(No Model.)

C. FISHER.

STORE SERVICE APPARATUS.

No. 314,814. Patented Mar. 31, 1885.

Fig. 1.

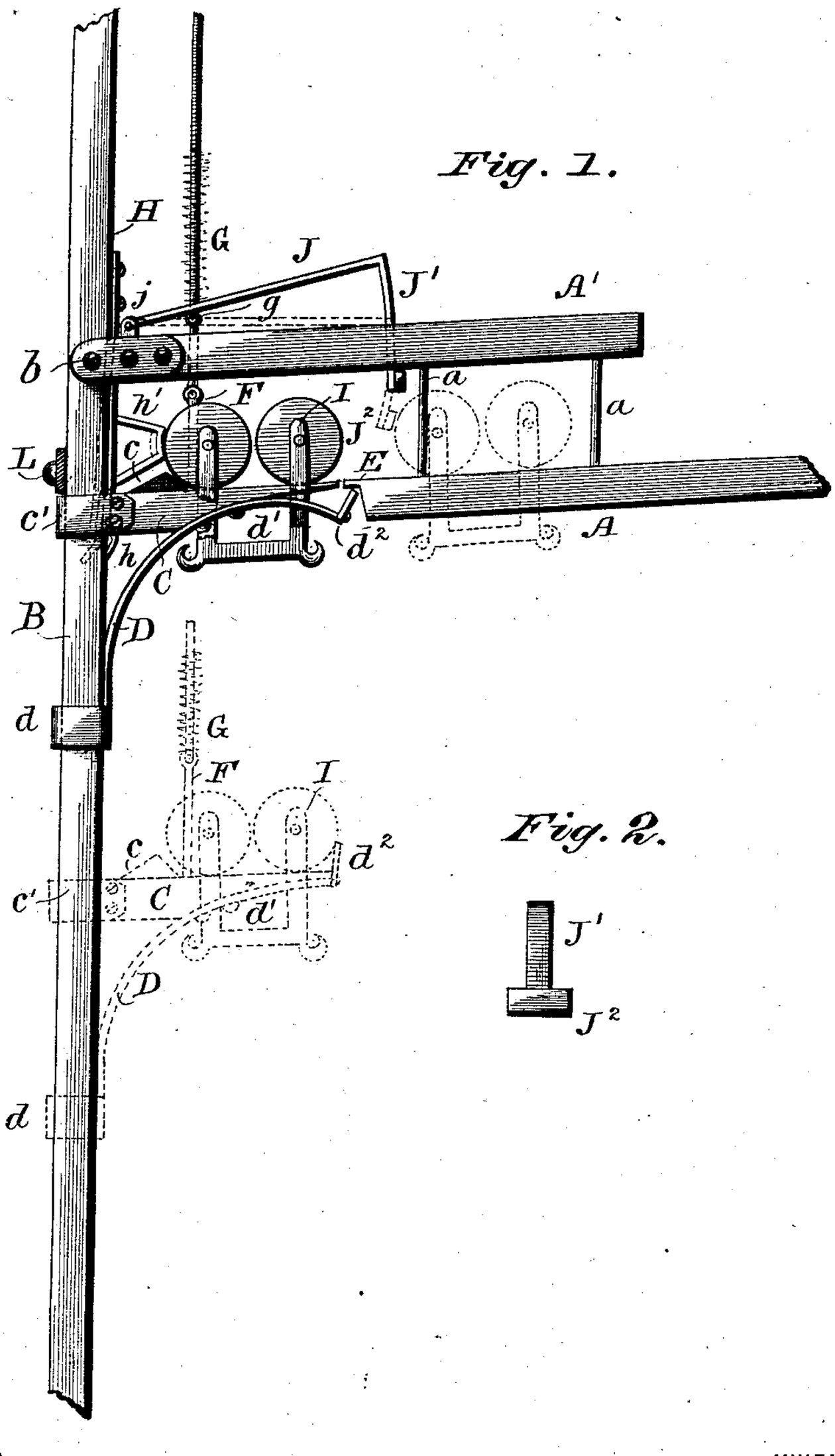

Fig. 2.

WITNESSES

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CHARLES FISHER, OF MANITOWOC, WISCONSIN, ASSIGNOR TO THE INTERNATIONAL STORE SERVICE COMPANY.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 314,814, dated March 31, 1885.

Application filed December 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES FISHER, of Manitowoc, in the county of Manitowoc and State of Wisconsin, have invented certain new and useful Improvements in Store-Service Systems; and I do hereby 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 pertains to make and use the same.

My invention relates to store-service systems, the object being to provide an improved receiver of novel construction for use in connection with systems employing rolling carriers.

The invention consists in a receiver for store-service systems adapted to be automatically raised and lowered by the movement of the carriers.

The invention further consists in the various appliances, hereinafter fully described, when combined with the receiver of a store-service system.

Figure 1 is a side elevation of a portion of the track and guideway of a store-service system with my improved receiver and its operating mechanism applied thereto. Fig. 2 illustrates a detail.

A represents the track or strip upon which the carriers travel, and A′ a short guard-strip arranged above the track A and secured thereto by rods *a*.

B represents the strip or way, to which the guard-strip A′ is secured by connecting-strips *b*.

C represents the carrier-seat of the receiver, formed on its upper side with a beveled stop, *c*, and secured loosely by a spanning strip, *c′*, upon the way B.

D represents a curved spring, which is secured at its lower end by a spanning strip, *d*, loosely upon the way B. This spring D extends up under the seat C, which is beveled to receive it, and is secured to said seat by screws *d* or equivalent means. The free end of the spring D is provided with an upwardly-projecting arm, d^2, to engage a shoulder, E, formed upon the projecting end of the track A, and to serve as a guard to retain the carrier in place upon the receiver-seat. The arm d^2, I preferably form in a separate piece and secure it to the spring D.

The seat C is provided with an upwardly-projecting eye-rod, F, to which is secured an elastic cord, G, formed with a knot, *g*.

H represents a spring-support, rigidly secured at its upper end to the inner side of the way B. This support H extends downwardly below the seat C when the latter is in the position shown by the full lines of Fig. 1, and is inwardly bent at its lower end to engage the lower edge of the seat C, as shown. This spring is also formed with a bracket-like extension, *h′*, which projects inwardly over the stop *c* of the seat (when the latter is raised) in position to be struck by the carrier I after the latter has rolled onto the seat.

The inner side of the way B is recessed adjacent to the spring-support H, to enable the latter, when struck by the carrier, to be forced out of engagement with the seat C, as shown in dotted lines, Fig. 1.

J represents a rod pivoted to a bracket, *j*, projecting from the strip A′, adjacent to the way B. The inner end of the rod J is bent downwardly and slightly curved, to extend through an opening formed in the strip A′, and is provided at its free end with a short cross-bar, J^2, upon which is secured an elastic bumper, J^3.

The elastic cord G extends through an opening in the strip A′, and also through an opening in the arm J, the knot *g* being below the arm J, and serving to hold said arm in elevated position when the receiver is raised.

L represents an elastic bumper, which serves as a stop to limit the upward movement of the receiver.

The operation of the improvement thus described is as follows: The carrier will readily roll from the track A onto the seat C, and, striking the bracket *h′* of the spring-support H, will release the carriage, which will immediately descend. The descent will release the arm d^2 from its engagement with the shoulder E, and said arm will at once assume the position shown in the dotted lines of Fig. 1, to secure the carrier upon the seat. The descent of the seat has the further effect of allowing the guard-arm J to drop into the position shown by the dotted lines, Fig. 1, to hold back any carrier that would otherwise roll off after the seat has begun its descent. The

elastic cord G (whose upper end, it will be understood, is suitably secured above the strip A′) will draw the seat back to its raised position as soon as its load is removed, thus re-engaging the spring-support H with the seat C, and by means of the knot *g* elevating the guard-arm J to allow the waiting carrier to roll onto the seat.

The spring-support D serves as a brake to prevent undue speed in the descent of the receiver by reason of its frictional contact with the way B.

I do not limit myself to the use of an elastic cord for raising the seat, as a spiral spring or other elastic suspensory might be employed in lieu thereof; nor do I limit myself to the other details of form and construction, but reserve to myself the right to make all such minor changes and modifications as may properly fall within the scope of my invention.

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

1. The combination, with the receiver of a store-service system, of a spring-catch for supporting the receiver in raised position, said catch being adapted to be struck by the carrier to automatically release the receiver, substantially as set forth.

2. The combination, with the receiver, of a spring-catch for supporting the receiver in raised position, and adapted to automatically release the receiver by contact with the carrier, and a spring-brake provided at its free end with an arm to support the carrier upon the seat, substantially as set forth.

3. The combination, with the shouldered end of the track-strip, of the seat and its brake-spring, whose free end is provided with a guard-arm, which engages the shouldered strip, substantially as set forth.

4. The combination, with the receiver-seat and its beveled stop, of the spring-support provided with an inwardly-projecting bracket and a shoulder, as described, the combined spring-brake and guard, and the elastic suspensory, substantially as set forth.

5. The combination, with the receiver-seat and its suspensory formed with a knot or stop, of a pivoted guard-arm adapted to be automatically raised and lowered, substantially as set forth.

6. The combination, with the receiver, of a pivoted guard supported above the track and adapted to be automatically raised and lowered by the elevating-cord of the receiver, substantially as set forth.

7. The combination, with the single guide strip or way, recessed as described, of the carrier-seat and its suspensory formed with a knot or stop, and its beveled stop, the spring-support formed with a shoulder to engage the seat, and with a bracket projection adapted to be struck by the carrier, the curved spring forming a combined brake and guard, and the pivoted guard-arm adapted to be automatically raised and lowered, and provided with a bumper at its free end, substantially as set forth.

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

CHARLES FISHER.

Witnesses:
JOSEPH SPEVACEK,
HENRY BREY.