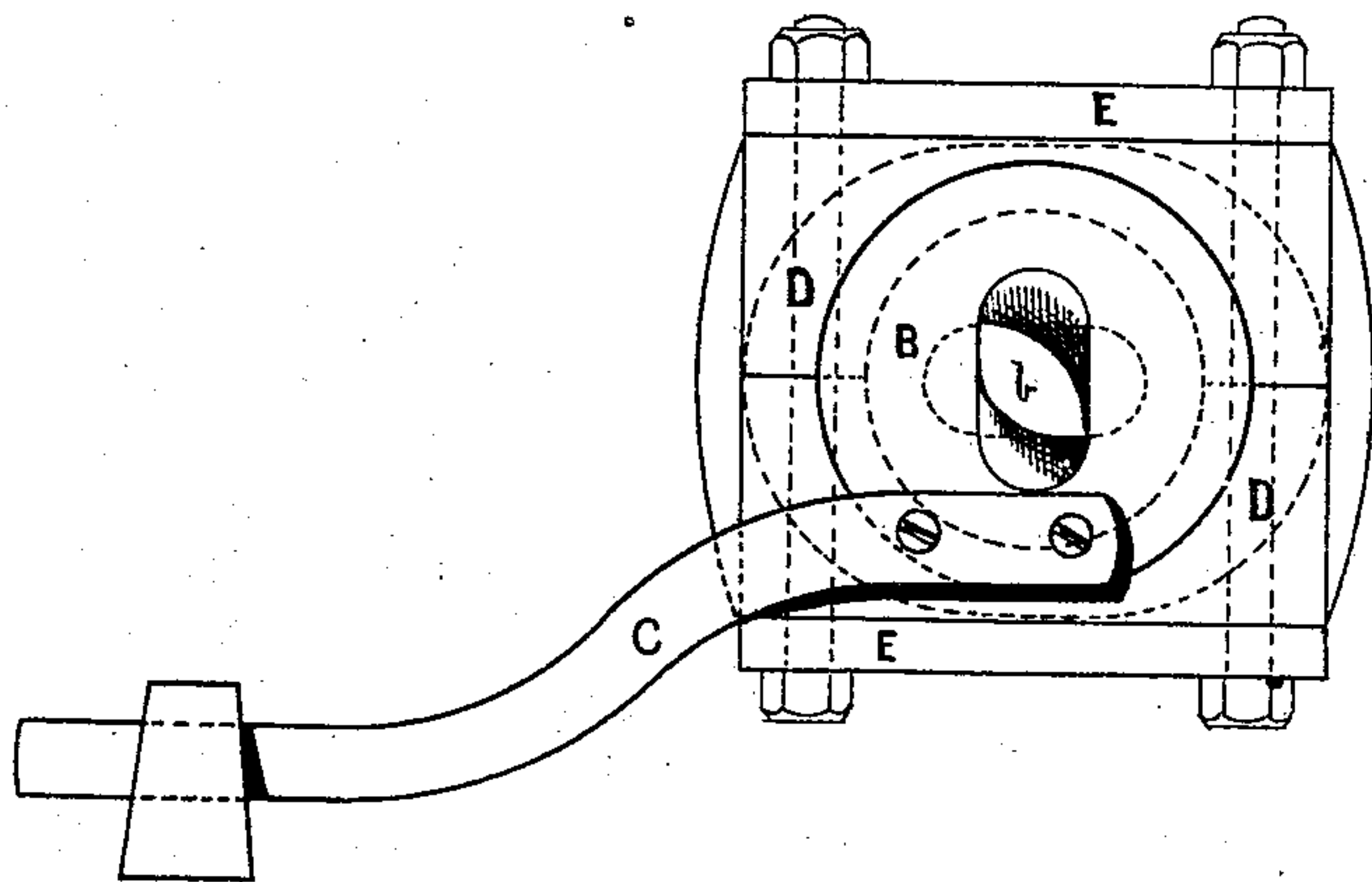
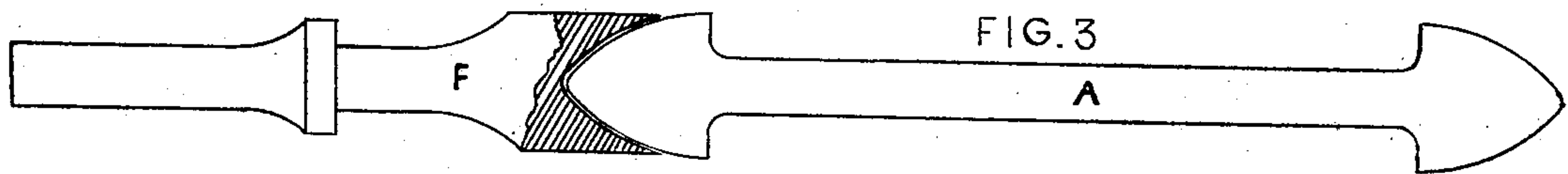
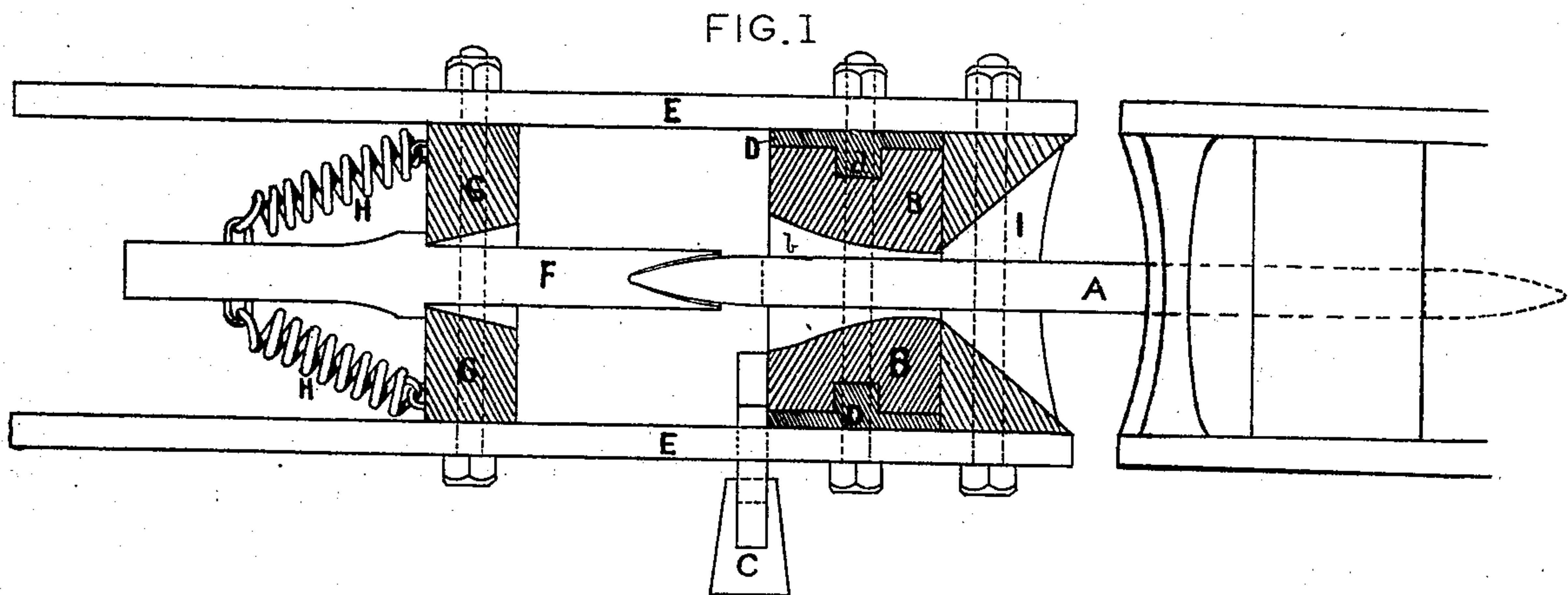


T. R. LAND.
Car-Couplings.

No. 146,008.

Patented Dec. 30, 1873.



WITNESSES.

Wm. Loutzenheiser

INVENTOR.

Thos. R. Land.

UNITED STATES PATENT OFFICE.

THOMAS REAS LAND, OF GRASS VALLEY, CALIFORNIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **146,008**, dated December 30, 1873; application filed June 3, 1871.

To all whom it may concern:

Be it known that I, THOMAS REAS LAND, of Grass Valley, Nevada county, State of California, have invented a new and Improved Railway-Car Coupling, of which the following is a specification:

My invention is an improvement in the class of car-couplings in which one or both draw-heads are provided with a rotary block having a spiral opening to receive the draft-bar.

The improvement consists in the combination of a spear-headed draft or shackle-bar, with rotary weighted blocks arranged in the draw-heads and spring-socket bars, as hereinafter described.

Figure 1 is a longitudinal section of my coupling detached from the car. Fig. 2 is a back-end view, showing opening to draw-head, &c. Fig. 3 is a plan, showing the shape of the shackle-bar, and how it fits in the sustaining-socket.

A is the link or shackle bar, each end being a flat spear-shaped head, as shown. This link, when the cars come together, enters the spiral opening *b* in the circular block B. As the link is pushed through this spiral opening it turns the block B one quarter around and lifts up the weighted lever C attached. When the spear-shaped head of the link has passed entirely through, the weighted lever drops and returns the block B to its original position, which position is such that the narrower width of the spiral opening will be crossed by the broader part of the spear-head of the link, and therefore the link will be prevented from being withdrawn through the opening. The block B is held in the draw-head by circular flange or rib *d* of the block D, which enters a cor-

responding circumferential groove in said block B. The block D is secured to the plates E by bolts, as shown. The shackle-bar or link A is sustained in a horizontal position, and guided to enter the spiral opening by the assistance of the socket-piece F. This socket-piece has a square stem which plays back and forth in a square hole in the center of the blocks G. The spiral springs H connecting the stem to the blocks operate to relieve the cars from the effects of the shock of meeting when in the act of coupling. The end of the link closely fits in this socket-piece, as shown, the other end of the link being held in a similar manner in the coupling iron of the car adjoining.

It will be seen that one of the functions of the piece F is to prevent the shackle-bar A from turning and becoming disengaged from the draw-head.

The mouth I of the coupling widens out as do other couplings, all sides converging to the opening in the center. Widening the mouth of the coupling, as shown, insures the entrance of the shackle-bar, though its height or position in relation to the car it is about to couple to may vary as one car often varies in height from another.

I claim—

The combination of the spear-headed shackle-bar A, socket-piece F, having a rectangular stem block, G, with corresponding aperture, springs H, block B, having a spiral opening and weighted lever C, as shown and described, for the purpose specified.

THOS. R. LAND.

Witnesses:

WM. SMITH,

WM. LOUTZENHEISER.