

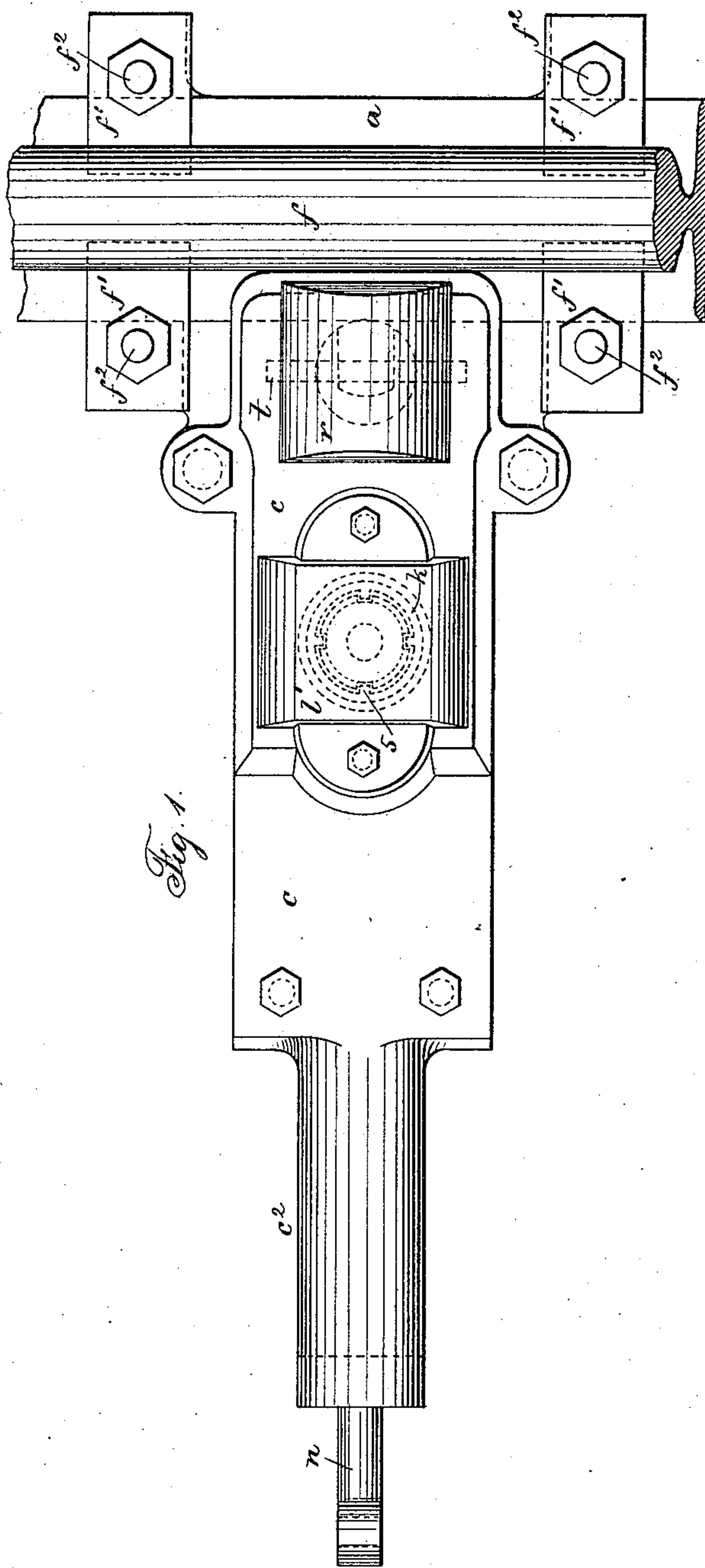
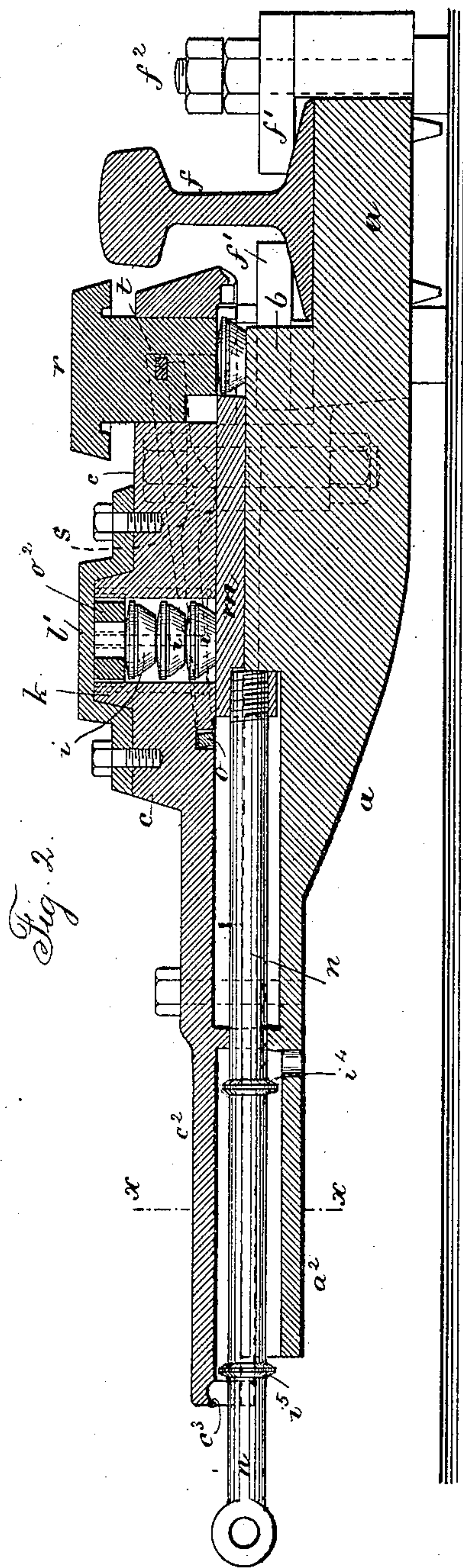
(No Model.)

2 Sheets—Sheet 1.

T. G. PALMER.
TORPEDO RAILWAY SIGNAL.

No. 334,133.

Patented Jan. 12, 1886.



Witnesses:
J. Stail
Chas. H. Smith

Inventor:
Timothy G. Palmer
per Leniuel W. Lowell atty

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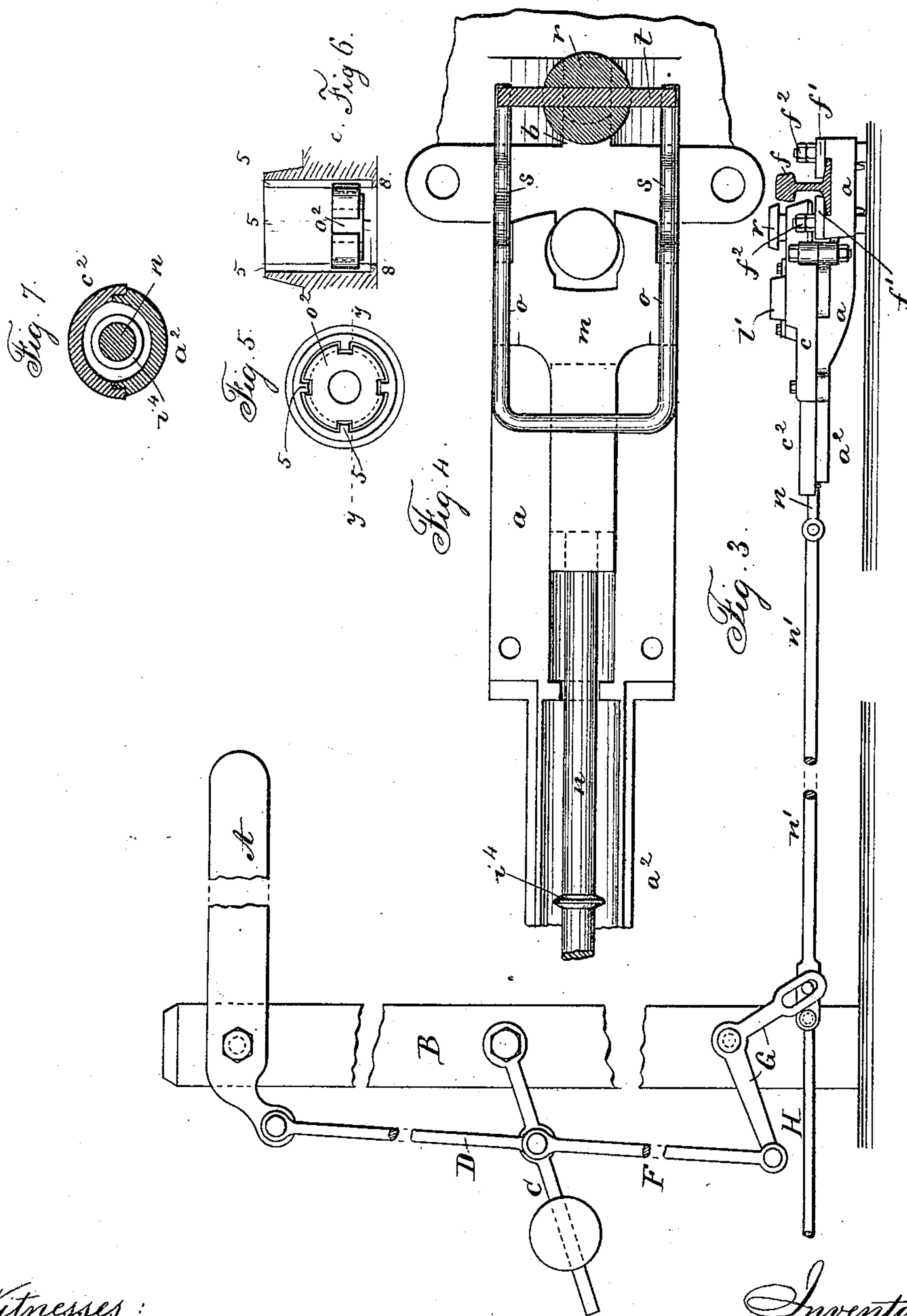
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UNITED STATES PATENT OFFICE.

TIMOTHY G. PALMER, OF SCHULTZVILLE, NEW YORK.

TORPEDO RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 334,133, dated January 12, 1886.

Application filed May 1, 1885. Serial No. 164,150. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY G. PALMER, of Schultzville, in the county of Dutchess and State of New York, have invented an Improvement in Torpedo Railway-Signals, of which the following is a specification.

The present invention is a modification of and improvement upon the devices shown in Letters Patent No. 310,717, granted to me January 13, 1885, and a reference is hereby made to the said patent for a description of those parts which correspond to the same parts herein described.

In the drawings, Figure 1 is a plan view. Fig. 2 is a longitudinal section of the torpedo holding and exploding devices. Fig. 3 is an elevation illustrating the manner in which the torpedo-signal is connected with the visual signal. Fig. 4 is a plan view of the cartridge, slide, and lifter with the cap removed and the exploder in section. Fig. 5 is a plan of the magazine and weight. Fig. 6 is a side view of the weight and a section of the magazine at line *y y* of Fig. 5. Fig. 7 is a cross-section at the line *x x*.

The base *a*, anvil *b*, exploder *r*, cap *c*, slide *m*, and forked levers *o* are similar to the parts shown in my aforesaid patent, except in the particulars hereinafter described.

I prefer to extend the base *a* beyond the anvil and beneath the railway-rail *f*, and to connect the parts by the clips *f'*, that lap upon the flanges of the rail, and are secured by bolts *f''*, passing through the clips into the base. The rod *n*, that is attached to the slide *m*, extends outside the case of the apparatus, and is connected to a rod, *n'*, from the visual signal apparatus. In this the swinging arm *A* is upon a post, *B*, and *C* is a weighted lever pivoted upon the post and connected by the link *D* to the back end of the visual signal *A*, and by a link, *F*, to the right-angled lever *G*, also pivoted to the post; and *H* is a rod extending to the distant switch, or to the apparatus that moves such signal or switch, so that when the switch or siding is opened to the main track or the visual signal swung up into view the rod *H* will be moved endwise, and the weighted lever *C* will move the rod *n* and slide *m* endwise, and place a torpedo in position for being exploded. The cam portions *s* of the levers *o*

are acted upon by the slide *m* as the latter is moved, and in so doing the cross-pin *t* and exploder *r* are raised as the torpedo is moved along, so as to permit the torpedo to pass in upon the anvil and beneath the exploder without risk of injury to the torpedo by forceful contact with the exploder. The cams *S* are relieved by the projections of the slide *m* passing beyond them before the movement is completed, so that the levers *o* fall and are out of the way of the cross-pin *t* of the exploder *r*, as in my aforesaid patent.

I make the magazine *k* in the cap *c*, and the same projects slightly above such cap *c*, and I provide a movable hollow cap, *l'*, preferably attached to the top of the cap *c* by screws, and I use a weight or spring to steady and force down the torpedoes as they are carried off from time to time and exploded. I prefer to use the weight *o''*, that is made with a hole in the center for the insertion of the finger for lifting it out when the same is to be removed for the introduction of torpedoes *i*, and the interior of the torpedo holder or magazine is ribbed, as at 5, to guide the torpedoes, and the weight is correspondingly notched upon the edges, so as to be guided by such ribs, and the weight is stopped, so that it cannot drop into the torpedo-space of the slide *m*, by the edges of the weight resting upon the ledge formed at the lower part of the magazine, between the ribs. By this construction the insertion and removal of the torpedoes is facilitated, and they are not liable to be misplaced by the action of the slide *m* moving back and forth beneath the pile of cartridges. The space around the torpedoes between the ribs allows for the insertion of the finger or nail to act upon the edge of the torpedo in turning over or properly placing or removing a torpedo.

The base of the apparatus is extended, as a trough, *a''*, and the cap is similarly extended as a semicircular cover, *c''*, and the edges of the cover overlap and interlock with the edges of the trough, as seen in Fig. 7. The object of this is to exclude rain, snow, or ice, and to prevent the rod *n* becoming coated with ice or other foreign substance. I also make a dripping-lip, *c'''*, at the end of the cover *c''*, to prevent water running along upon the inner surface of said cover, and upon the rod *n* there are

collars at $i^4 i^5$, which prevent water running along on the rod and either freezing or causing the parts to rust.

I claim as my invention—

5 1. The vertical circular torpedo - holding magazine having upon its inner surface ribs to guide the circular torpedoes that are placed flatwise one upon the other, and to facilitate their insertion, adjustment, or removal, substantially as set forth.

2. The vertical circular torpedo-magazine having a rim or stop around its inner surface at the lower end, in combination with the slide below the torpedo-magazine and a weight with-
5 in the magazine that keeps the torpedoes in position and rests upon the rim when the torpedoes are exhausted, substantially as set forth.

3. The vertical circular torpedo-magazine having ribs upon its inner surface and a rim
5 at the lower end, in combination with the slide

beneath the magazine and the weight having notches in its edges for the ribs, substantially as set forth.

4. The combination, in the torpedo-holder, of the base with a trough-shaped projection, a
25 cover with a similar projection, the slide m , and the rod passing through the space between the trough and cover, substantially as set forth.

5. The slide m and the rod n , having the collars $i^4 i^5$ around it, in combination with the
30 base a , cover, and trough-shaped projections, between which the rod and collar are received, substantially as set forth.

Signed by me this 27th day of April, A. D. 1885.

T. G. PALMER.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.