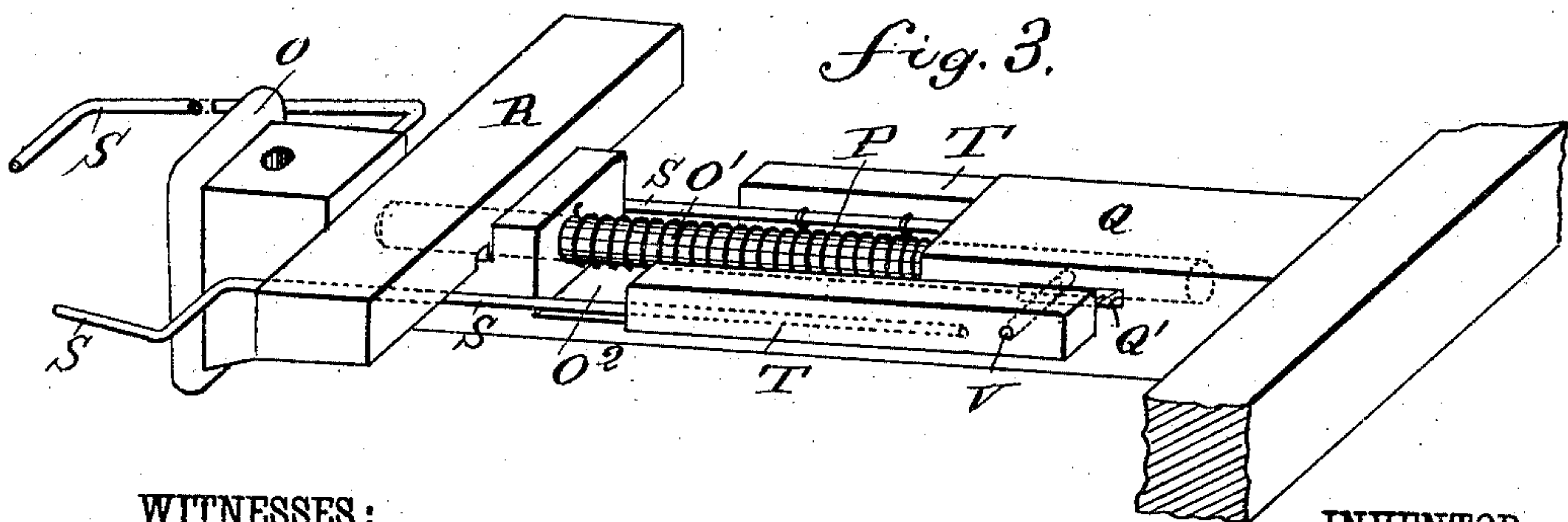
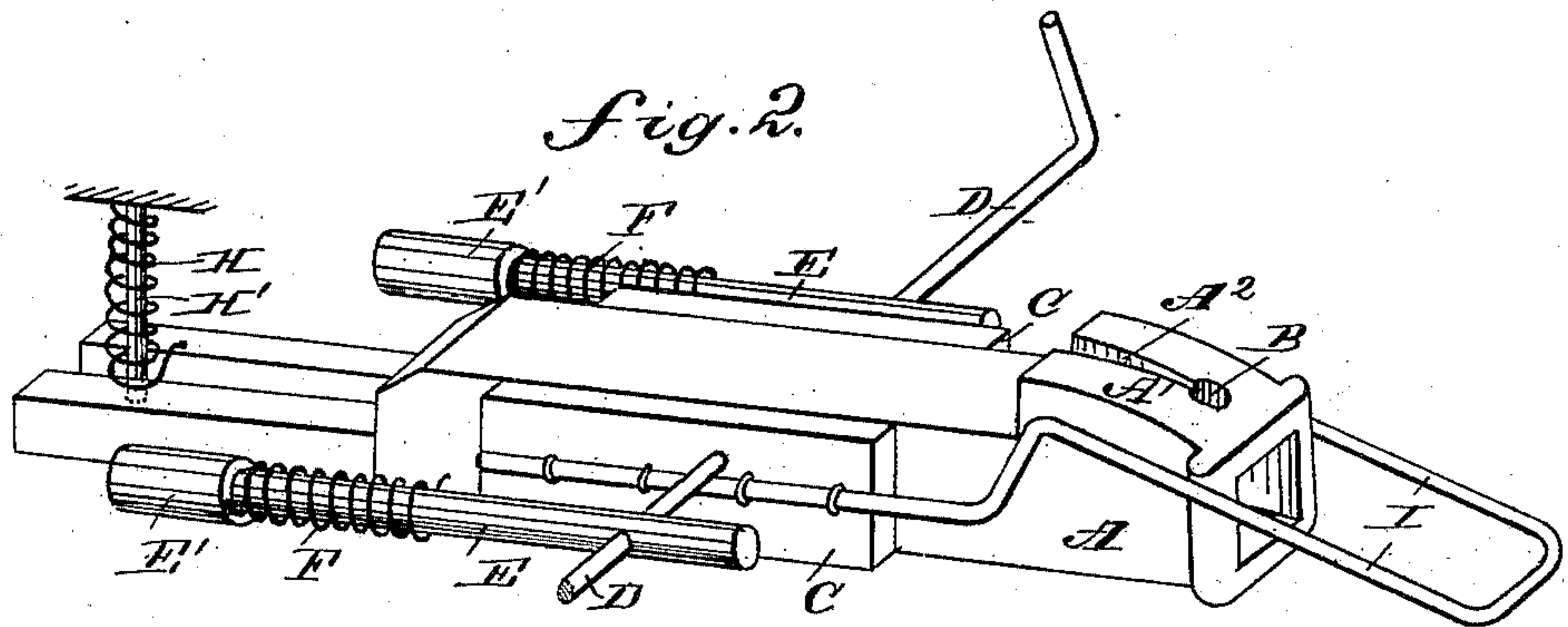
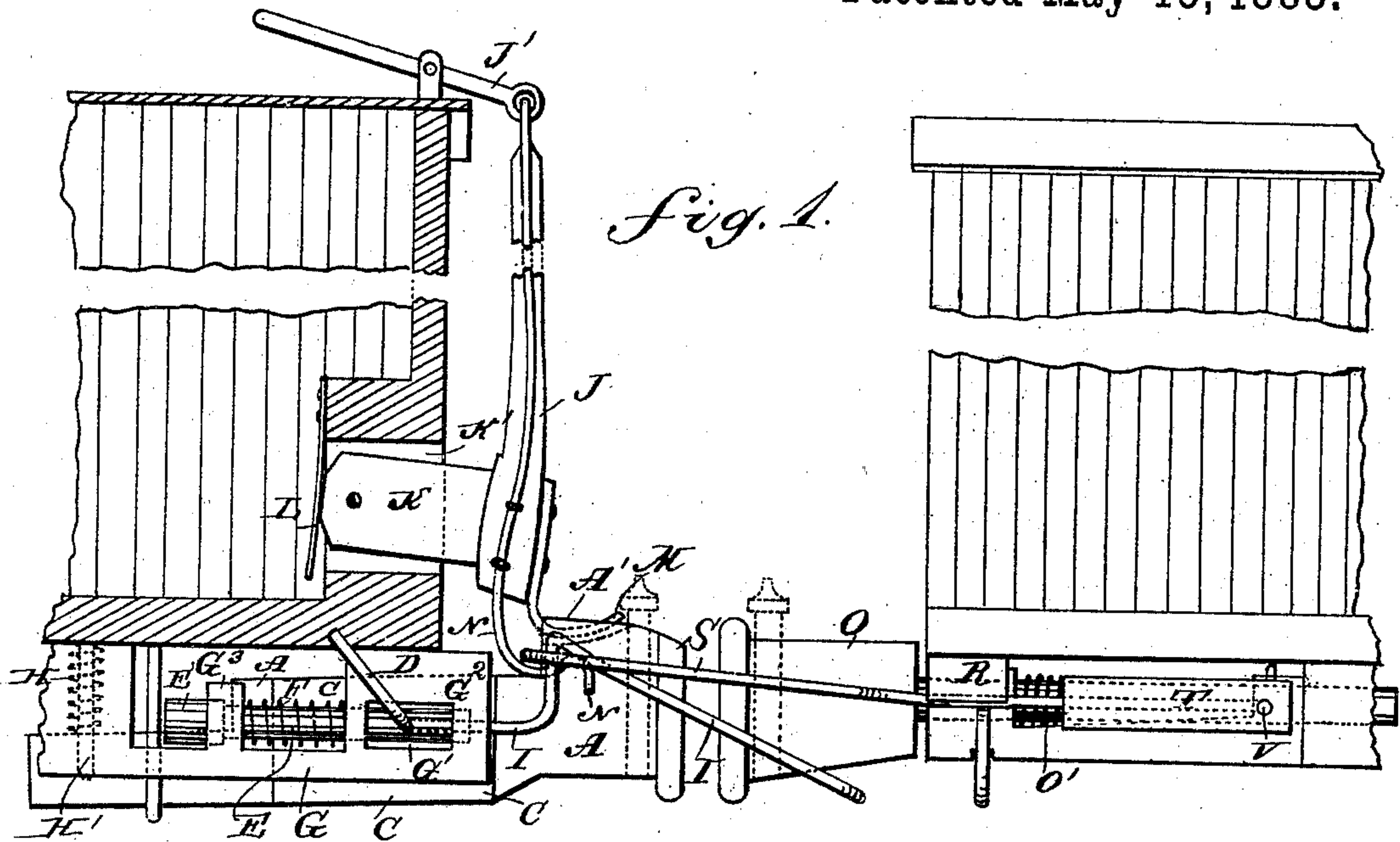


(No Model.)

E. R. BROWN.
CAR COUPLING.

No. 277,674.

Patented May 15, 1883.



WITNESSES:

Wm. Beyer
L. Bedgwick

INVENTOR:

E. R. Brown

BY

Mum & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDWARD R. BROWN, OF SPARTANBURG, SOUTH CAROLINA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 277,674, dated May 15, 1883.

Application filed September 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. BROWN, of Spartanburg, in the county of Spartanburg and State of South Carolina, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The invention consists in the peculiar construction and arrangement of the parts of a car-coupling, as hereinafter more fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal elevation of one end of one car and a longitudinal sectional elevation of one end of another car, both provided with my improved coupling. Fig. 2 is a perspective view of the coupling for one end of a car, showing the same detached. Fig. 3 is a perspective view of the coupling for the opposite end of the car, the same being also shown detached.

A different coupling mechanism is required for each end of the car, and the couplings at the opposite ends of two cars must be united to couple the cars.

One draw-head, A, is provided on its upper surface with a hook projection, A', which is beveled downward toward the outer end of the top of the draw-head. The top of the hook projection A' is provided with a groove or slot, A², extending from the pin-aperture B to the inner end of the hook projection. Two side pieces, C, are placed against the sides of the draw-head, and are held to the same by a transverse rod or shaft, D, which passes through them and the draw-head. The said rod D also passes through two bars, E, at the sides of the draw-head, which bars are provided at the inner ends with heads E', and are surrounded by spiral springs F in front of the heads. The rod D also passes through horizontal slots G' in side pieces G, attached to the under side of the car, in which side pieces the bars E are held to move longitudinally, the springs F being held between the slotted part G² and a vertical projection or lug, G³. If the bars E are moved longitudinally, the springs F will be compressed. The draw-head is piv-

oted by the rod D, and the inner end of the draw-head, which is forked, is pressed downward by a spring, H, surrounding a pintle, H', projecting downward from the bottom of the car and between the shanks of the fork formed at the inner end of the draw-head. A U-shaped spring-frame, I, projecting beyond the outer end of the draw-head, is bent upward at the inner end of the hook projection A', and is then gently inclined downward and outward. A lever, J, is provided with a rectangular projection or lug, K, which projects into a vertical recess or slot, K', in the end of the car, in which recess it is pivoted at its inner end. A lever, J', pivoted on the top of the car, has its outer end connected with the upper end of the lever J, as shown. A spring, L, rests against the inner end of the lug K. An outwardly-projecting hook, M, at the lower end of the lever J is adapted to pass into the slot or recess A² in the hook projection A'. Curved hooks N, having the lower ends curved and bent downward, are attached to the sides of the lever J at the lower end of the same. The draw-head O, at the opposite end of the car, is provided at its inner end with a spindle, O', which is surrounded by a spiral spring, P, which is contained in a recess, O², in the upper surface of the draw-head. The outer end of the spring P rests against the outer end of the recess O², and the inner end rests against a block, Q, into which the inner end of the spindle is adapted to pass, and in which it can move longitudinally, whereby the said spring P will be compressed. A transverse piece, R, on the under side of the car passes through a transverse recess in the upper surface of the draw-head. A wide U-shaped spring-frame, S, has the inner ends of its shanks attached to pieces T, held to slide on the sides of the block Q. A transverse pintle, V, passes through the inner ends of the side pieces T and the inner end of the spindle O', the block Q being provided with longitudinal slots Q' in the sides, through which slots the pintle V can pass.

The operation is as follows: If the cars are to be coupled, the inner end of the lever J' must be depressed and the lower end of the lever raised. When the cars come together, the spring-frame S slides up the inclined hook

projection A' at the end of the same, and snaps down behind the same. The cross-piece of the frame S passes in between the hooks M and N on the lever J, and then the lever J is raised, whereby the lower end of the lever J will move downward, and the hook M will pass into the recess A², whereby the frame S will be locked in place.

The ends of the hooks N are rounded, so that the cross-piece of the frame S does not catch on the same or pass under them. If the cars are to be uncoupled, the lever J is raised by means of the lever J'. The hook M passes out of the recess A², and the hooks N raise the frame S above the inner end of the hook projection. The frame I forms a guide for the frame S in coupling. The spring L holds the lever J in the desired position. The springs F and P act as buffer-springs in both directions.

Cars provided with my improved coupling can also be coupled to cars having the usual link-and-pin coupling.

A suitable spring may be arranged to act directly by downward pressure on the hook M, to substitute the spring L, as shown in the drawings.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The draw-head A, provided on its top with a hook projection, A', beveled downward to the outer end of the draw-head, and provided with a groove or slot, A², extending from the pin-aperture B to the inner end of the hook projection, substantially as shown and described.

2. The combination, with the draw-head A, having a hook projection, A', of the U-shaped spring-frame I, bent upward at the inner end of the hook projection A', substantially as herein shown and described, and for the purpose set forth.

3. The combination, with the draw-head A, of the U-shaped frame I, the side pieces C, the transverse rod D, the bars E, and springs F,

held between the slotted part G² and lug G³, the whole arranged, constructed, and operated substantially as shown and described.

4. The combination, with the pivoted draw-head A, having its inner end forked, of the downwardly-projecting pintle H' and the spiral spring H, pressing on the forked end of the draw-head, substantially as herein shown and described, and for the purpose set forth.

5. The combination, with the draw-head A, provided with a hook projection, A', having a slot or groove, A², of the lever J, pivoted on the end of the car, and of the hooks M and N, attached to the lower end of the lever J, substantially as herein shown and described, and for the purpose set forth.

6. The combination, with the draw-head A, provided with a hook projection, A', having a slot or recess, A², of the lever J, provided with a lug, K, pivoted in the end of the car, the spring L, resting against the inner end of the said lug, and of the hooks M and N, attached to the lower end of the said lever J, substantially as herein shown and described, and for the purpose set forth.

7. The combination, with the draw-head A, of the lever J, provided at its lower end with hooks M and N, and of the lever J', pivoted to the top of the car and to the upper end of the lever J, substantially as herein shown and described, and for the purpose set forth.

8. The combination, with the draw-head O, of the U-shaped frame S, attached to the same, substantially as herein shown and described, and for the purpose set forth.

9. The combination, with the draw-head O, of the U-shaped frame S, the side pieces T, the block Q, the pintle V, passing through the side pieces T and the inner end of the spindle O', and of the spring P, substantially as herein shown and described, and for the purpose set forth.

EDWARD R. BROWN.

Witnesses:

S. S. ROSS,

E. E. BOMAR.