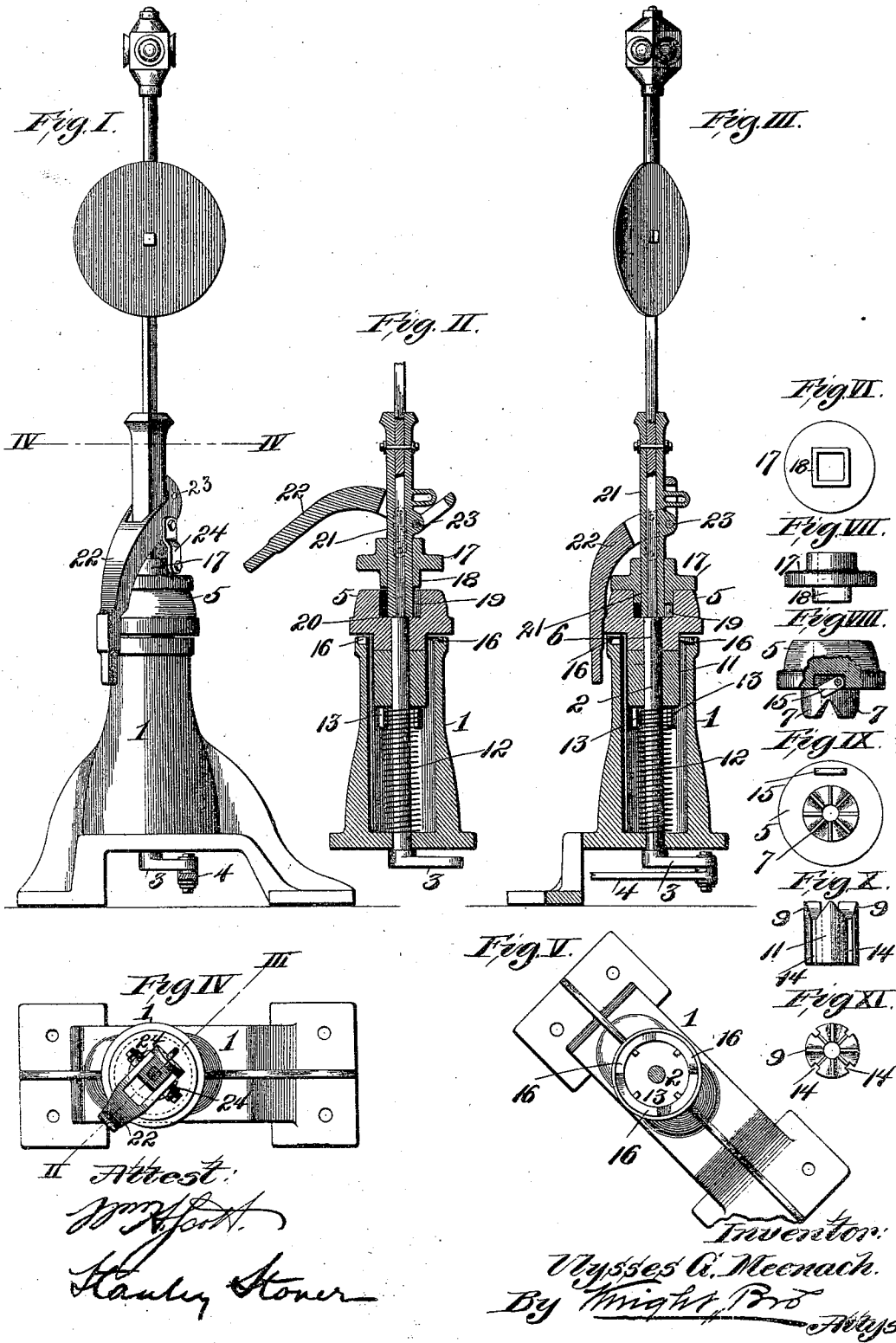


(No Model.)

U. G. MEENACH.
SWITCH STAND.

No. 542,168.

Patented July 2, 1895.



UNITED STATES PATENT OFFICE.

ULYSSES G. MEENACH, OF ALTON, ILLINOIS.

SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 542,168, dated July 2, 1895.

Application filed March 26, 1895. Serial No. 543,289. (No model.)

To all whom it may concern:

Be it known that I, ULYSSES G. MEENACH, of Alton, Madison county, State of Illinois, have invented certain new and useful Improvements in Automatic Switch-Stands, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in automatic switch-stands; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side view of my improved switch-stand. Figs. II and III are vertical sections taken on line II III, Fig. IV, showing the parts in different positions. Fig. IV is a section taken on line IV IV, Fig. I. Fig. V is a top view of the body of the switch-stand. Fig. VI is a bottom view of the locking-collar of the stand. Fig. VII is a side view of same. Fig. VIII is a side view of the stand-cap. Fig. IX is a bottom view of same. Fig. X is a side view of the ratchet-block. Fig. XI is a top view of same.

Referring to the drawings, 1 represents the body of the switch-stand, and 2 the shaft of the stand, having on its lower end a crank 3, connected to the switch-bar 4.

My improved switch-stand is well adapted for use in connection with mechanism for automatically throwing the switch by a passing train—such a mechanism, for instance, as is shown in my application, Serial No. 531,878, filed December 15, 1894—and to permit of the switch being automatically moved by the locomotive to close it for the main track, while preventing this movement of the switch by the locomotive should it be passing from the side track onto the main track, while at the same time allowing for the switch to be moved by hand to open it from the main track is the object of my invention.

5 represents a cap having a depending neck 6 fitting within the hollow center of the body of the stand. The lower face of the neck of the cap is notched out, forming teeth 7, (see Fig. VIII,) that engage with teeth 9 (see Fig. X) on the upper end of a ratchet-block 11. The block 11 fits in the hollow stand and surrounds

the shaft 4, as shown in Figs. II and III, and it is held up against the cap so that the teeth of the two engage by means of a spring 12, surrounding the shaft 4. The ratchet-block is held from rotary movement, while it is free to move vertically, by means of ribs 13 on the inside of the stand 3, and which engage or fit in grooves 14, formed in the outer surface of the block.

The cap 5 is provided with a dog 15, that engages with ratchet-teeth 16, formed on the upper edge of the stand, and prevents the cap from being turned forward when the dog is raised. The dog does not prevent the cap from being turned backwardly, which is the direction that it moves when the switch is being closed to the main track.

17 represents a collar having a non-circular lower extension 18, that fits in a non-circular socket 19 in the cap 5. Above the point 20, Fig. II, the shaft 2 is made non-circular, and fitting over this part of the shaft is a non-circular sleeve 21, that passes through the collar 17, and to which the operating-lever 22 of the switch-stand is pivoted at 23. The lever 22 is connected to the collar 17 by means of links 24. (See Fig. I.) The upper end of the shaft 2 carries the usual signals, as shown in Figs. I and III. From this construction it will be seen that when the switch is opened to the main track and the mechanism operating it is struck by the locomotive the switch will be allowed to close by the cap 5 turning backward and carrying the other parts of the stand, with the exception of the body 1 and block 11, around with it, the dog 15 slipping over the teeth 16.

Should the train be moving from the side track onto the main track, the switch will not be opened automatically for the reason that the shaft 2 will be locked to the body of the switch-stand through means of the described parts, the dog 15 engaging the teeth 16 and the shaft 2 being held from turning by the cap through means of the locking-collar 17 and the other parts.

When it is desired to open the switch and permit the train to pass from the side track onto the main track, it may be done by taking hold of the lever 22 and lifting it from the position shown in Fig. III to the position shown

in Fig. II, when the collar 17 will be raised out of the socket of the cap 5, and the shaft 2 thus disconnected from the cap, so that it can be turned to move the switch.

- 5 By providing the ratchet-block 11 a resistance to the backward movement of the cap 5 is offered, so that the switch will not be accidentally moved, while this resistance is not sufficient to prevent the moving of the cap 5
10 when the locomotive strikes the automatic mechanism that throws the switch, the spring 12 at this time yielding to the pressure and the ratchet-block descending, allowing the teeth of the cap to slip over the teeth of the
15 block.

I claim as my invention—

1. The combination in an automatic switch stand, of a cap having ratchet connection with the body of the stand, a vertically movable
20 collar held from rotary movement upon the shaft of the stand and engaging said cap when in its lower position, and a lever connected to said collar and adapted to raise it out of engagement with said cap, substantially as and
25 for the purpose set forth.

2. In an automatic switch stand, a hollow switch stand body, a cap having pawl and ratchet connection with the stand, a collar having a non-circular extension fitting in a
30 socket in said cap, a shaft, a non-circular sleeve passing through said collar, a lever piv-

oted to said sleeve, and a connection between said lever and collar, substantially as set forth.

3. In an automatic switch stand, the combination of a hollow switch stand body, a shaft, 35 a ratchet block surrounding the shaft and held from turning within said body, a cap having teeth engaging the teeth of the ratchet block, a spring acting to hold the block into engagement with said cap, a pawl and ratchet 40 connection between said cap and said body, a collar having a non-circular extension fitting in a socket in said cap, a sleeve secured to the shaft and fitting within said collar, a lever pivoted to the sleeve, and straps connecting said 45 lever to said collar, substantially as set forth.

4. In an automatic switch stand, the combination of a switch stand body having internal ribs, a ratchet block having grooves to receive said ribs, a spring for holding the block 50 in its upper position, a cap having pawl and ratchet connection with said body, and having teeth engaging the teeth of said block, a collar having a non-circular extension fitting in a socket in said cap, a sleeve secured to the 55 shaft of the stand, a lever pivoted to the sleeve, and straps connecting the lever to the collar, substantially as and for the purpose set forth.

ULYSSES G. MEENACH.

In presence of—

GEO. H. KNIGHT,
STANLEY STONER.