

(No Model.)

H. V. HINCKLEY.  
SWITCH STAND.

No. 348,968.

Patented Sept. 14, 1886.

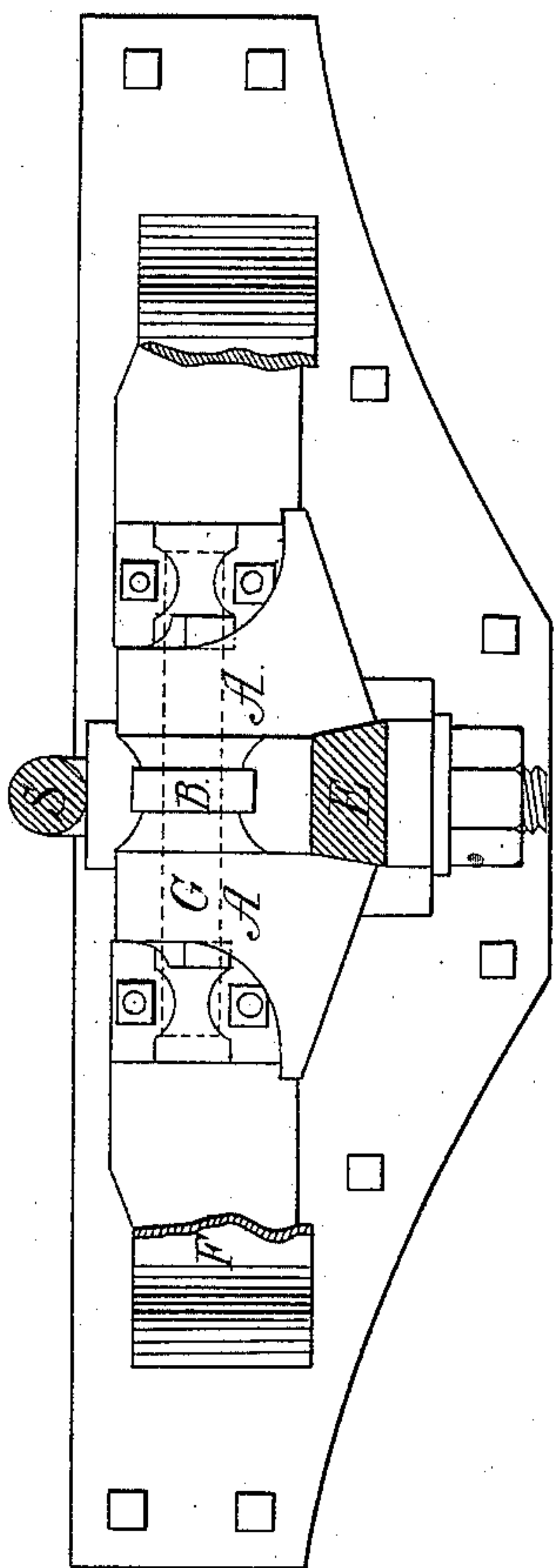


Fig. 2

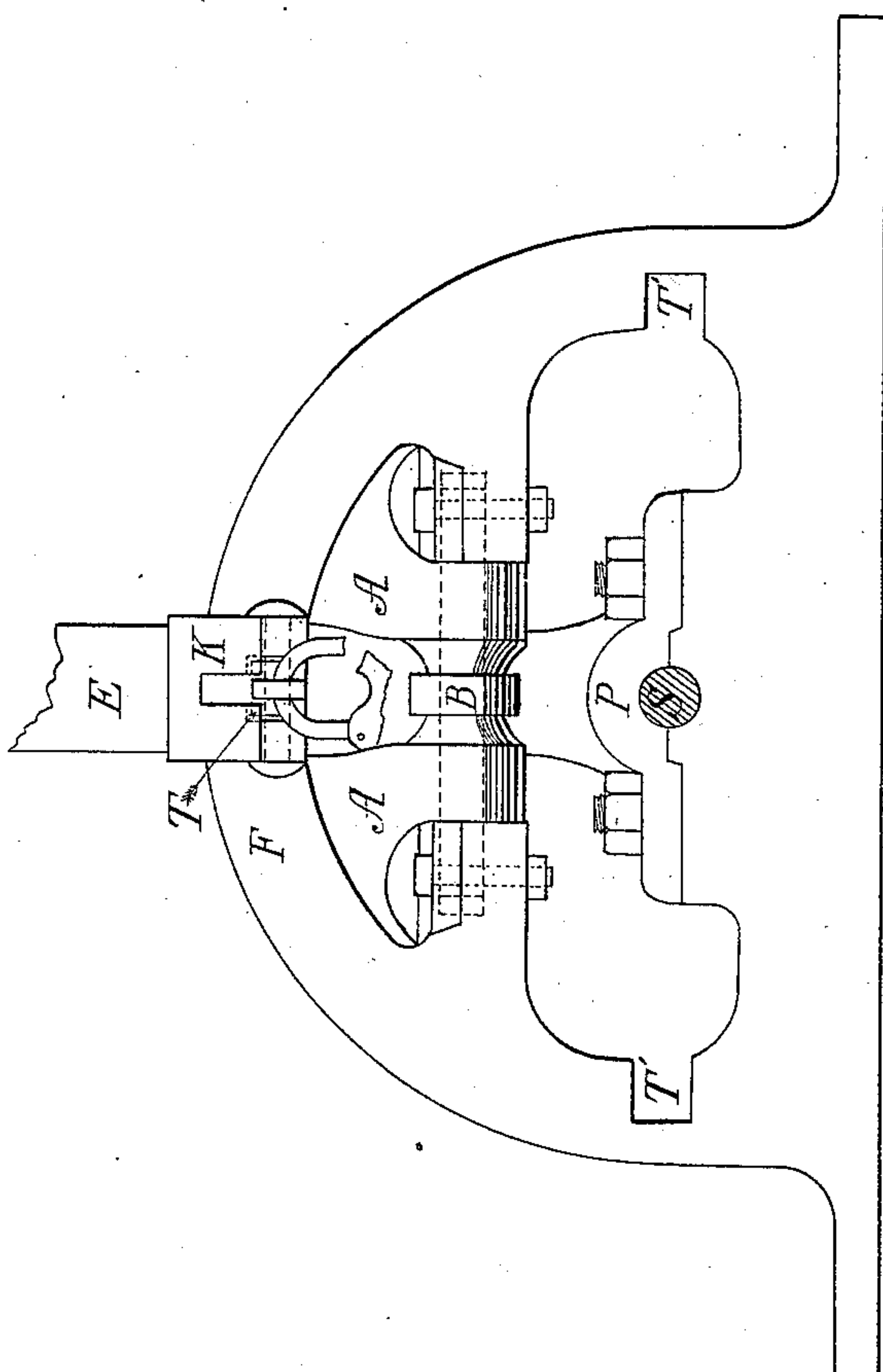


Fig. 3

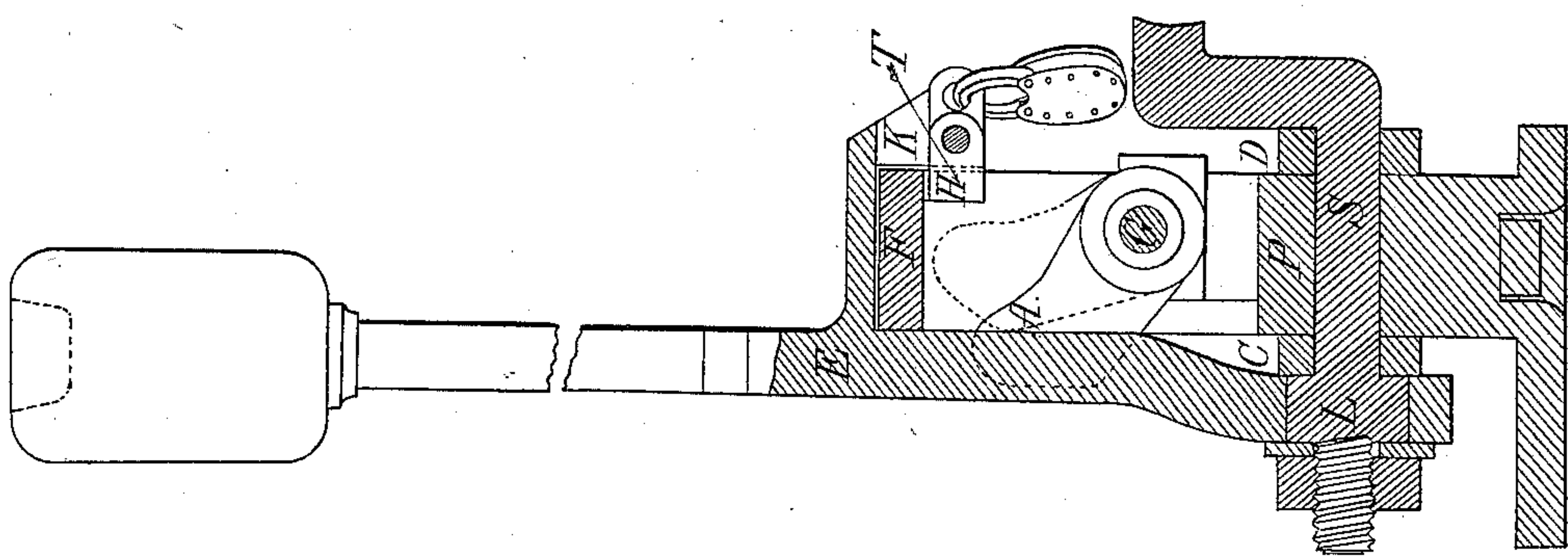


Fig. 1

Witnesses

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# UNITED STATES PATENT OFFICE.

HOWARD V. HINCKLEY, OF TOPEKA, KANSAS.

## SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 348,968, dated September 14, 1886.

Application filed May 21, 1886. Serial No. 202,912. (No model.)

*To all whom it may concern:*

Be it known that I, HOWARD V. HINCKLEY, a citizen of the United States, and residing at Topeka, county of Shawnee, and State of Kansas, have invented a new and useful Improvement in Railroad-Switch Stands, of which the following is a specification.

My invention relates to improvements in railroad-switch stands where the throwing-lever revolves in a vertical plane about a fulcrum at one end of lever near the ground, such a lever being commonly known as a "tumble-lever;" and the objects of my invention are, first, to provide an automatic stop and hold for the lever in its central position, and, second, to provide a convenient means of locking it in that position. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of stand on a plane parallel with the railroad-track, and showing automatic lugs. Fig. 2 is plan of stand with semicircular rim removed to show mechanism below. Fig. 3 is a rear elevation of stand.

Similar letters refer to similar parts throughout the several views.

The fulcrum about which the tumble-lever E revolves is the shaft S, which extends in a direction which is in most of its length parallel with the railroad-track, and which throws the required mechanism or combination of switch bars and rails. The lever E is provided with a flange, K, extending over and down behind the semicircular rim F of the stand. The washers C and D having been shrunk onto the shaft S, the shaft is then placed in position, and the journal-cover P is secured by lag-screws. The flange K of the lever is then placed over the rim F of the stand, and the lever then secured to the shaft at L in Fig. 1. This being done, the flange K, depending over the rim F, serves two purposes: first, to steady and guide the lever in its motion through the vertical plane in case of any looseness of the lever-fastening upon the shaft at L; second, to provide the locking device hereinafter described. The two lugs A turn freely upon a horizontal pivot pin or shaft, G, upon which they are separated by a collar, B, which is shrunk onto said pivot-pin before being placed into position in its

journal-bearings. The lever in being raised from either horizontal position to its center or vertical position encounters the beveled face of the nearest lug A, (see Fig. 2,) and throws that lug back out of its way, as shown by dotted lines in Fig. 1. The other lug A stops the lever at its proper vertical position, and the thrown lug, having most of its weight on the lever side of the pivot-pin, as shown in Fig. 2, is returned at once by force of gravity to its normal position, and the lever is securely held on both sides by the lugs A.

When it is desired to throw the lever into either horizontal position, a touch of the switchman's foot to the proper lug pushes it away and the lever is readily thrown; when the lug again returns to its normal position, ready always to do its duty, and by prompt automatic action, avoiding the delays and dangers often occurring where stops and holds for the lever are not self-acting. The lugs A may be pivoted near the bottom, as shown, or may be pivoted near the top, with their greater weight on the side of pivot-pin remote from the lever; but to secure a longer bevel on their faces I prefer to put the heavy side toward the lever and the pivot nearer the bottom of the lugs, substantially as shown. The two lugs may also be made as one, omitting the separating-collar B; but as this construction would be less effective as a lever-stop I prefer the construction here shown. The semicircular rim F has a depending rim on rear side in Fig. 3, which does not show in Fig. 1, as the section is taken through the slot in which the locking-lug H operates. The locking-lug H operates upon a pin passing through the bifurcated depending rim K, and is several times as thick and heavy on the end marked H in Fig. 1 as it is on the perforated end. Therefore, when the switch is not locked this lug remains vertical or parallel with the lever, and swings with the lever to and fro.

When it is desired to lock the switch, the bottom or heavy end of the locking-lug H is pushed toward the tumble-lever, the perforated end coming out from the slot in the bifurcated rim K to receive the hasp of the padlock, as shown in Figs. 1 and 3.

When the padlock is in place, as shown, it is prevented from going up by the projecting rim



K. The heavy end of the lug H is therefore prevented from going down, and, remaining in the slot T of the vertical semicircular rim of stand, holds the switch securely locked in position till the padlock is removed. When the padlock is removed, the heavy end of the lug H falls, the perforated end goes into the slot in the bifurcated rim K above it, (see Fig. 3,) and the lever can be readily thrown.

10 The semicircular rim F may be provided with two additional slots, T', for locking the lever when in its horizontal positions; but on account of the ease with which a lock may generally be applied through a staple in the end of the lever to a fastening driven into or bolted to the head-block, tie, or stand itself, and for the reason that the locking-lug H will not be automatic if used in the slots T', I prefer, generally, to omit the slots T' in construction.

20 I claim and desire to secure by Letters Patent—

1. In a railroad-switch stand having a vertical semicircular rim, F, the automatic lug or lugs A, constructed and operated beneath said rim and upon the pivot-pin G, substantially as described, for stopping and holding the tumble-lever.

2. In a railroad-switch stand, the pivot-pin G, in combination with the rim F, the switch-lever E, the lug or lugs A, either with or without the collar B, and made and operating substantially as herein shown and described.

3. In a railroad-switch stand, the bifurcated

35 flange K, projecting and depending over the semicircular rim F, which stands in a vertical are, for guiding the lever and holding the device that receives the padlock, substantially as shown.

4. In a railroad-switch stand, the automatic lug H, for receiving the hasp of the padlock, in combination with the bifurcated and depending flange K, the rim F, and the lever E, constructed substantially as shown and described.

5. A railroad-switch stand having a vertical semicircular rim provided with the slot T, whose center is in the vertical plane that passes through the center line of the shaft S at L, parallel with the main track, and also provided with the slots T', whose centers are in a horizontal plane passing through the center line of the shaft S at L, said slots acting with the locking-lug H in securing the switch in its different positions, as described.

6. The combination, in a railroad-switch stand, of the slot T, the slots T', the perforated locking-lug H, the projecting and depending flange K of the lever E, and the rim F.

7. In a railroad-switch stand, the combination of the locking-lug H, the slot T and slots T', the projecting, depending, and bifurcated flange K, the pivot-pin G, the lug or lugs A, and the collar B, with the rim F, lever E, and shaft S.

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Witnesses:

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