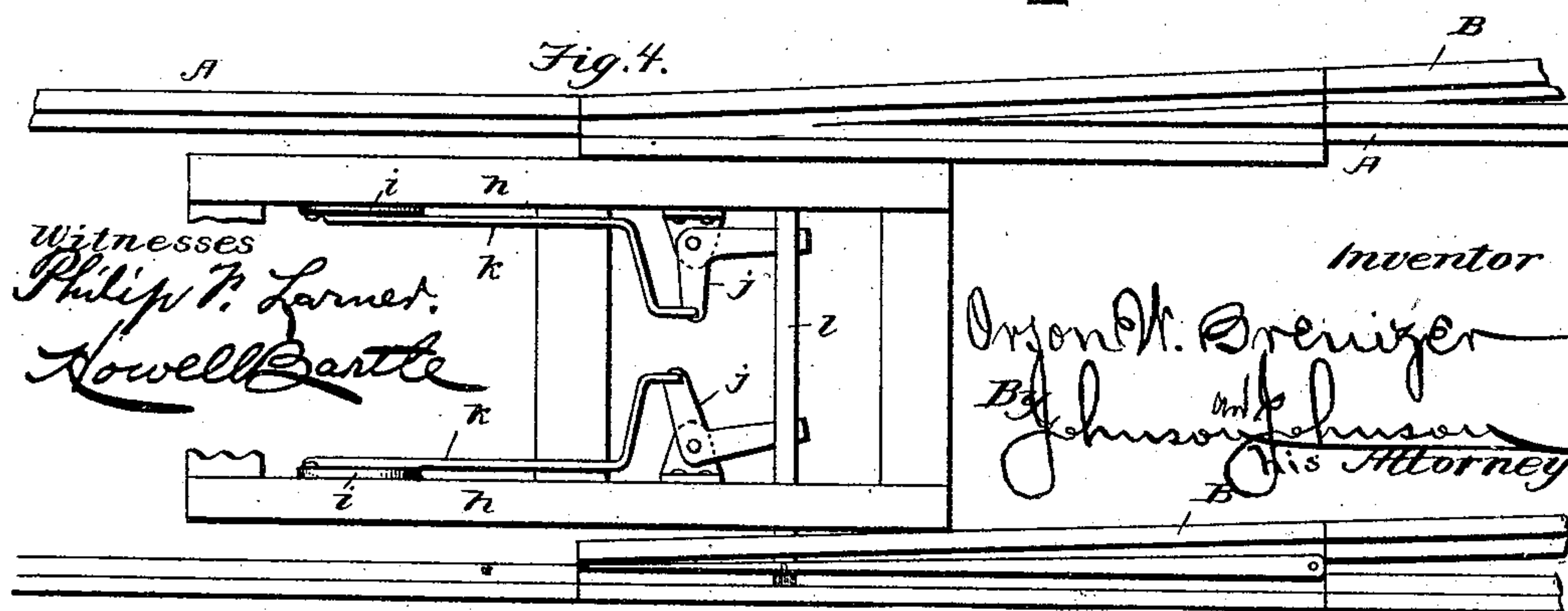
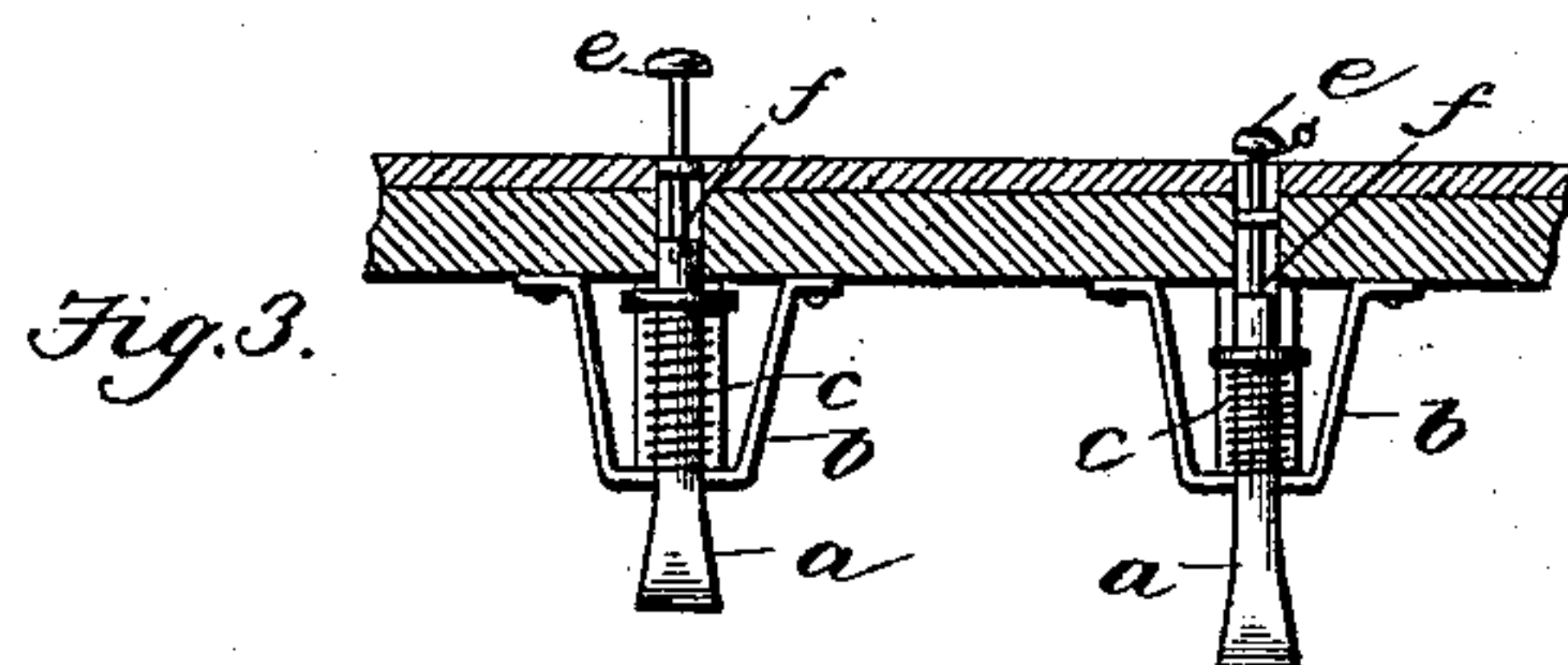
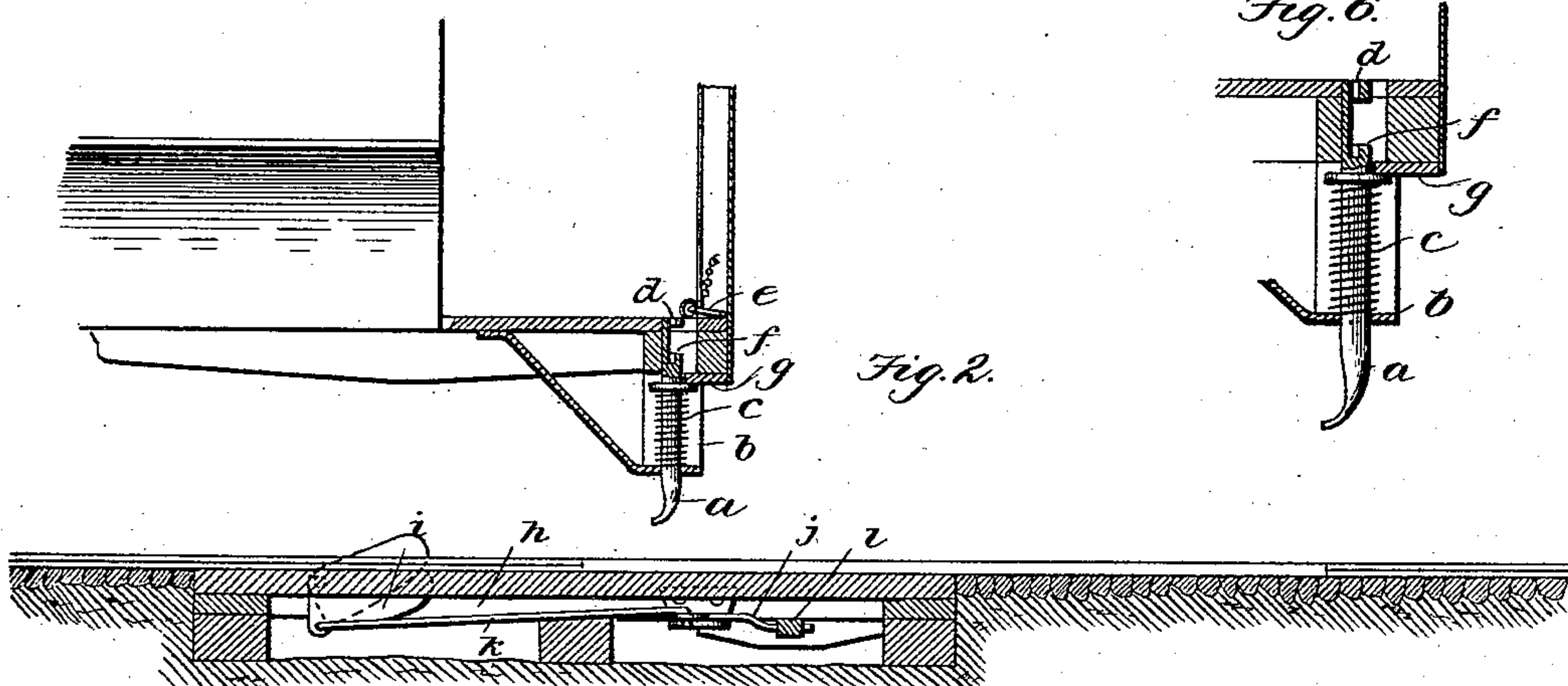
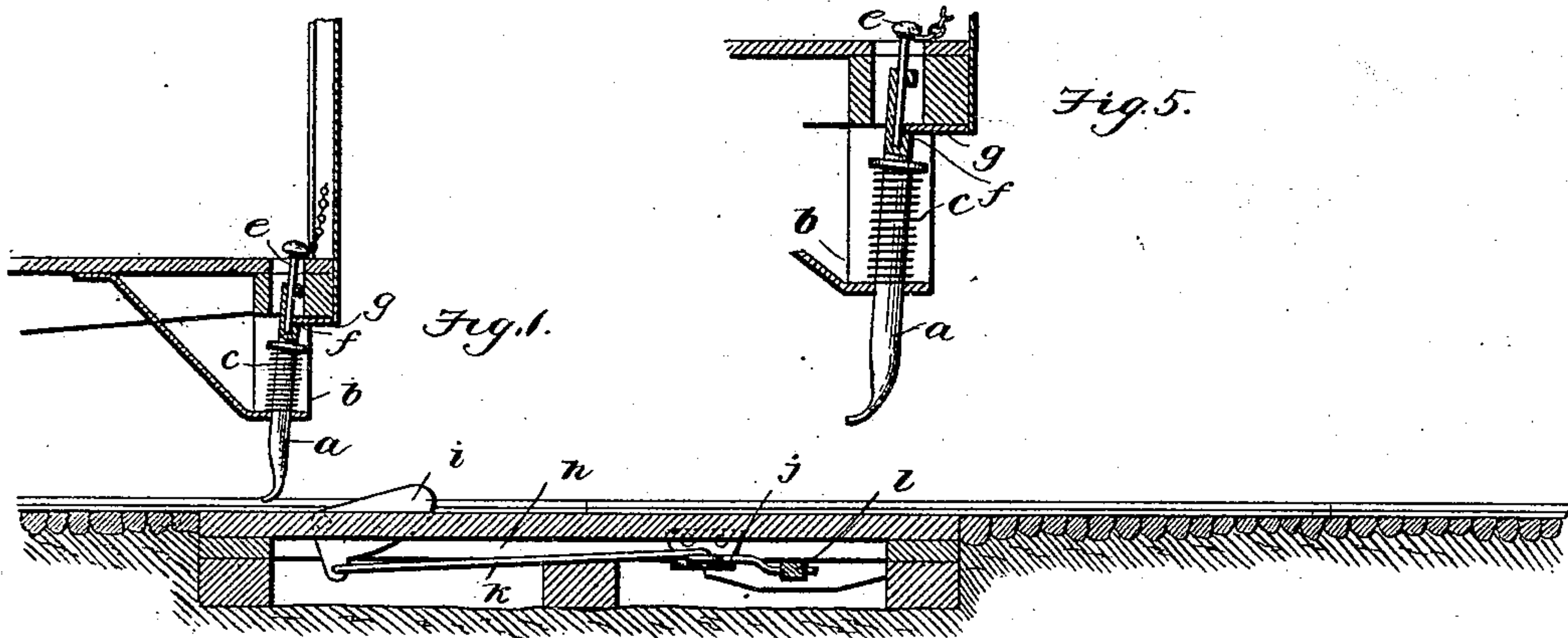


(No Model.)

O. W. BRENIZER.
SWITCHING ATTACHMENT FOR STREET CARS.

No. 471,714.

Patented Mar. 29, 1892.



UNITED STATES PATENT OFFICE.

ORSON WILLBERT BRENIZER, OF DULUTH, MINNESOTA, ASSIGNOR OF ONE-HALF TO THOMAS H. PRESSNELL, OF SAME PLACE.

SWITCHING ATTACHMENT FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 471,714, dated March 29, 1892.

Application filed June 3, 1891. Serial No. 394,984. (No model.)

To all whom it may concern:

Be it known that I, ORSON WILLBERT BRENIZER, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Switching Attachments for Street-Cars, of which the following is a specification.

My invention relates to improvements in devices for operating street-car switches from the platform of the car by the foot of the driver or operator; and the object of my improvement is to avoid obstructing the car-platform by the foot-actuated device.

My improvement provides a construction whereby a spring-sustained presser-rod is adapted for use with a separate foot presser-pin to allow the driver or operator to readily set said pin on the presser-rod part, so as to stand above the platform to receive the depressing action of the driver's foot to set the presser-rod down in position to operate the switch when desired.

The car-switching presser device is adapted for operating a switch tongue or point which is connected in such manner with levers arranged in the track to receive the depressing action of such car device in passing onto the switch.

The accompanying drawings illustrate my invention, in which—

Figure 1 represents a vertical section of a portion of one end of a street-car and of the track at the switch thereof, showing my improved car-switching attachment locked in position to depress the switch-connecting lever to shift the switch-point. Fig. 2 is a similar section of the car, showing the switching attachment out of operative position and the car-platform free of obstruction. Fig. 3 shows a cross-section of the car with the switching presser devices one out of and one in operative position. Fig. 4 shows in top view the switch portion of the car-track and the switch-shifting mechanism. Figs. 5 and 6 show the presser device in and out of action.

When the car is double-ended, each platform is provided with the foot-actuated presser device, and which I prefer to arrange as separate attachments near each side of the platform for operating a single switch-point

from each side of the track to change the car from one track to another, as described, and for this purpose I prefer to use the switch-point connecting and operating mechanism shown in the drawings; but my improved car-switching presser attachment may be used with other constructions of switch-point connecting and operating mechanism adapted to be operated by foot-actuated presser-rods mounted in the platform.

As shown, two presser-rods *a a* are vertically mounted in separate brackets *b b*, secured to the under side of the car-platform near each side thereof, so that the upper ends of said presser-rods pass up through openings in the platform, but do not extend above it, as seen in Fig. 2, which is their normal position, and are sustained by springs *c c*, housed by the brackets. The lower ends of these presser-rods are flattened and rounded, so as to ride easily over a track-connected switch-operating lever, while the upper end of each rod is provided with socket *d*, adapted to receive a presser-pin *e*, having a length sufficient, when set in the socket, to stand above the platform a distance equal to that to which the presser-rod is depressed to bring its lower end in operative relation to the switch-operating lever. The upper ends of these presser-rods are formed with a shouldered recess or recesses *f*, which are adapted to engage with a catch *g*, preferably on the under side of the platform, so as to form a lock for holding the presser-rod down when depressed by the presser-pin against the tension of the spring. To effect this locking action, the upper end of the presser-rod is free to be thrust forward against the catch at the same time it is depressed by the foot of the driver or operator, so that the locking action of the shoulder with the catch will be automatic and will hold the presser-rod down until it has acted upon and shifted the switch. The driver or operator then removes the presser-pin by his hand or by his foot, and at the same time pulling it backward pulls back, also, the upper end of the presser-rod, and thereby releases it from the catch and allows it to be forced up into its normal position, but not above the platform. To permit of this forward movement of the upper end of the presser-rod, the

opening in the car-platform is elongated, so that as the rod is depressed its shouldered recess comes opposite the catch-plate. The rod will then be free to be pushed forward to engage its shoulder with the catch.

A presser-pin may be provided for each presser-rod and chained to the dash-board, or one chained presser-pin may be used for both presser-rods, or a single presser-pin may be used by the driver or operator for all the presser-rods, and it is obvious that the presser-pin may have the socket to fit over the upper end of the presser-rod, its function being to increase the length of the latter as a presser-section and as a means of operating said presser-rod and only requires to be removably supported upon the latter at the time when the switch is to operated.

The switch-point-operating connections are shown in Fig. 4 and are arranged between the track-rails on two beams *h h*, to each of which is pivoted a lever *i* a suitable distance in advance of the switch-point and which is connected to a bell-crank lever *j* by a rod *k*, while the bell-crank levers are connected to a cross-rod *l*, which is pivoted to the switch-point and is fitted to slide in guideways under the said beams. The levers *i* are arranged to receive the depressing action of the presser-rods as the car approaches the switch, and for this purpose they are so constructed, arranged, and connected that one of them will stand in inclined position above the top of the beam in whatever position the switch-point may be, so as to be pressed down to throw the switch-point into the desired position.

A A are the rails of the main track, and B B are the rails of the side track, which are provided with the fixed and movable switch tongues or points now used.

The presser-rods when depressed ride upon

and over the levers *i*, and pressing them down pulls the connecting-rod *k*, which operates the bell-crank lever and slides the shifting cross-bar, which moves the switch-tongue to the main track or to the side track, as may be desired.

I claim as my improvement—

1. In a switching attachment for street-cars, the combination, with a spring-sustained presser-rod mounted in the platform below the top thereof, of a removable foot presser pin or section adapted for use with said presser-rod, substantially as described.

2. In a switching attachment for street-cars, the spring-sustained presser-rod mounted in the platform below the top thereof and having a socket and a shoulder at its upper end, in combination with a removable foot presser pin or section, and a catch on the platform, substantially as described, for the purpose stated.

3. The combination, with a track-connected switch-operating lever arranged to receive a depressing action from a passing car to shift the switch, of a switching presser device on the car, consisting of an upward-thrusting presser-rod having a socketed upper end normally below the top surface of the platform, a shoulder below said socket and flattened at its lower end, a catch on the platform, and a separate foot presser-pin for actuating said presser-rod to depress the switch-connected lever, substantially as described.

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

ORSON WILLBERT BRENIZER.

Witnesses:

T. H. PRESSNELL,
FRANK S. TEDFORD.