

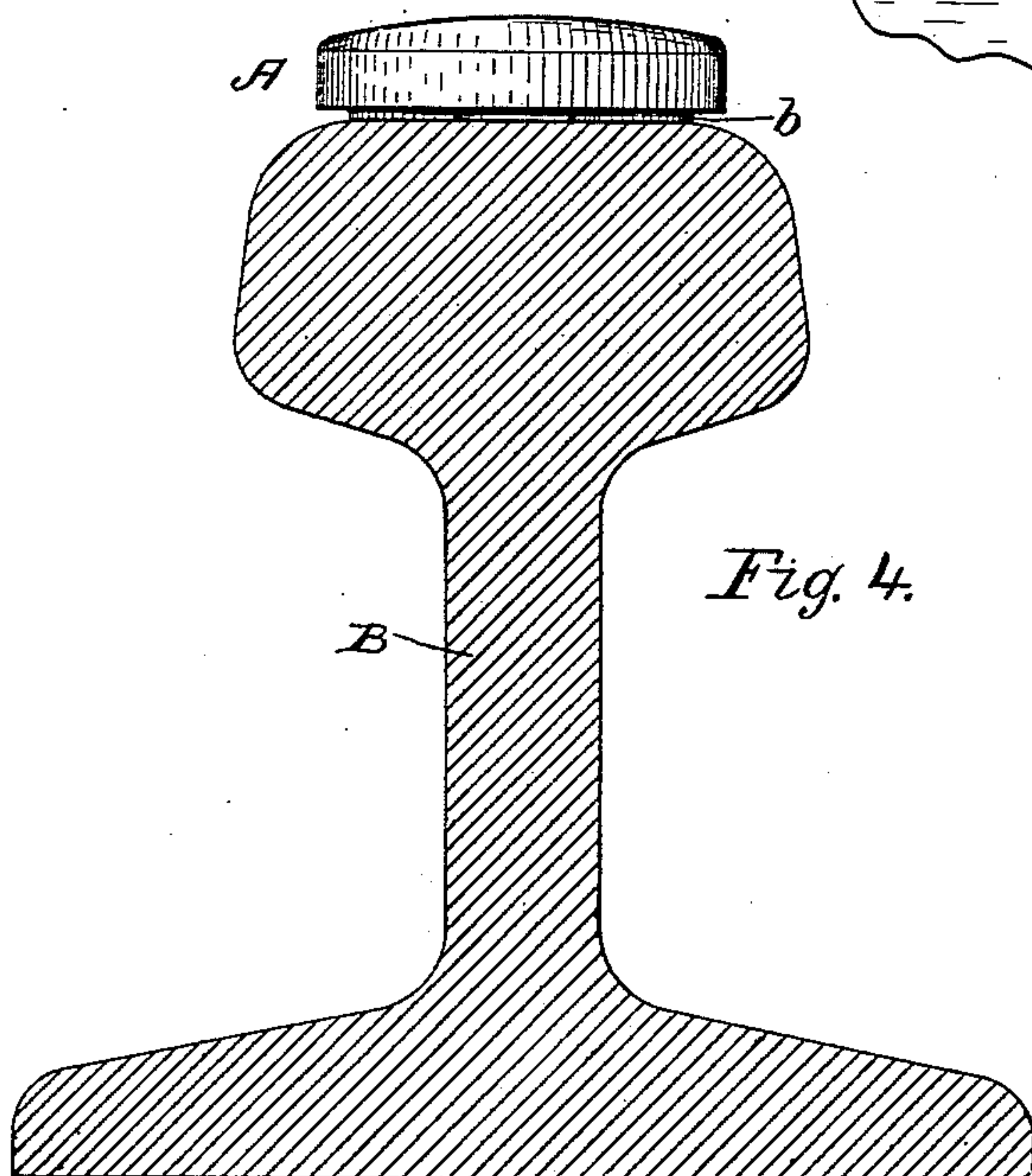
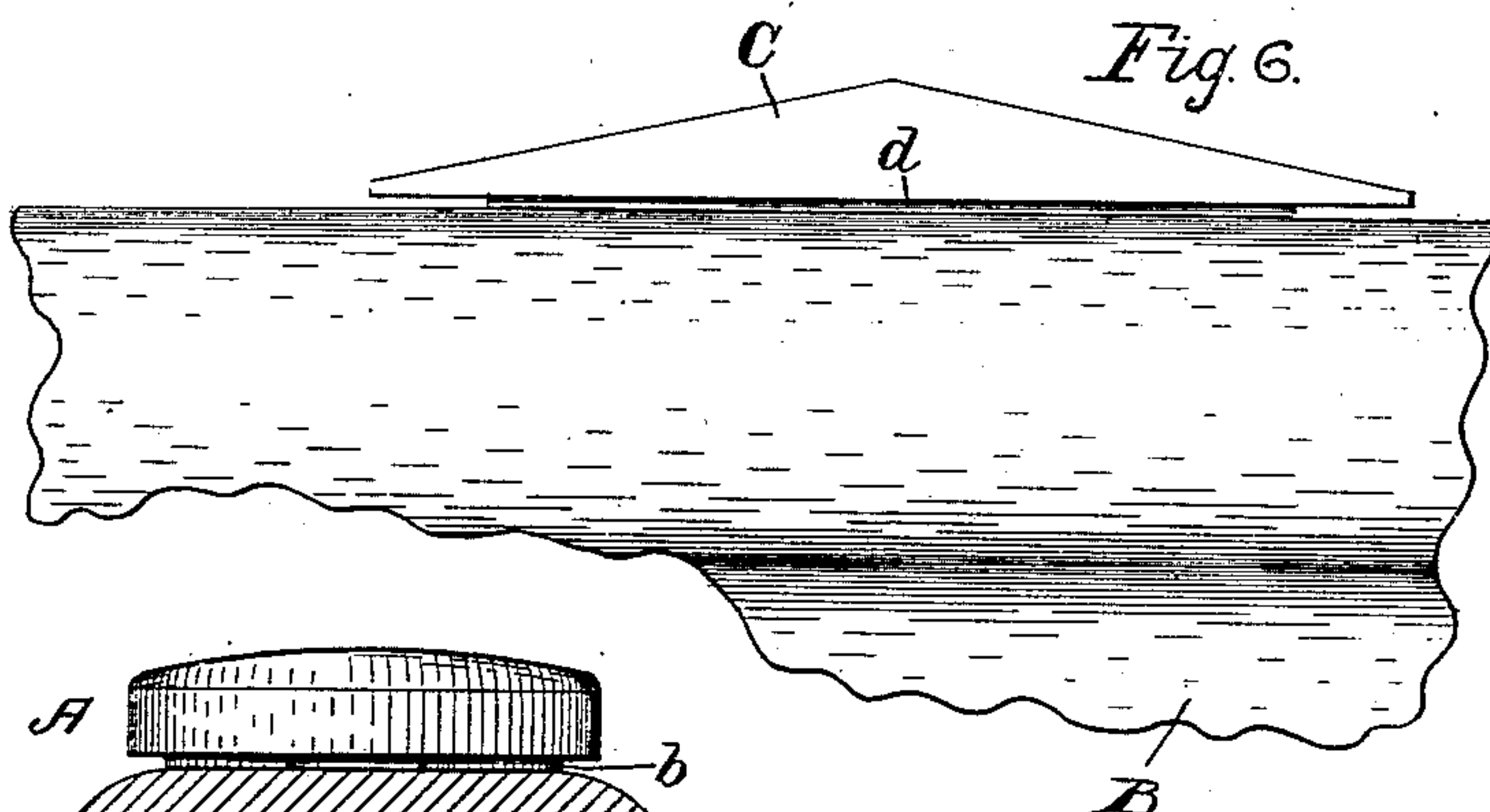
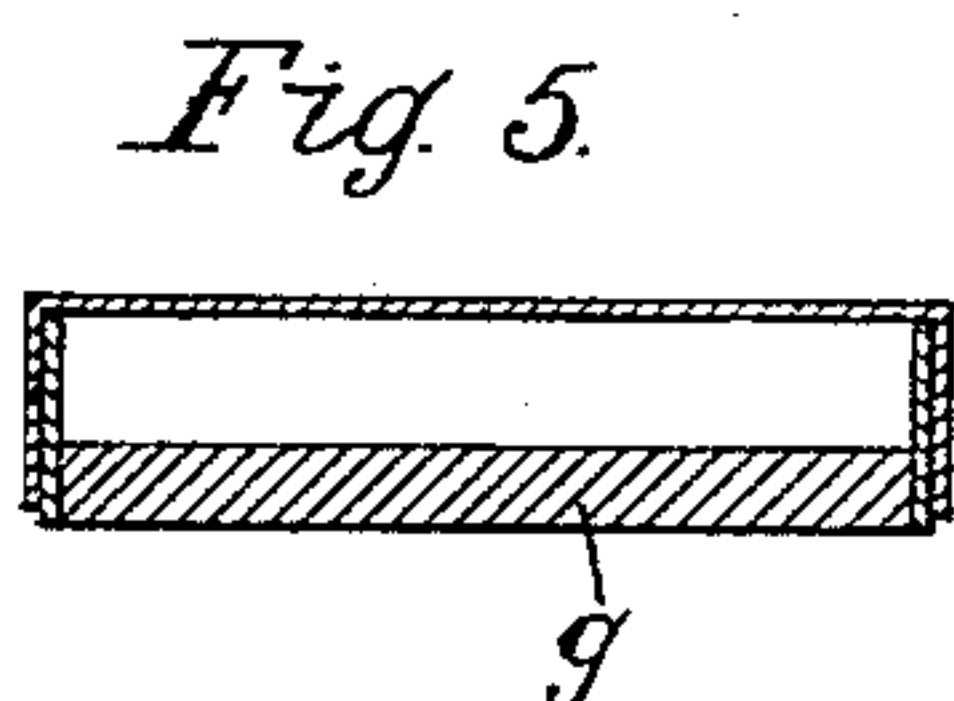
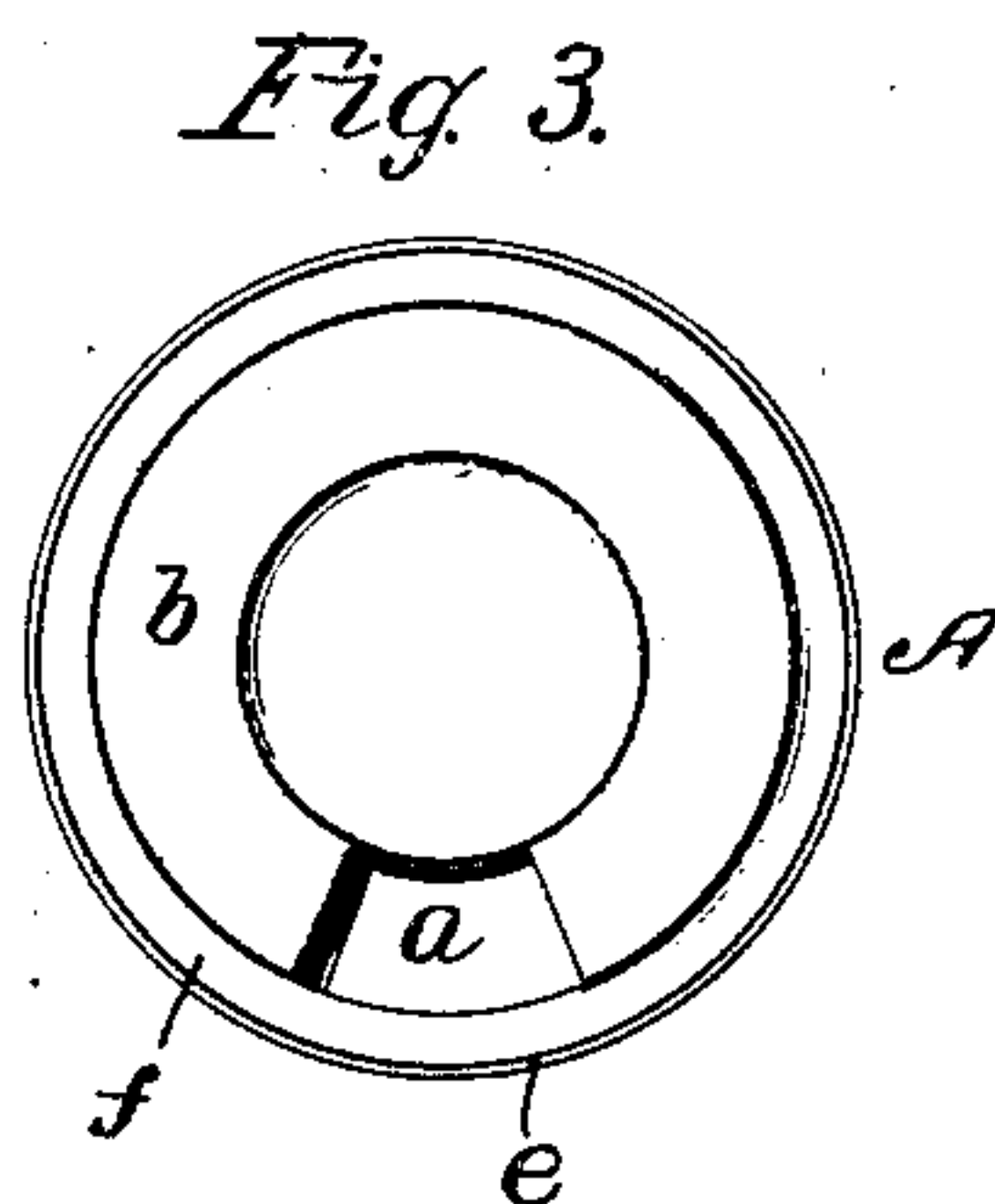
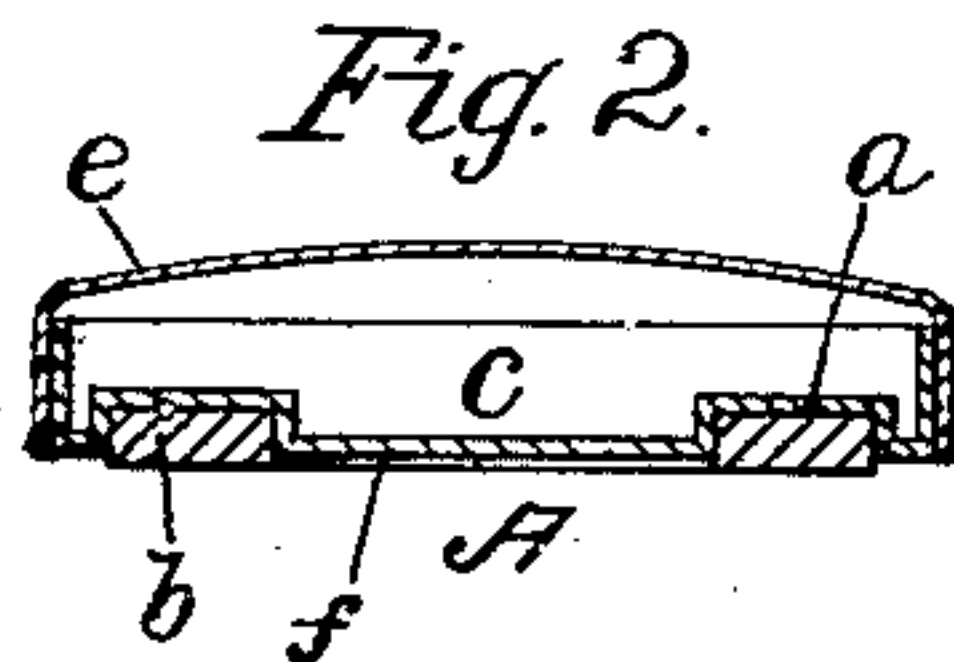
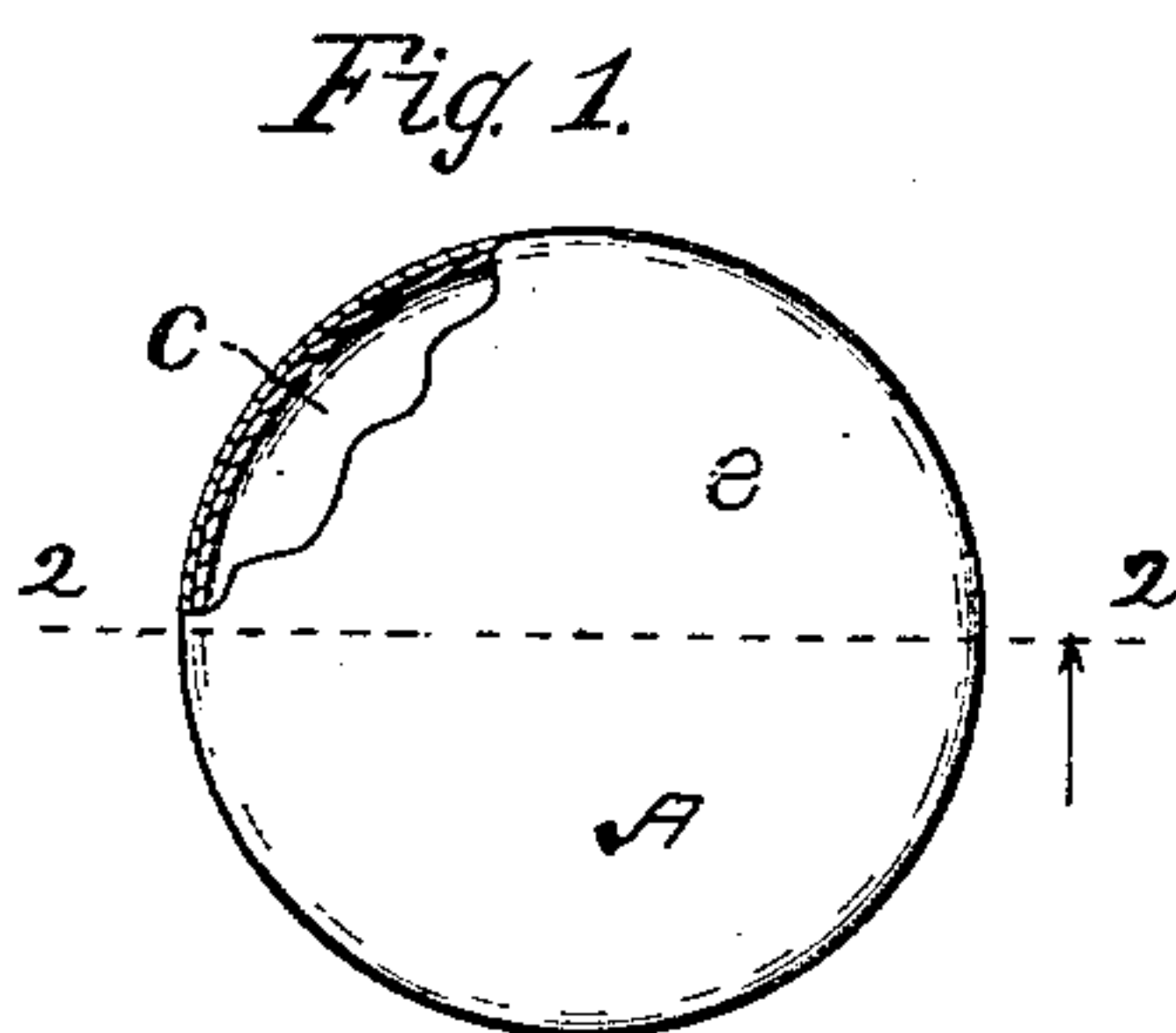
No. 630,931.

Patented Aug. 15, 1899.

J. C. ROCHE.
RAILROAD TORPEDO.

(Application filed Mar. 22, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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RAILROAD-TORPEDO.

SPECIFICATION forming part of Letters Patent No. 630,931, dated August 15, 1899.

Application filed March 22, 1899. Serial No. 710,109. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. ROCHE, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Railroad-Torpedoes, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

10 This torpedo is designed for use upon the tracks of steam-railways to explode when encountered by the wheels of an advancing train for the purpose of giving an alarm of danger.

The invention relates more particularly to the means provided for holding the torpedo to place upon the rail, the same being hereinafter fully described and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of a torpedo of common form to which my invention is applied. Fig. 2 is a bottom view of the torpedo, showing the steel magnet. Fig. 3 is a transverse section on the dotted line 3 3 in Fig. 1. Fig. 4 shows the application of the invention to use. Figs. 5 and 6 show slight modifications of the form and arrangement of the parts.

A in the drawings is a hollow body or box, commonly made of sheet metal, for holding the explosive matter of the torpedo in the space *c* thereof. The box is made of a bottom part *f* and cover *e*, the bottom being inwardly indented at *a*, in which is inserted a magnetic body *b*, as a ring of steel. This magnet is arranged to project at some little distance below the body A, as shown, so that when the torpedo is placed upon a rail B the magnet will be in immediate contact with the rail. The steel body *b* is set firmly to place in the bottom of the box, being magnetized by some convenient or well-known means, so that when in contact with the metal rail it will hold to place thereon by magnetic attraction.

The form of the magnet or the hollow body for holding the explosive is not essential to my invention nor the kind or character of the explosive used. The elongated form of the box or body C (shown in Fig. 6) may be

preferable in some cases, as when thus formed the torpedo is more readily and certainly mounted by the wheel of the approaching car and less liable to be pushed off of the rail by the wheel. In this form of the torpedo the magnet *d* is secured or attached to the body, as in the form shown in Figs. 1 to 4. Thus provided with a magnet the torpedo, whatever its form, may be placed upon a rail at the rear end of a railway train by the attendant and held to place by magnetic attraction and without other fastening device. To place the torpedo, the attendant reaches down from the steps of the rear car and without the train being necessarily wholly stopped for the purpose.

It may be desirable to construct the box with the magnet *g* forming the real bottom thereof, as shown in Fig. 5, this being, however, mainly a matter of convenience or choice.

It is of much importance to have a railroad-torpedo of such a nature that it will hold to place by being merely laid upon the rail and without having to stop the train and take time to go onto the ground to adjust fasteners to hold it to place.

When the magnet is placed in an indentation in the box, as stated, or added to the box in other convenient way, it may hold to place by friction or by applying some adhesive substance or otherwise, the means of securing the magnet to the box being a matter of convenience and not an essential part of the invention. When the magnet constitutes one wall, as the bottom, of the box or inclosure, as shown in Fig. 5, it may be secured to the other part of the box by any well-known means in similar constructions.

What I claim as my invention is—

1. A railway-torpedo provided with magnetic securing means.

2. A railroad-torpedo consisting of a hollow body or box for holding an explosive, and a magnetic body or magnet secured to said box or body, substantially as shown and described.

3. A torpedo for use upon railroads, consisting of a box or body for holding an ex-

plosive, having an indentation and a magnet held in said indentation, substantially as and for the purpose set forth.

5 4. The hollow body or explosion-chamber of a torpedo, formed with an indentation and a magnetic body placed therein, said magnetic body projecting from the hollow body, substantially as and for the purpose specified.

In witness whereof I have hereunto set my hand, this 17th day of March, 1899, in the presence of two subscribing witnesses.

JAMES C. ROCHE.

Witnesses:

ENOS B. WHITMORE;
M. L. WINSTON.