

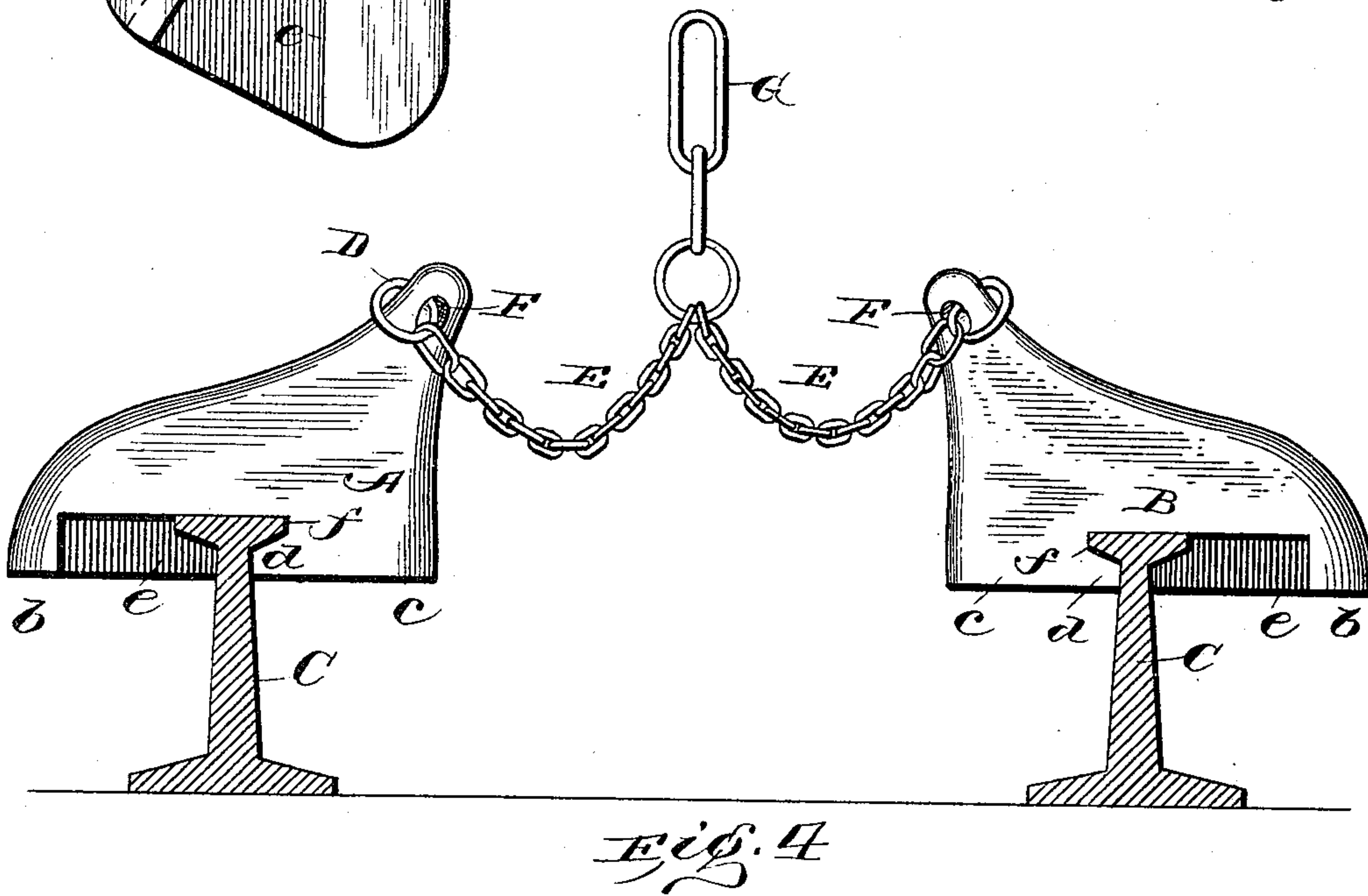
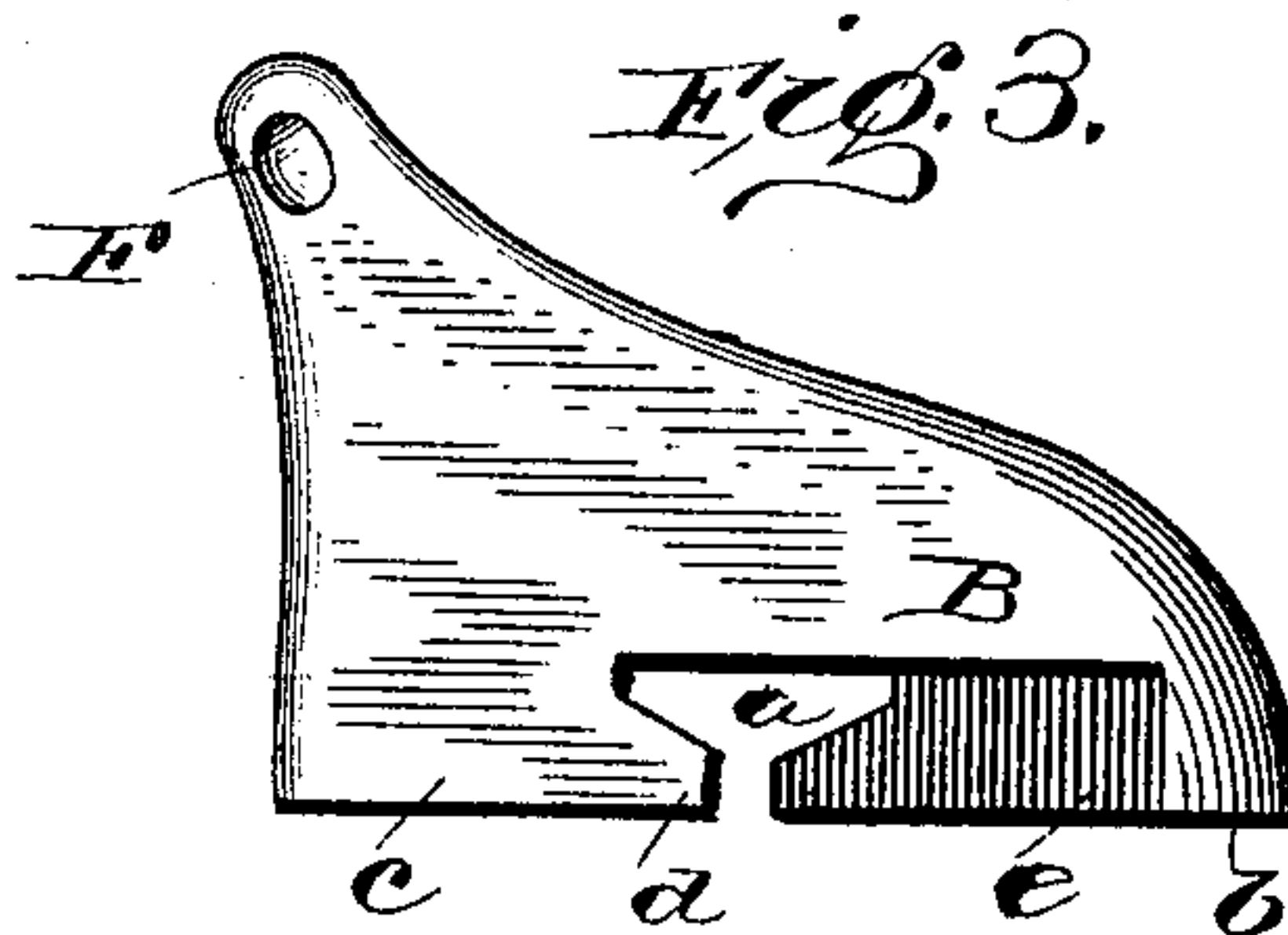
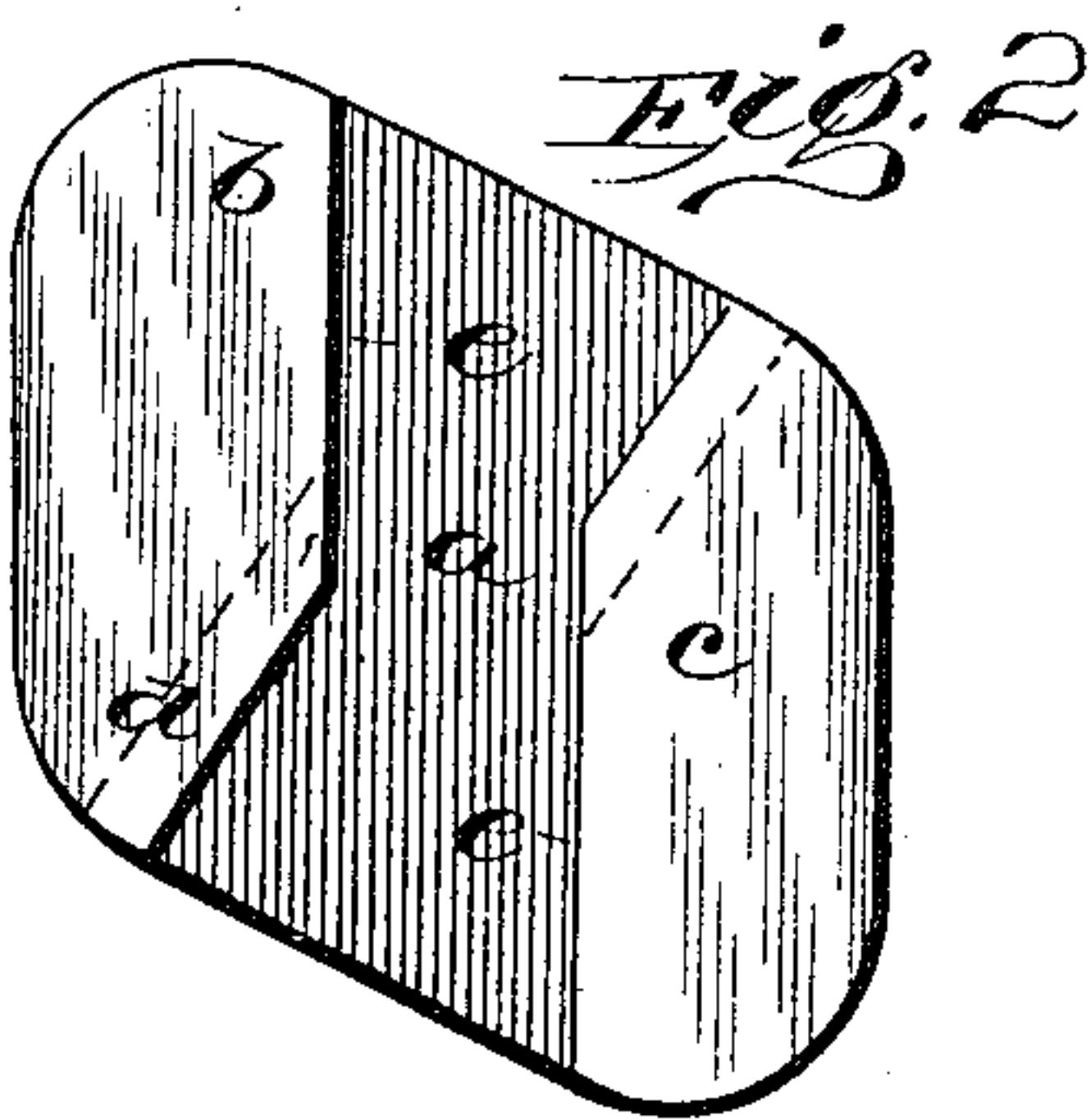
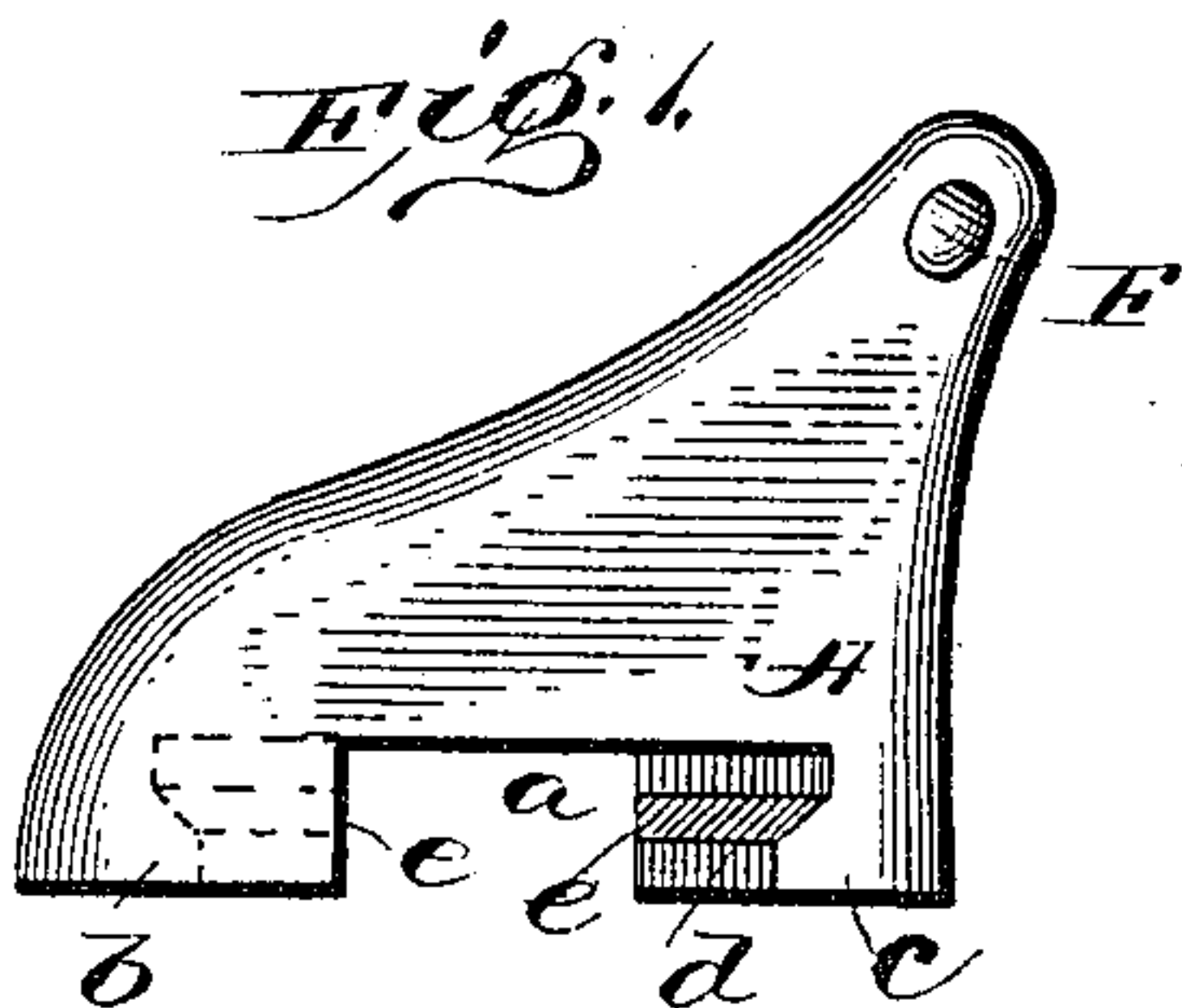
No. 654,262.

Patented July 24, 1900.

F. KREMER.
TRAIN ANCHOR.

(Application filed Mar. 5, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK KREMER, OF DULUTH, MINNESOTA.

TRAIN-ANCHOR.

SPECIFICATION forming part of Letters Patent No. 654,262, dated July 24, 1900.

Application filed March 5, 1900. Serial No. 7,414. (No model.)

To all whom it may concern:

Be it known that I, FRANK KREMER, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented a new and useful Train-Anchor, of which the following is a specification.

My invention consists of a small iron anchor which grips onto the steel rail and is attached to the end of a train of cars by chain or cable and holds the train still when standing on a grade when gravel or dirt is being unloaded from flat cars by means of a plow and, in general, whenever it is desired to keep a train from moving in a certain direction. They are intended to be used in pairs, one on each rail, and the two anchors are made so as to grip the rails with the pull on both coming from the same direction.

The chief features of this anchor are, first, that it is small, compact, and portable; second, that it can be instantly fastened or loosened, and, third, that it holds by friction alone, the harder the pull the greater the friction.

The anchors are illustrated in the accompanying drawings.

Figure 1 represents one of the anchors in the position it would be in when being placed on a rail, standing perpendicular to the face of the drawing. Fig. 2 represents the same anchor inverted. Fig. 3 represents an anchor which would be a mate to the first and would fit the opposite rail; and Fig. 4 represents a pair of anchors locked on the rails, with the pull coming from toward the observer.

Similar letters refer to similar parts, and the drawings on the left side of the page are of one anchor and those on the right side are of its mate.

The anchor is to be cast in one piece of iron or steel, it being thought that malleable iron will probably prove the most satisfactory, strength, durability, and cost being considered. The material, however, is not an essential part of the invention.

In Fig. 4 we have a side view of a pair of anchors locked on the rails, showing the holes F in the nose, through which the chain or cable is attached.

In Fig. 1 the anchor is in position for put-

ting on the rail. It will be seen from an examination of Figs. 1 and 2 (Fig. 2 being the anchor in Fig. 1 inverted) that there is a deep cut *a* running diagonally through the bottom of the anchor, on each side of which and on opposite sides of the anchor there is another small lateral cut, over which extends a flange *d*. In both Figs. 1 and 2, *a* represents the cut which fits over the rail, the rail being parallel to the wall of the cut *a*, which wall is designated by the letter *e*. After the anchor is set down over the rail in this position it is twisted around by a pull on the nose, by which the ledges or flanges *d* are twisted under the flanges of the rail, and the anchor is then in the position shown in Fig. 4, the walls of the flanges *d* being parallel to and closely pressed against the standard of the rail C. The anchor is now sitting squarely across the rail, and with the nose extending out toward the center of the track acting as a lever, with the pull coming from the direction of the observer, it will be seen that a twisting tension will be imparted to the anchor, by which a large part of the force brought to bear upon it will be expended in forcing the flanges *d* against the standard of the rail, and the harder the pull the greater will be the friction in consequence, and slipping of the anchor will be practically impossible.

In Fig. 1 the result is accomplished by placing the anchor A down over the rail and then pulling the nose toward the observer, which brings the face of the flange *d* around parallel to the position now occupied by the wall *e*. The same thing may be illustrated in Fig. 2 by inserting the rail in *a* parallel to the wall of the cut *e* and then twisting the anchor to the left, by which the rail would become parallel to the face of the flanges *d*, the flanges of the rail being in the cut under *d*, and *d* itself being tightly pressed against the standard of the rail. It will be noticed that the anchor cannot slip off the rail when in this position.

The anchor B in Fig. 3, being the mate to anchor A in Figs. 1 and 2, has the lateral cuts and the flanges *d* on the opposite sides of the anchor; but the action is exactly the same.

When the rails are new, the flanges thereof will fit closely in the lateral cuts under *d*, and

the friction will come on them also; but on old and worn rails the entire friction will come on the flanges of the anchor *d*.

When the chain is loosened and the pull released, as in Fig. 4, it will be seen that the anchors can be twisted back and removed, and when the pull is not removed they can be loosened by a smart blow on the back side of that part of the anchor indicated by the letter *b*.

A much more powerful clench can be obtained by twisting the anchor around so that the nose extends out instead of in. It will be seen that there will be more of a twisting tension when the anchor is in such a position.

It is immaterial what kind of a chain is used. The one illustrated has one link *G* of the same size and shape as a coupling-link and can be attached to the end of a car in the same manner.

I therefore claim as my invention and desire to secure by Letters Patent—

1. A rail-gripping train-anchor, provided with a groove or opening of a width to pass over the flange of a rail, and having a flanged portion to pass the flange of the rail and bite the rail when the anchor is under strain; substantially as described.

2. A rail-gripping anchor provided with a

groove or recess in its lower face to receive a rail-web, and flaring at opposite sides of its middle to allow it to be turned laterally on the web and flanges or projecting portions on the opposite walls of the groove or recess, at opposite sides of its middle to pass under the rail-web and grip opposite sides of the rail.

3. A rail-gripping anchor provided with a recess in its lower face of a size to pass over and off of a rail and shaped to grasp the web when turned laterally, and a nose or extension at the inner side of the anchor, and means for connecting the said nose or extension with a car.

4. An anchoring mechanism for cars, comprising a pair of rail-gripping anchors having inwardly-extending noses or extensions provided with means for connecting them with a car; the lower faces of the anchors being provided with recesses to receive a rail-web, and flanges to pass under the opposite sides of the rail-webs when the anchors are turned laterally by a pull on their noses.

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