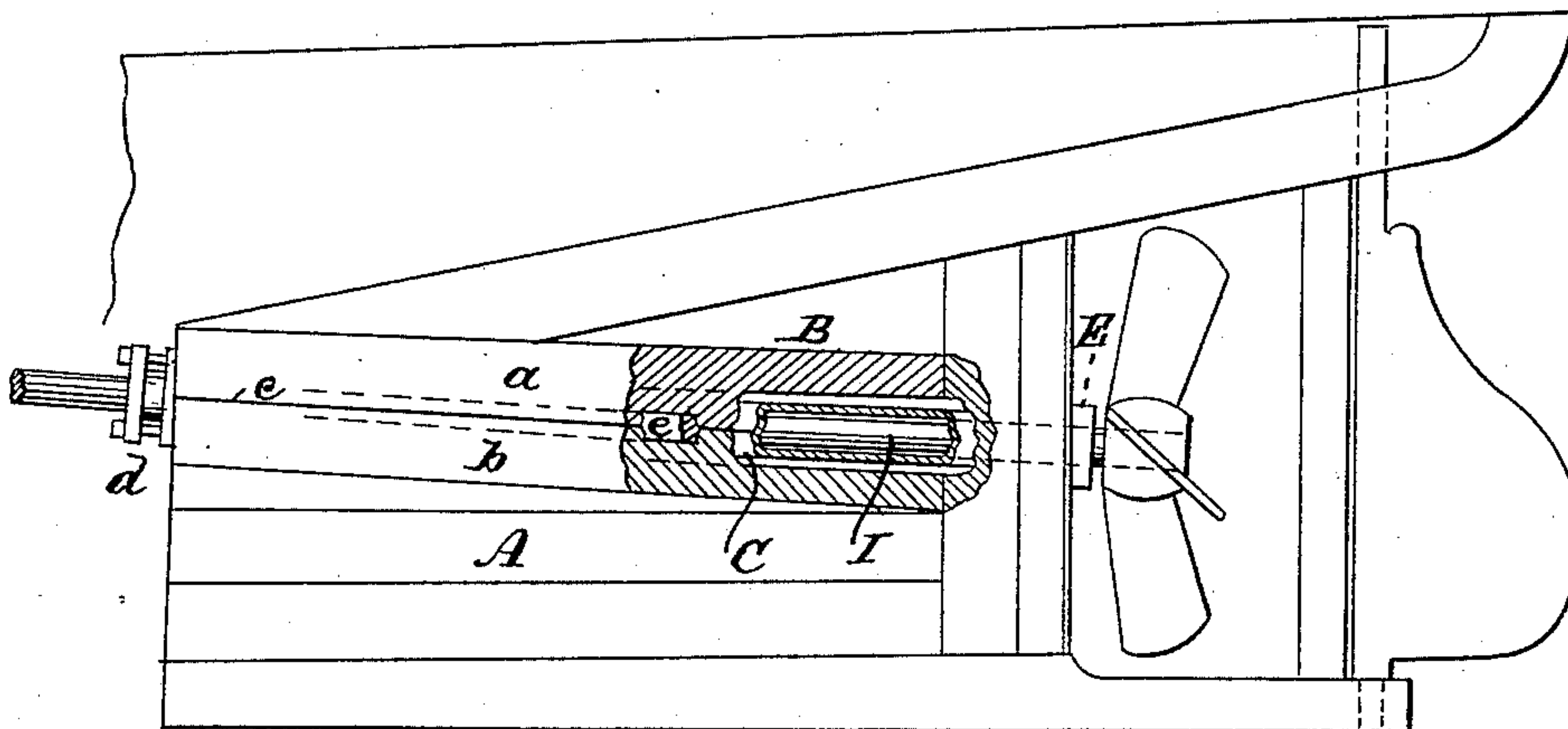
(No Model.)

R. A. REED.  
MARINE VESSEL.

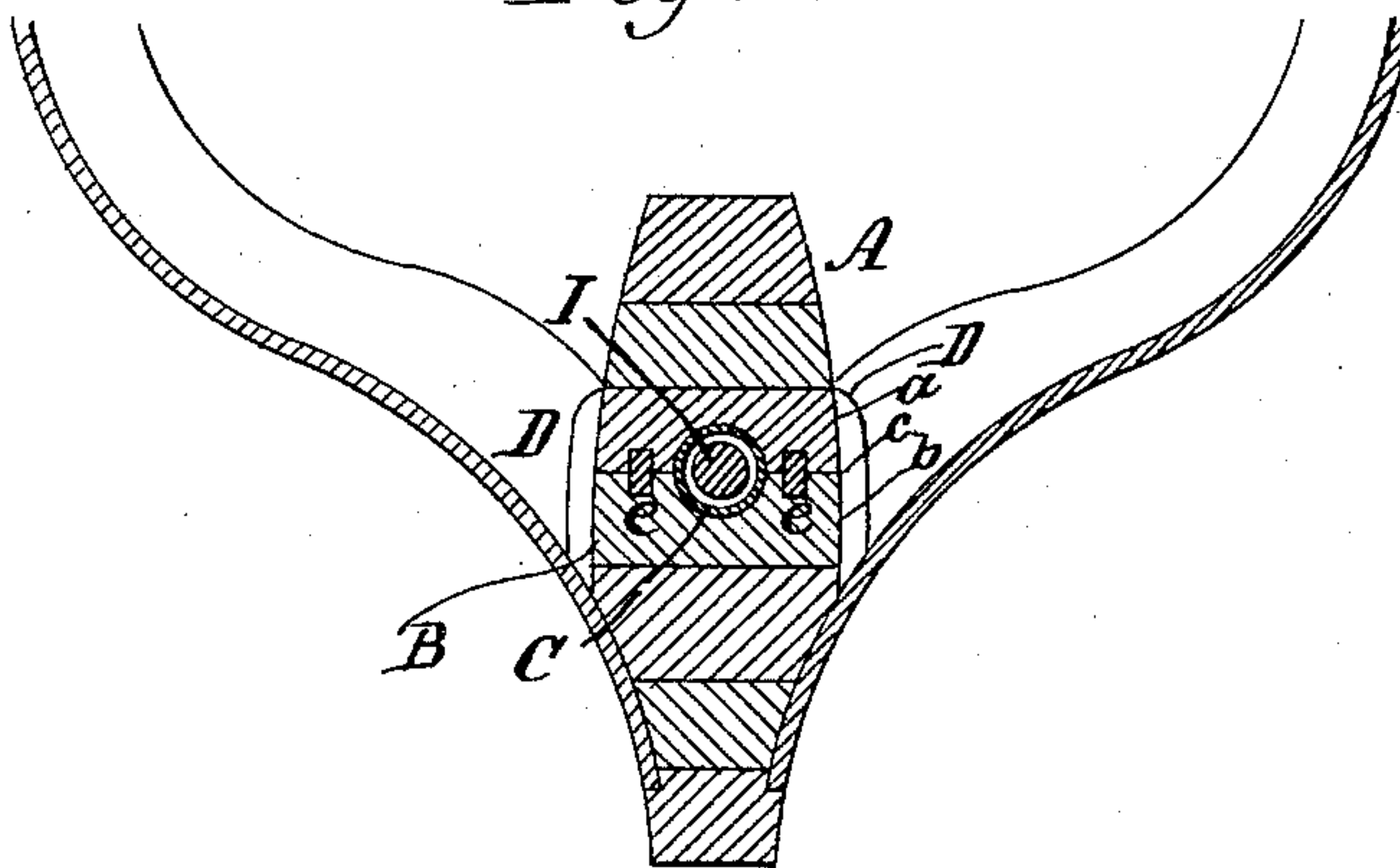
No. 348,587.

Patented Sept. 7, 1886.

*Fig. 1.*



*Fig. 2.*



Witnesses.  
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H. C. Hagen.

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# UNITED STATES PATENT OFFICE.

ROBERT A. REED, OF BROOKLYN, NEW YORK.

## MARINE VESSEL.

SPECIFICATION forming part of Letters Patent No. 348,587, dated September 7, 1886.

Application filed August 6, 1885. Serial No. 173,752. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT A. REED, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in the Construction of Marine Vessels, of which the following is a specification, reference being had to the annexed drawings, forming a part hereof, in which—

Figure 1 is a side elevation, partly in section, of a part of a wooden vessel, showing the application of my improvement. Fig. 2 is a transverse section taken on line *x x* in Fig. 1.

My invention is designed to prevent the entrance of water to the hold of a vessel either through sleeve or log inclosing the shaft of the propelling-screw of a steam-propelled vessel in case of the rupture of the shaft-sleeve. When a shaft breaks in the shaft-sleeve, it is liable to cut through the sleeve, allowing the water, which generally has free access to the interior of the shaft-sleeve, to flow into the hold of the vessel. To prevent the entrance of water to the vessel in this way, I provide on opposite sides of the shaft-sleeve in the dead-wood longitudinal stops, which are placed a short distance from the shaft-sleeve and practically out of the reach of the broken shaft.

The dead-wood A of a steam-propelled vessel is commonly provided with a log, B, formed of two parts, *a b*, separated longitudinally by seams *c*, and bored axially on the line of the seams, and provided with the metallic lining or sleeve C, which is designed to exclude water from the vessel and confine it closely around the shaft I, passing through the said sleeve. Water gains access to this sleeve only through the journal-box E in the stern-post. The forward end of the sleeve C is provided with a stuffing-box, *d*, to prevent the water from escaping from the sleeve around the shaft into the vessel. The seams *c* of the log B are sometimes calked; but the calking, being from the inside, is unreliable and liable to be forced out by the water entering through a ruptured sleeve. To prevent this leakage through the seam of the log B, I groove its two parts *a b*

along their contact-surfaces on each side of the shaft-sleeve, and in the grooves in one part of the said log I insert strips *e*, of wood or other suitable material, which enter into the grooves in the other part of the log, forming a stop, which effectually prevents the entrance of water to the hold of the vessel through the seams between the two parts *a b* of the log B. The strips inserted in the grooves of the joints, as described, are preferably made of dry wood, which will swell on being moistened. They may be made of elastic material, which by its own expansion will always tend to fill the grooves, or the strips may be made of material incapable of extending or swelling to any appreciable extent. The spaces between the stops inserted in the log B and the shaft-sleeve will be sufficient to separate the stops from the said sleeve, so that they will prevent leakage in case the sleeve should be ruptured.

In some cases I apply to opposite sides of the shaft-log strips D of wood or iron to cover the seams *c*, and afford an additional protection against the entrance of water to the hold of the vessel through the seams.

I am aware that it is old to form grooves in the adjoining timbers of ships or other vessels and secure the said timbers together by strips that enter the said grooves. Such construction I do not claim, broadly, or without combination with other elements, as it is shown in patents of this and other countries.

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

The combination, with the shaft-sleeve C, having a stuffing-box on the inner end thereof, and a log, B, formed of two parts, *a b*, grooved longitudinally, of the strips or stops *e*, inserted in the grooves of the parts *a b*, substantially as herein described.

ROBERT A. REED.

Witnesses:

GEO. M. HOPKINS,  
H. C. HAGEN.