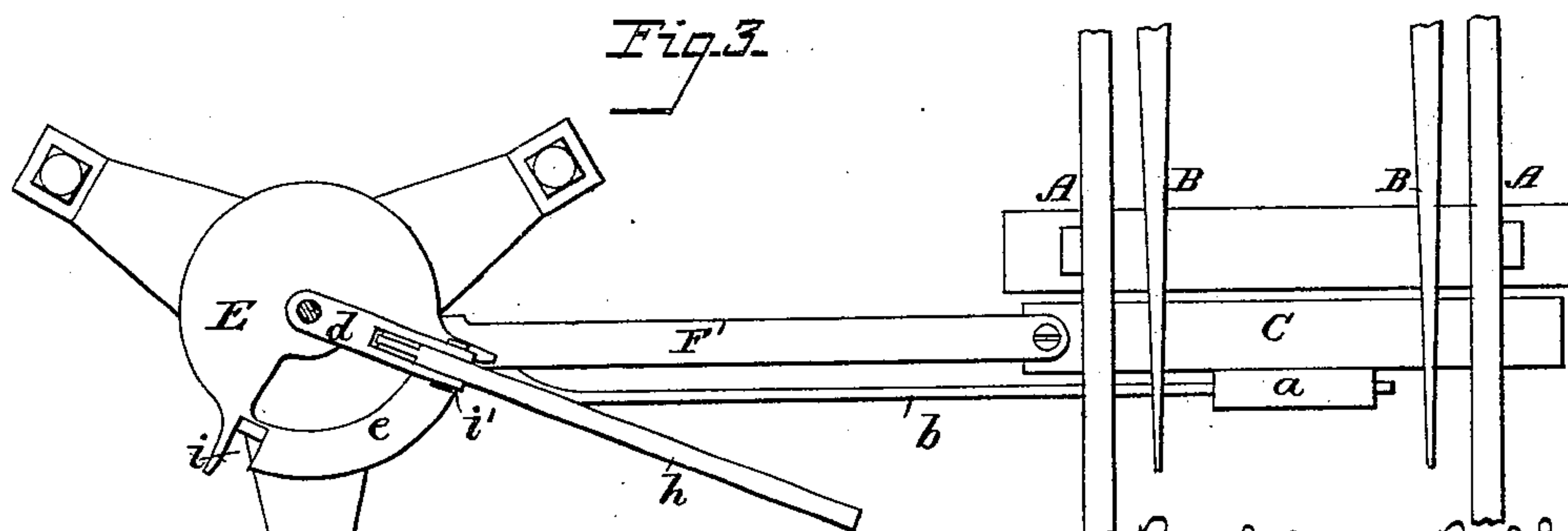
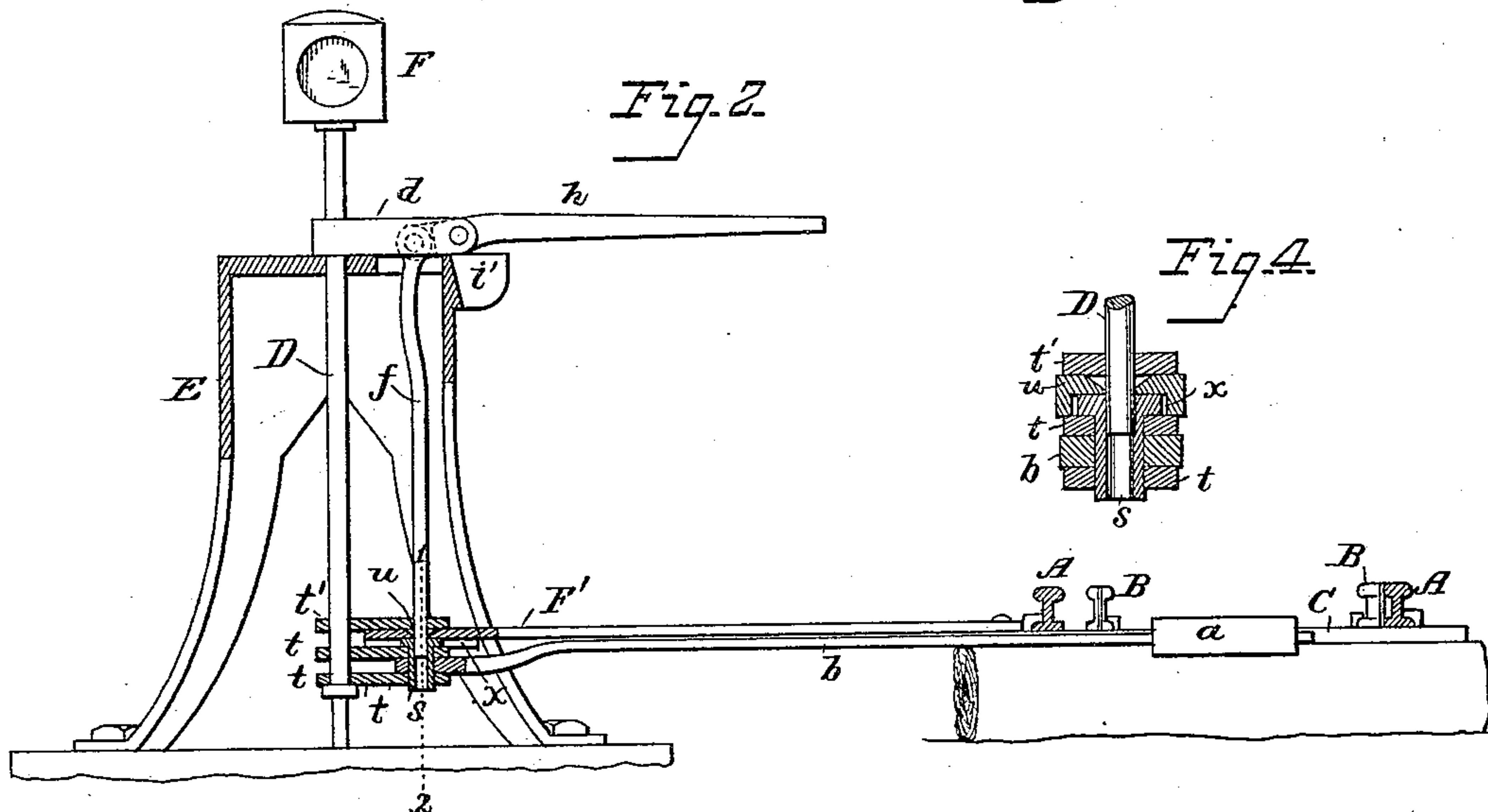
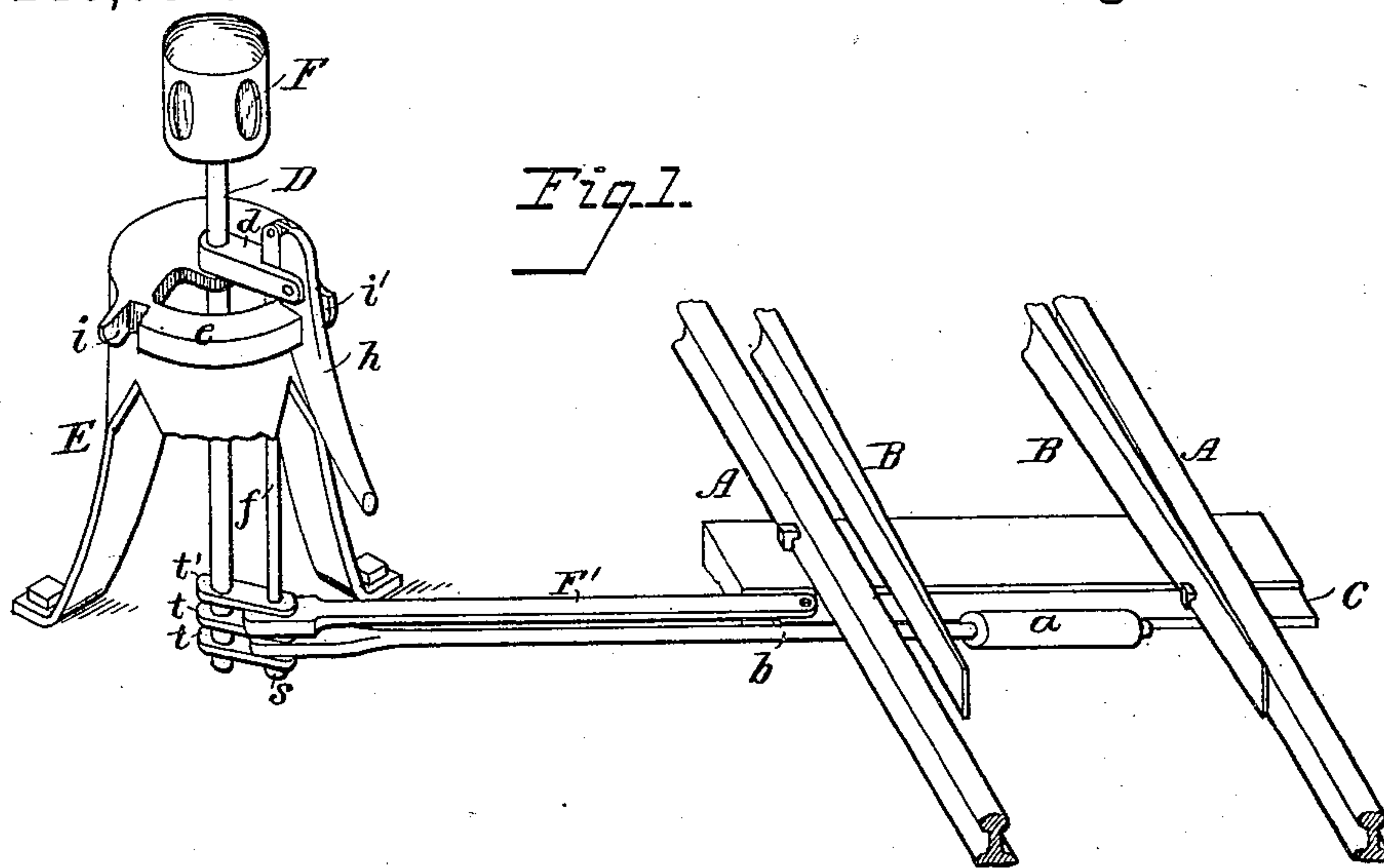


(No Model.)

B. B. DE VOUT.
RAILWAY SWITCH.

No. 246,094.

Patented Aug. 23, 1881.



Attest:
Courtney & Co. Secy.
J. M. Cleary.

Bartholomew B. DeVout
by his attorney.
Charles E. Foster

UNITED STATES PATENT OFFICE.

BARTHOLOMEW B. DE VOUT, OF HARRISBURG, PENNSYLVANIA.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 246,094, dated August 23, 1881.

Application filed March 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, BARTHOLOMEW B. DE VOUT, of Harrisburg, Dauphin county, Pennsylvania, have invented certain Improvements in Railway-Switches, of which the following is a specification.

My invention relates to that class of switches and operating devices referred to in the Letters Patent granted to me March 23, 1880, and numbered 225,747, and has for its object to provide effective and certain means for preventing the switch-operating device from being "set" unless the parts are in proper position.

In the drawings, Figure 1 is a perspective view, showing part of the main and switch rails and my improved operating and safety appliances. Fig. 2 is a sectional elevation; Fig. 3, a plan; Fig. 4, an enlarged section on the line 1 2, Fig. 2.

A A are the fixed rails, and B B the switch-rails, the latter connected by the cross-bar C, carrying the spring-box *a*, from which extends the spring-rod *b*, with which spring-switches are usually provided.

The outer end of the rod *b* is jointed between the crank-arms *t t* of an upright switch-shaft, D, supported in a stand, E.

Above the top of the stand the shaft D carries a signal or lantern, F, and is provided with a lateral arm, *d*, in the forked end of which is hung a lever, *h*, and in a segmental projection, *e*, at the edge of the top of the stand, are two notches, *i i'*, so arranged that the lever can only be dropped to vertical position when opposite one of said notches, at which time the switch-rails will be in one of the positions they should occupy.

To the inner end of the lever *h* is connected a rod, *f*, which extends through a hole in a crank-arm, *t'*, and when the lever is raised the rod passes into a hollow pin, *s*, which connects rod *b* to the cranks *t t*, and the head of which is formed to act as a guide for a safety-bar, F', having a groove, *x*, or flanges on the under side to receive said head, and which is secured at the opposite end to the bar C.

In the bar is a countersunk hole, *u*, which,

when the switch-rails are in proper position relative to the other parts, will be directly over the hollow pin *s*.

When the lever *h* is raised the rod *f* descends through the safety-bar into the hollow pin *s*, thus jointing the end of the safety-bar F' between the cranks *t t'* on the shaft D, and when the shaft D is turned the switch-rails will be carried to one position or the other, and when the movement is completed in each direction the lever *h* will be exactly over one of the notches *i i'*, and only then can it be dropped to a vertical position and locked, when the rails will be left free to be adjusted under the action of the springs in the box *a*; but should the rails in being set strike any obstruction, the shaft D cannot be turned sufficiently to bring the lever *h* over either notch *i i'*, and the lever therefore cannot assume its vertical position, and thus gives warning of the obstruction to the switchman.

By this means absolute certainty of adjustment is secured, as the switch-rails cannot be brought to either position, so as to permit the switch-lever to be locked in place, unless all obstructions are removed, and after the rails have been adjusted and the switch-lever locked they can play to the desired extent under the action of the springs.

It will further be seen that the head of the tubular pin *s* guides the safety-bar F', so that its opening will be brought absolutely beneath the rod *f*.

By countersinking the hole *u* the end of the rod *f* is guided or directed into the hole, should the latter not exactly coincide with the rod.

I claim—

1. The combination, with the switch-rails and spring-rod *b*, of the crank-shaft D and safety-bar F', connected to the rails and to the cranks on the shaft, and appliances whereby the latter connection is released only when the rails are set in proper position, substantially as set forth.

2. The combination, with the switch-rails, shaft D, its cranks *t t'*, and safety-bar F', of the switch-stand, provided with the notched segment *e* and arm *d*, connected to the shaft

D, the lever *h*, and rod *f*, extending through the cranks, substantially as set forth.

3. The combination, with the shaft D, its cranks *t t'*, arm *d*, lever, and movable rod *f*,
5 of the hollow pin *s*, having a head adapted to a groove in the safety-bar F', substantially as set forth.

4. The combination, with the rails, stand, crank-shaft, and rods *f* and *b*, of the guided

bar F', having a countersunk hole, *u*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BARTHOLOMEW B. DE VOUT.

Witnesses:

WILLIAM A. MELLEN,
EUGENE SNYDER.