(No Model.)

H. C. SINGISER.

SWITCH STAND.

No. 345,081. Patented July 6, 1886.

Fig. 1.

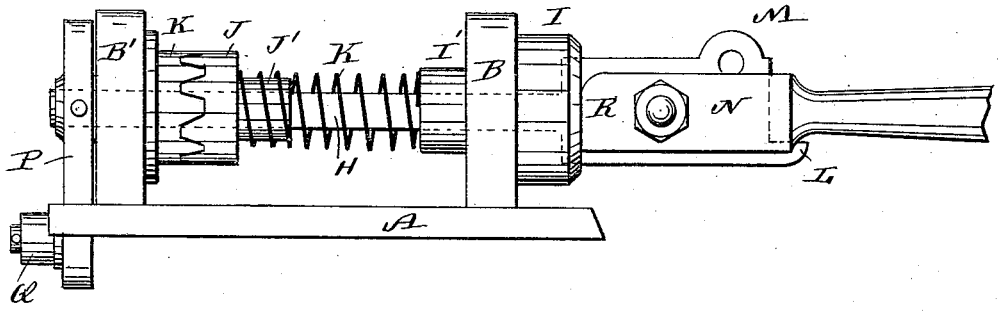


Fig. 2.

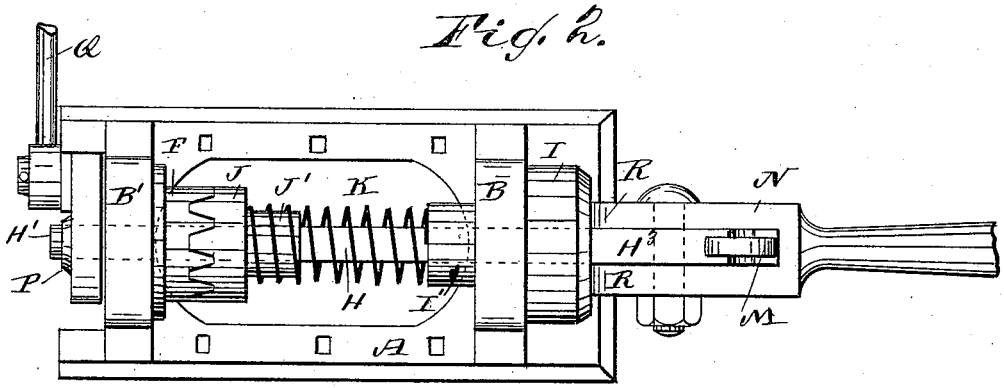
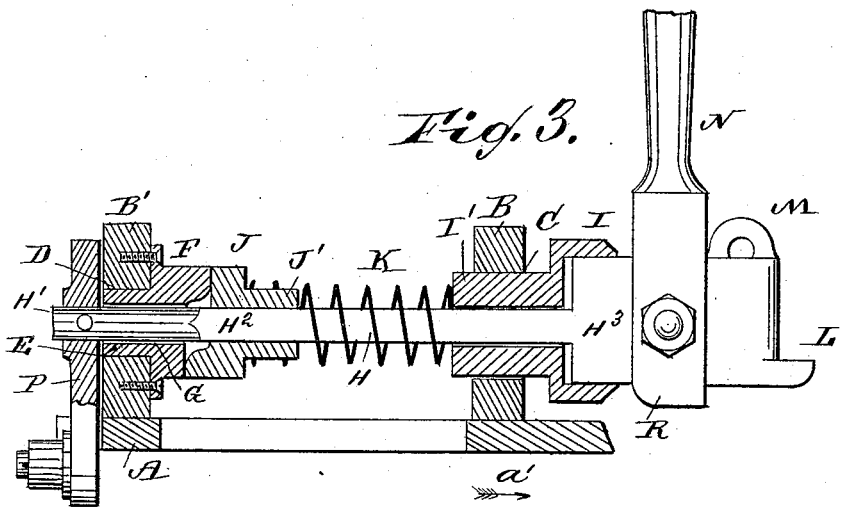


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY C. SINGISER, OF MECHANICSBURG, PENNSYLVANIA.

SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 345,081, dated July 6, 1886.

Application filed September 10, 1885. Serial No. 176,738. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SINGISER, of Mechanicsburg, in the county of Cumberland and State of Pennsylvania, have invented a new and Improved Switch-Stand, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved switch-stand which is simple in construction, safe, and reliable, and which can be locked securely.

The invention consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and pointed out in the claims.

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

Figure 1 is a side view of my improved switch-stand. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional elevation of the same.

On the base-plate A two standards, B and B′, are secured, of which the former is provided with a circular aperture, C, and the latter is provided with a squared aperture, D, through which a squared neck, E, is passed, projecting from a toothed clutch-disk, F. The clutch-disk F and the neck E are provided with a tubular bore, G, through which the rounded end part H′ of the shaft H is passed, which shaft has a squared central portion, H^2. On the squared part H^2 of the shaft a clutch-disk, J, is mounted to turn with the shaft, the teeth of the clutch-disk J interlocking and engaging the teeth of the disk F. A spiral spring, K, surrounds the shaft H and rests against the clutch-disk J, part of the spring surrounding the neck J′ of said disk. The other end of the spring K rests against a neck, I′, of a collar, I, mounted to turn in the aperture C of the standard B, through which collar the squared part H^2 of the shaft passes, and into a recess or notch in the collar I the flattened end H^3 of the shaft passes. The spring K presses the disk J against the clutch-disk F. On the flattened portion H^3 of the shaft H the forked end of a lever, N, is pivoted, the ends of the prongs of the fork being rounded to form cams R, which can act on the face of the collar I. A prong, L, is formed on the end of the flattened portion H^3 of the shaft, on which prong the lever N can rest when swung down, as shown in Figs. 1 and 2. An eye, M, is formed on the upper end of the flattened portion H^3 of the shaft H, for receiving a pin for locking the lever N in place when the same is swung down. An arm, P, is mounted on the end H′ of the shaft H, and is connected with the rod Q for throwing the switch-tongues.

The operation is as follows: When the switch is locked, the lever N is swung down and the shackle of a padlock is passed through the eye M, thus keeping the shaft H and lever N in line. As the ends R of the forked lever N rest against the collar I, they keep the spring K in tension and the spring presses the disk J against the disk F. When the switch is to be thrown, the lock is removed, the lever N swung up into the position it has in Fig. 3, and the spring K forces the neck I′ and collar I in the direction of the arrow *a′*, Fig. 3. The lever N is then swung to the right, whereby the shaft H is turned and swings the arm P to the right or left and operates the rod Q. The clutch-disk J is turned with the shaft H, and the disk F remains fixed. The teeth of the clutch-disk J slide over the teeth of the disk F and lock the parts in place as soon as the lever N is released. The lever N is swung down and its ends come in contact with the end surface of the collar I and press said collar and its neck I′ in the inverse direction of the arrow *a′*, whereby the spring K is compressed and presses the disk J firmly against the clutch-disk F. Then the lever N is locked in place by means of a lock. When the lever N is swung down and locked, the shaft cannot be turned, as sufficient leverage cannot be obtained, the tension of the spring K being so great as to make it impossible to cause the teeth of the disk J to slide on the teeth of the disk F. When the handle-lever N is raised, the tension on the spring is removed and the long arm N can be used to turn the shaft H.

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

1. The combination, with the shaft H, of the fixed clutch-collar F, the clutch-collar J on the shaft, the collar I, having the neck I′, through

which the shaft H passes, the collar having a recessed part for receiving the flattened end H^3 of the shaft H, the lever N, pivoted on the flattened part H^3, and of the spring K, surrounding the shaft and pressing the clutch-disk J against the disk F, substantially as herein shown and described.

2. The combination, with the shaft H, having the flattened part H^3, having the flange L′, of the fixed clutch-disk F, the clutch-disk J on the shaft H, the spring K, and of the forked lever N, pivoted on the flattened part H^3, substantially as herein shown and described.

HENRY C. SINGISER.

Witnesses:
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