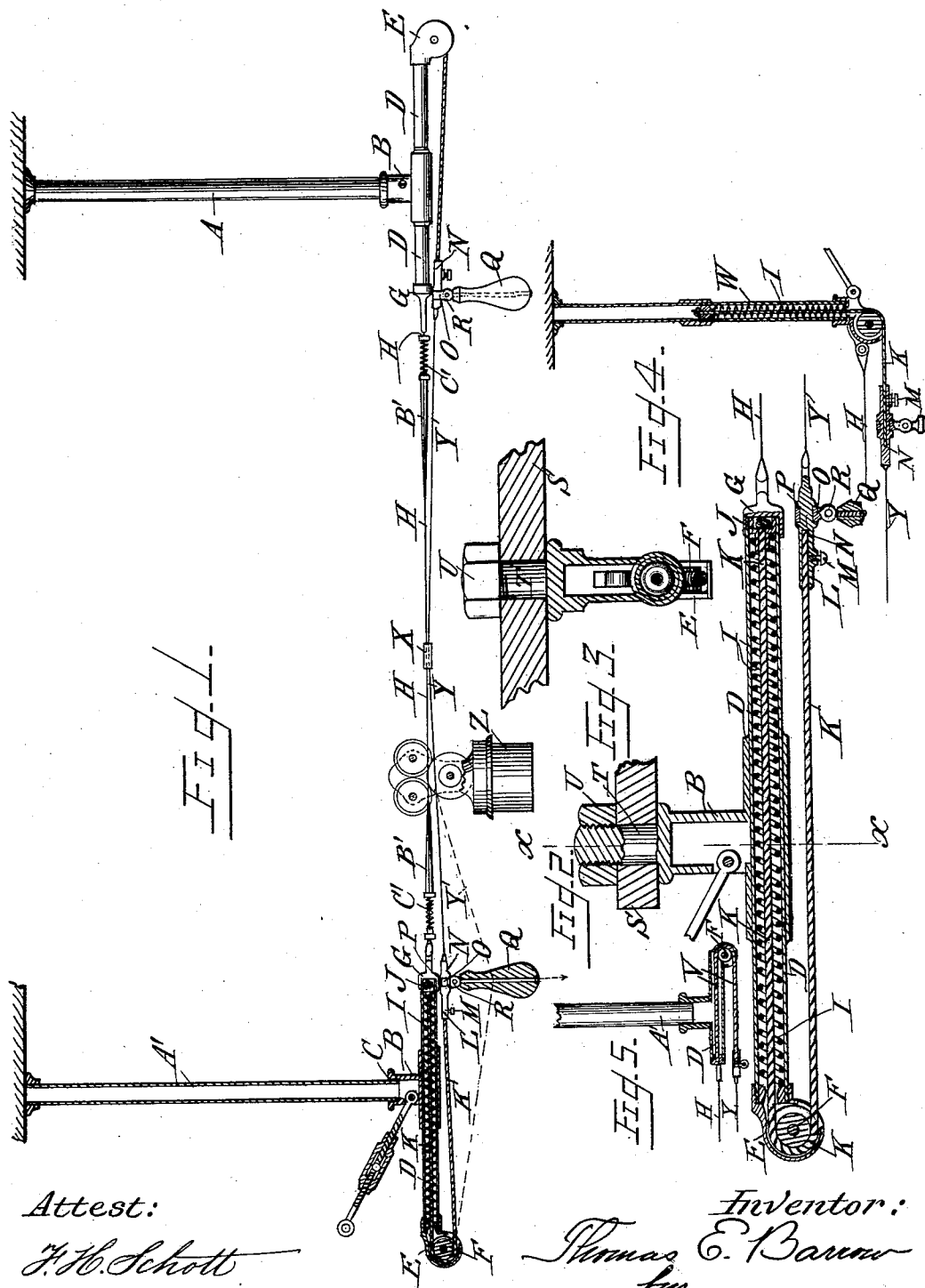


(No Model.)

T. E. BARROW.
STORE SERVICE APPARATUS.

No. 484,548.

Patented Oct. 18, 1892.



Attest:

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UNITED STATES PATENT OFFICE.

THOMAS E. BARROW, OF MANSFIELD, OHIO.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 484,548, dated October 18, 1892.

Application filed March 9, 1892. Serial No. 424,286. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. BARROW, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Store-Service Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in store-service apparatus of the class in which two wires are used—a stationary track-wire and a propelling-wire extending from station to station.

The objects of my invention are, first, to obviate the necessity of using a pivoted or hinged lever, to which is attached the spreading or propelling wire to spread the same; second, to construct a mechanism to allow the spreading of the lower wire without the use of a lever; third, to produce store-service which is simple and cheap in construction, durable and efficient in operation, and artistic in design. These objects I accomplish by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a complete line forming two stations, one end of the hanger-foot, &c., being shown in section. Fig. 2 is a longitudinal sectional view, enlarged, showing more perfectly the general construction and operation of my invention. Fig. 3 is a transverse sectional view of same, taken in the line $x x$. Fig. 4 is a modification showing the same construction placed in vertical position. Fig. 5 is also a modification. These modifications will be more fully described hereinafter.

In the accompanying drawings, A and A' indicate hangers or supports, and B cart-feet, which are T shape in form, the vertical stem of which is provided with female threads to attach the same to the hangers or supports.

D are tubes which are secured within the horizontal portion of the foot or may form part of the same.

E is a sheave-case, which is secured upon the outer end of the tube D. F is a sheave-pulley journaled in the center of the said case, the upper curve of said pulley being in line with the center of the tube D.

G indicates a cap and wire-conductor, which is secured upon the inner end of the tube D, and to this is secured the stationary track-wire H.

I indicates a coil-spring, which is provided upon its inner end with a slide J, which has a hole through its center and in which is secured one end of a cord K, of any flexible material, the said cord passing through the center of the coil-spring to the rear end of the tube D, then over the pulley F, then secured within the tube L by the set-screw M, the said tube forming part of the handle and connecting-rod. N.

O indicates a metal clip, which fits around the wire connection N in the recess P, formed to receive the same, the handle or pull Q being pivoted between the downwardly-projecting loops R, allowing a longitudinal and a lateral movement to the handle or pull Q.

Both ends of the line are substantially the same, except when a number of lines extend from a home-station plate S. In place of the hollow sleeve C, which forms part of the foot, a bolt T is formed at the top and passes through the home-station plate and is held rigid against the under side of the plate. This device I have fully shown in Figs. 2 and 3, and this description fully illustrates the construction, as shown in views Figs. 1, 2, and 3.

Fig. 4 illustrates a modification of Figs. 1 and 2, the only difference being in the position of the spring I. In this view I have shown the tension-spring in a vertical tube W, the cord or flexible connection operating the same as in Fig. 2. Fig. 5 also shows a modification in this construction. I do away with or obviate the necessity of using the coil-spring I in the place of the cord and use instead a flexible cord V, the same giving all the length required to the propelling-wire when spreading the same. I have shown these modifications for the purpose of showing that I accomplish the one result from the different constructions shown.

X indicates a double-tube sleeve, the track and propelling-wires passing through the same, the upper tube impinging the track-wire, the lower or propelling wire V passing loosely in the lower tube, the said propelling-wire having a sliding movement when in operation. I secure the sleeve in the center of the line. Its objects are of importance. First, it prevents the propelling-wire from sagging by supporting the same; second, it forms a wedge to the center of the line when the propelling-wire is operated, making a shorter wedge and propelling the car Z with greater velocity than it would do should the wedge formed by the wires extend from station to station, and, third, the lower tube forms a guide.

To propel a car from station to station, the operation is as follows: A car Z is placed upon the track-wire H, the propelling-wire Y passing between the upper and lower wheels of the said car. The car is held at the stations by a tapered rubber sleeve B', having a coil-spring C', placed between the rubber stop and foot B, the rubber stop passing between the upper and lower wheels of the car, thus forming a spring cushion and catch to hold and check the car and prevent all noise, which is common and objectionable in all other service apparatuses. By pulling down upon the handle or pull the springs I contract by the tension placed upon the flexible or cord connection. This allows any spread to the propelling-wire required to propel the car any distance required, the pressure of the propelling-wire J at the rear of the car forcing the car off the rubber stop. The wedge formed by the upper and lower wires forces the car along the line with great velocity, the car having received sufficient speed to the center of the line, the motion being sufficient to carry the car to the opposite station. When the operator releases the tension upon the pull Q, the expansion of the springs I returns the propelling-wire to the position shown, the lower wire sliding through

the lower tube of the sleeve x and allowing the contraction or expansion of both springs.

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

1. In store-service apparatus, the combination of a suitable support or hanger having a tubular lateral extension, a stationary track-wire, a spreadable propelling-wire, an operating-handle secured to said propelling-wire, and a flexible cord secured in the lateral extension and connected with the propelling-wire, whereby the propelling-wire may be spread and automatically returned to its normal raised position without the use of spreading-levers, substantially as described.

2. In store-service apparatus, the combination of a suitable support or hanger having a lateral tubular extension, a stationary track-wire, and a spreadable propelling-wire, an operating-handle secured to the said propelling-wire, a spring compressible in said extension, and a cord attached to said spring and to the operating-handle, whereby by pulling on the handle the spring is compressed and by releasing the handle the handle and the propelling-wire are automatically returned to their normal positions, substantially as described.

3. In store-service apparatus, the combination of a suitable support or hanger having a lateral tubular extension, a stationary track-wire, and a spreadable propelling-wire, a coil-spring compressible in said tube, a sheave journaled in said extension, and a cord connected to the rear end of the spring, passed over the sheave, and connected to the operating-handle, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS E. BARROW.

Witnesses:

H. D. B. WILLIAMS,
T. F. BLACK.