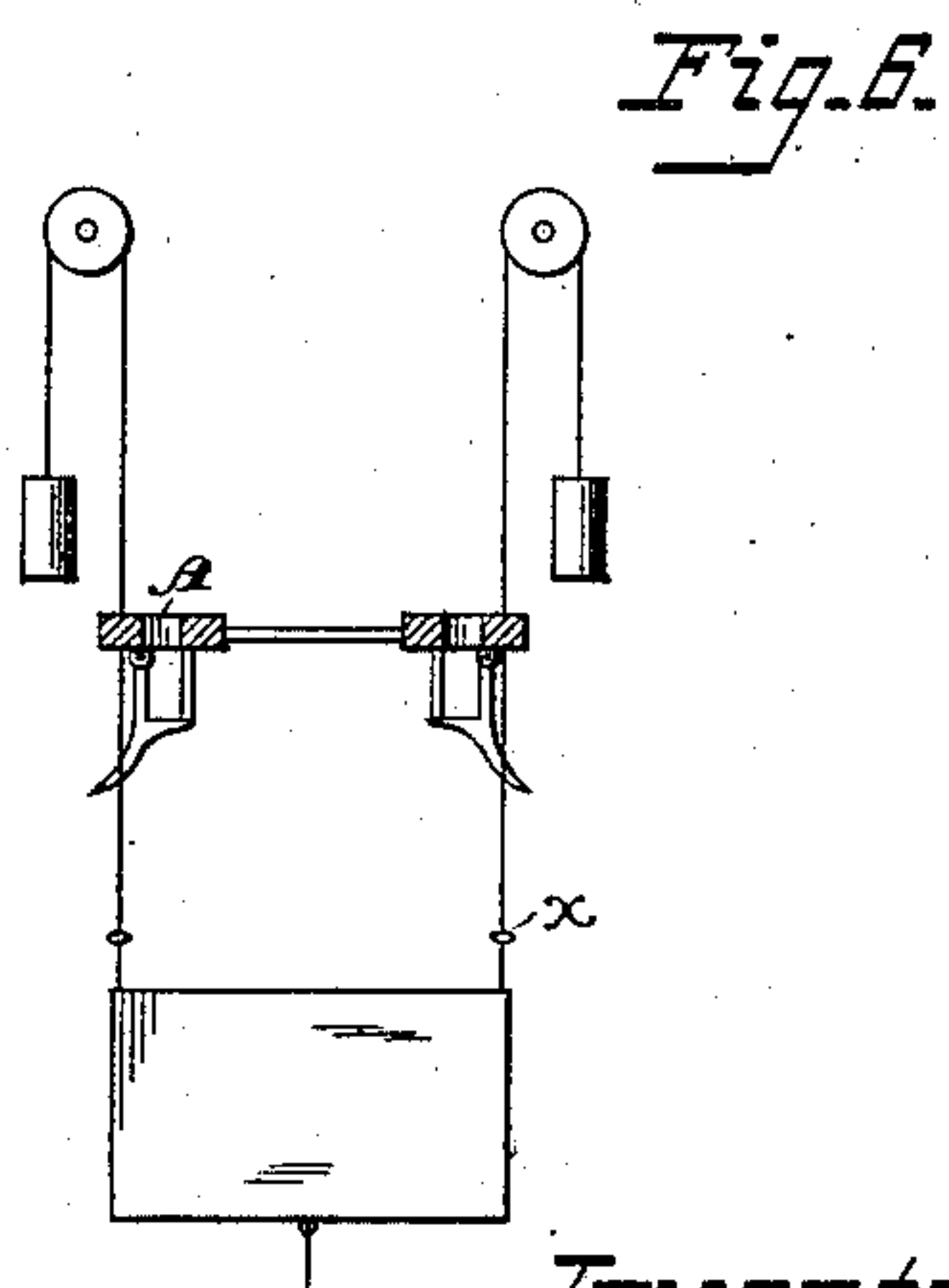
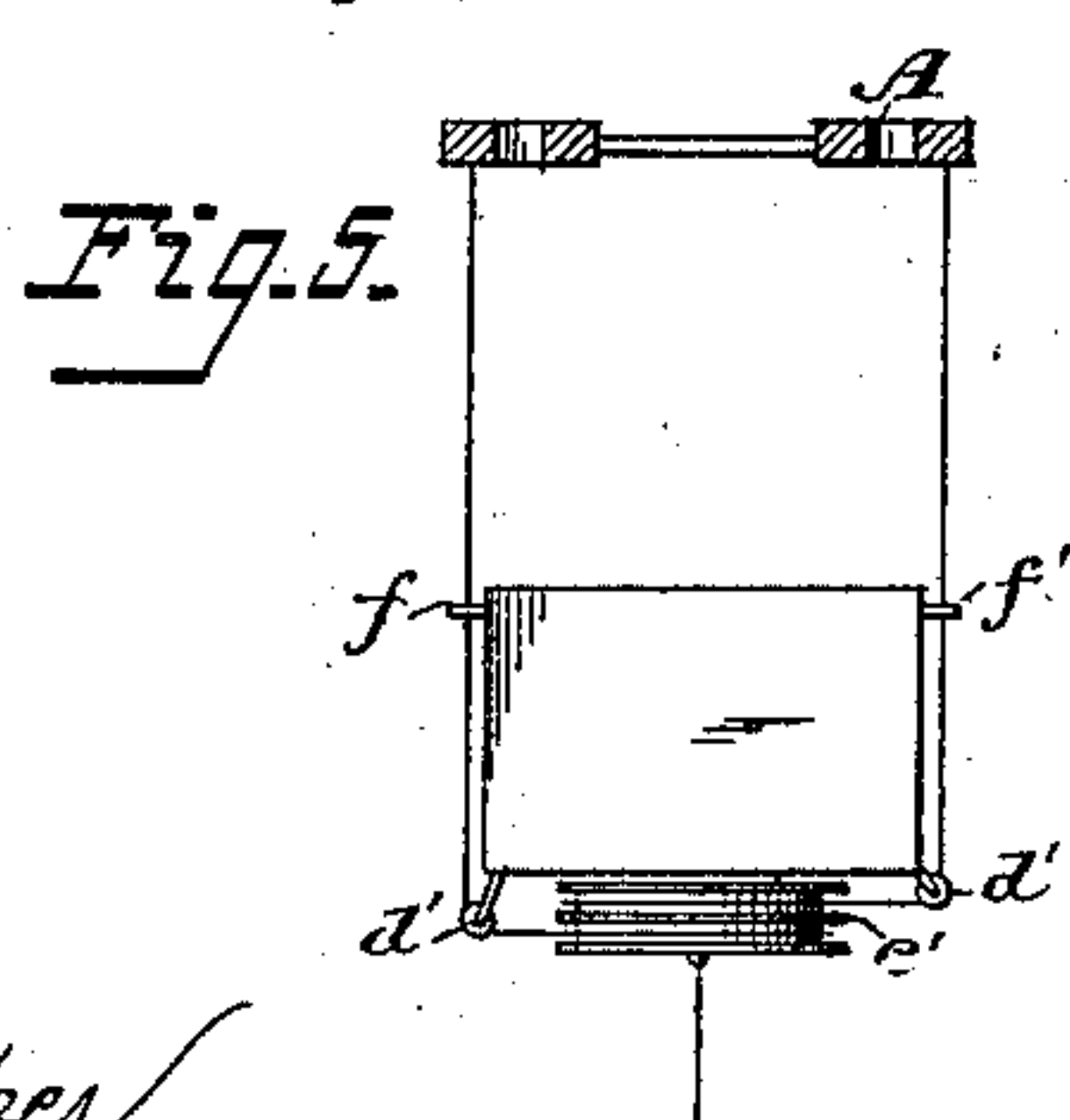
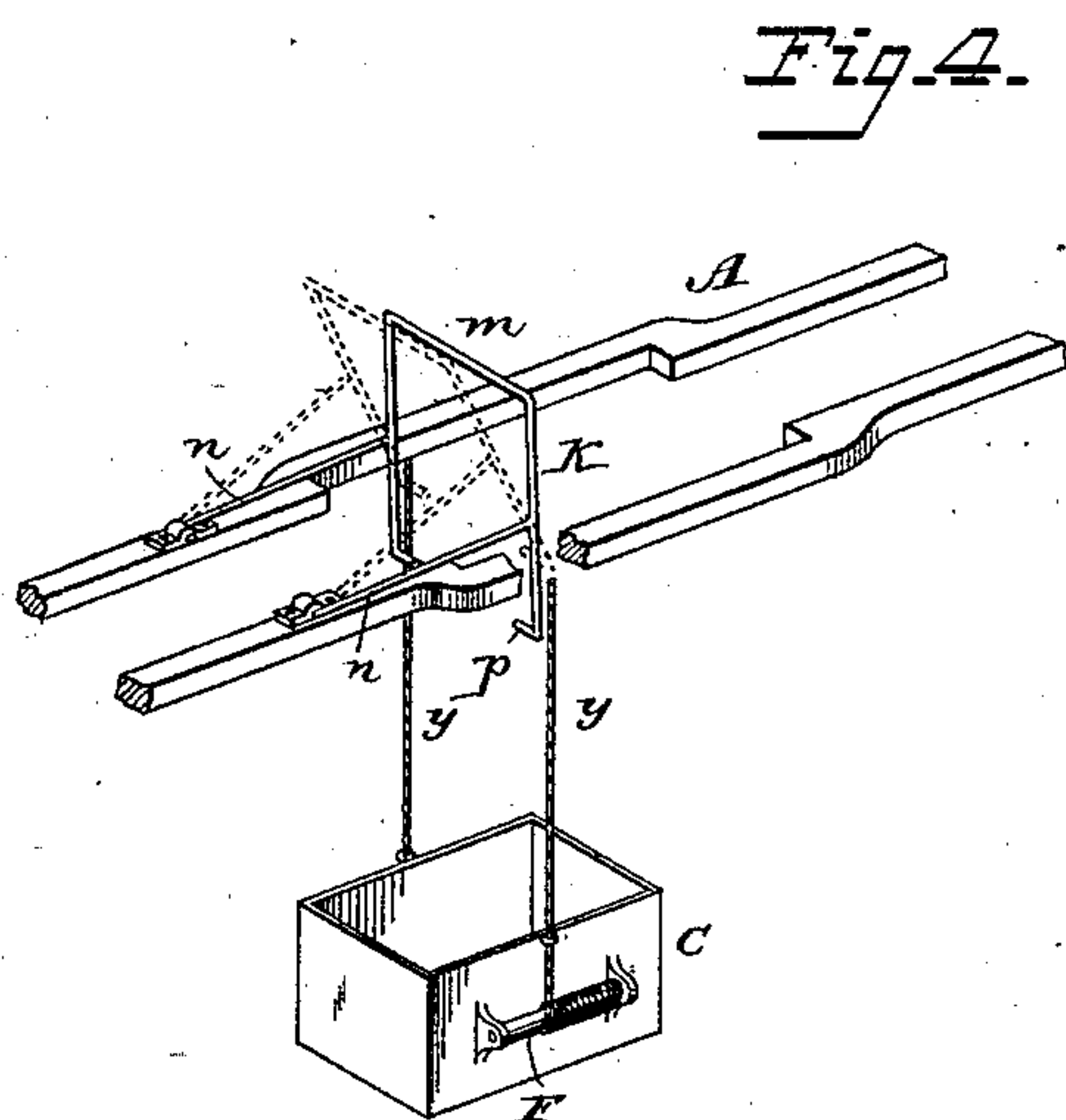
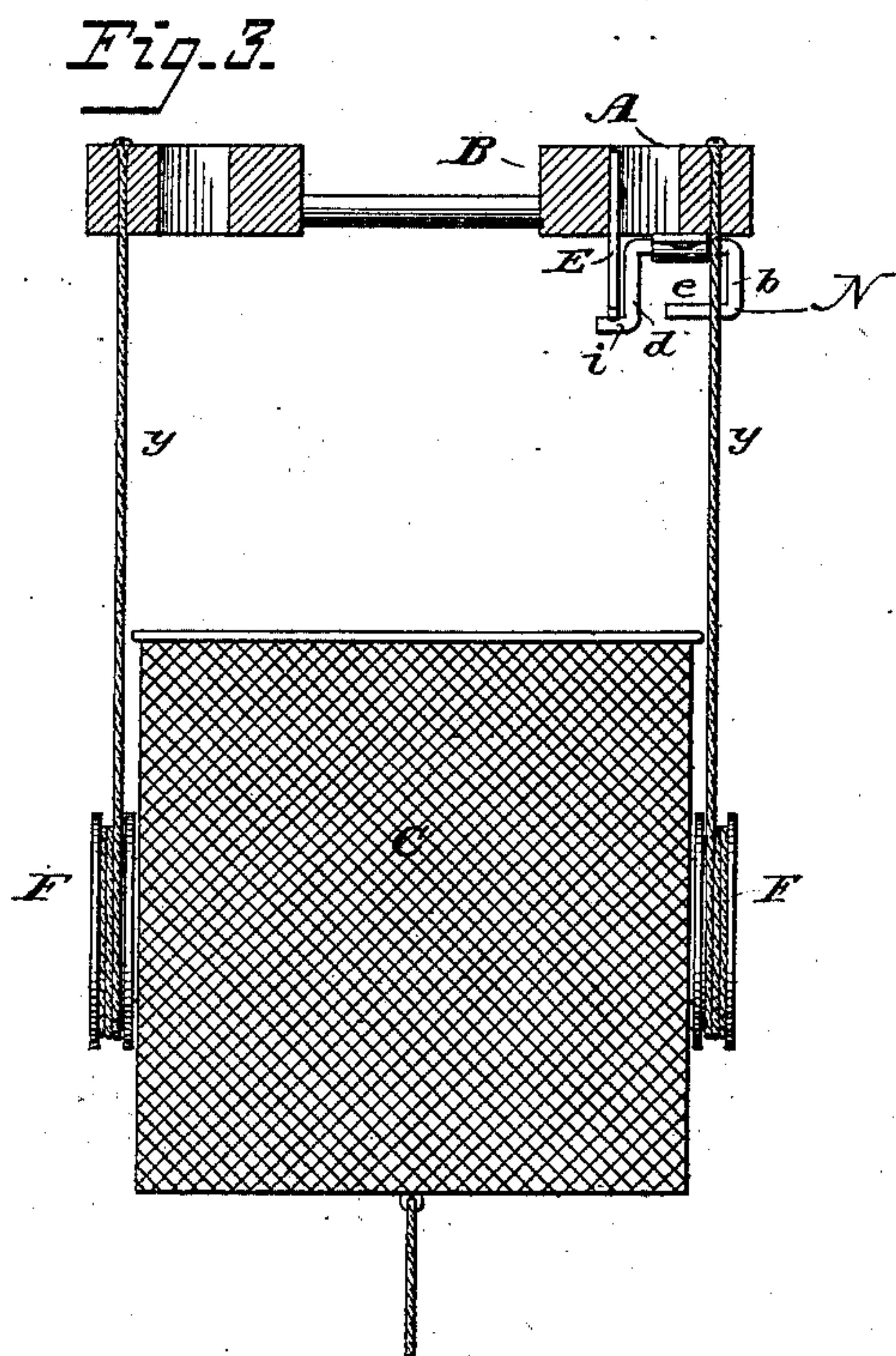
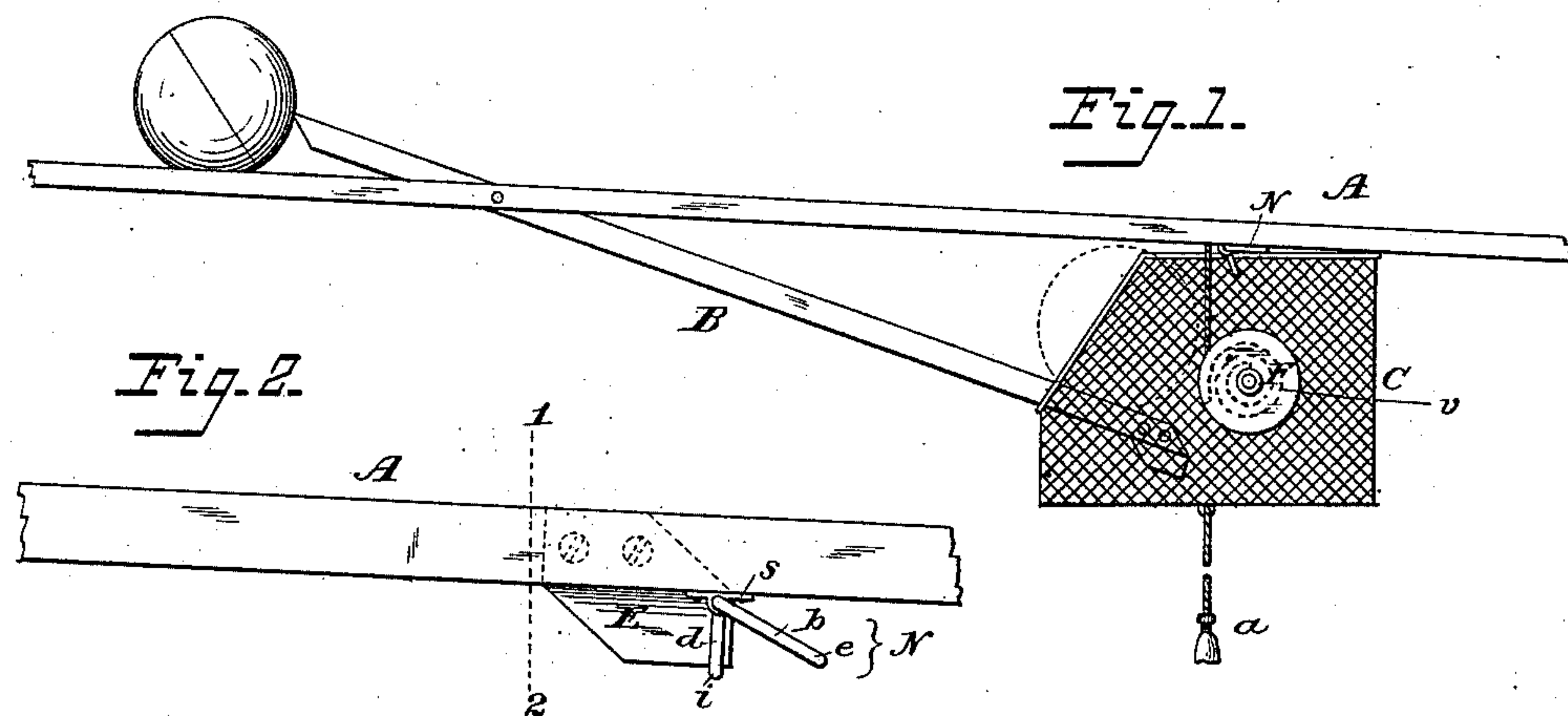


(No Model.)

H. H. HAYDEN.
STORE SERVICE APPARATUS.

No. 300,072.

Patented June 10, 1884.



Attest:
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UNITED STATES PATENT OFFICE.

HARRIS H. HAYDEN, OF NEW YORK, N. Y.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 300,072, dated June 10, 1884.

Application filed February 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, HARRIS H. HAYDEN, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

My invention relates to that form of store-service apparatus in which rolling carriers travel on ways to and from the cashier's desk, and are removed at the respective stations, by switches or dropping-gates, into baskets or other receptacles, which, when elevated, can be drawn down within reach of the salesman or attendant, and are automatically elevated by means of counterbalancing-weights or spring rollers or drums; and my invention consists in means for preventing the improper dropping of the carriers, and in means for facilitating the manipulation of the carrier-receptacles or drop-baskets, as fully described hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, showing part of the track and a switch and drop-basket. Fig. 2 is an enlarged view, showing the detent for holding the switch. Fig. 3 is a transverse section on the line 1 2, Fig. 2. Fig. 4 is a perspective view illustrating the arrangement of the detent at the end of the line. Figs. 5 and 6 are cross-sections showing modifications of the drop-basket and detent-operating devices.

It is usual in store-service apparatus in which rolling carriers are employed to provide several carriers for each station, any one of which will unlock the trap and fall into the basket. If, therefore, two or more carriers are sent in rapid succession to any one station, there is a possibility that the basket may be withdrawn to remove the first carrier just as the second arrives at and unlocks the trap, in which case the second carrier will fall upon the counter or floor. To prevent this I place upon the fixed post A of the trap a locking device, N, which automatically fastens the trap or drop B as soon as the basket C is withdrawn, and is automatically unfastened as soon as the basket is in a position to receive a carrier. A detent, N, of any suitable form to be thus operated, may be employed. Thus the detent may consist of a wire bent to form two arms, *b d*, with fingers *e i*, and with a cross-piece turn-

ing in a bearing, *s*, the finger *i* extending beneath the edge of a plate, E, fastened to the side of the switch-track B, and the fingers *e* occupying a position to be struck by the basket C as it approaches the track. The weight of the arms tends to keep the detent in the position shown in Fig. 2, with the finger *i* beneath the plate E, thereby locking the switch in place, while the contact of the edge of the basket with the finger *e* swings the arms *d b* to the position shown in Fig. 1, carrying the finger *i* from beneath the plate, when the switch can drop freely. A spring-actuated lock or detent will effect the same purpose as that described, and where the basket is attached to a cord connected to a counter-weight, a knot, *x*, upon the cord may make contact with the detent, and unlocks the switch, as shown in Fig. 6.

A modified form of detent for end drops where there are no switches or traps is shown in Fig. 4. A gate or detent, K, of any suitable construction, is arranged to present an obstruction to the passage of a ball or carrier from the track, except when the basket is in place. The detent may be of any suitable construction; but that shown in the drawings consists of a wire bent to form side arms, *n*, pivoted to the track, a cross-bar, *m*, and pendent arms *p*, the latter being in position to be struck by the edge of the basket as the same approaches the track, so that the detent is lifted to the position shown in dotted lines, when the carriers will pass beneath the bar *m* to the basket. When the basket is drawn down, the arms *n* rest upon the track, and the bar *m* is in position to prevent the carriers from passing from the track.

Heretofore it has been customary to attach the winding devices by which the baskets are counterbalanced or supported to the track; but I find it advantageous in some cases to attach them to the basket, instead of the track, as shown in Figs. 1 and 3, where the cords *y y* are wound on drums F F, attached to the basket, and are fastened to the track A at their upper ends. The drums contain springs *v*, (dotted lines,) that turn them to wind up the cords.

Instead of using two drums vertically fastened to the sides of the basket, I can use a single drum fastened horizontally to the bottom of the basket, as shown in Fig. 5, the cords in

that case passing over small guide-rollers *d' d'*, and through guide-ears *f f'* at the sides of the basket. As shown, the two cords wind upon separate portions of the drum separated by a flange, *e'*; or short rollers having spiral springs inclosed may be substituted for the drums with coiled springs, as shown in Fig. 4.

Without limiting myself to the precise construction and arrangement of parts described, I claim—

1. The lock for the drop or switch of a store-service apparatus, constructed, substantially as described, so as to fasten the drop automatically when the basket or other receptacle is withdrawn, and to release the same when the basket is returned, substantially as specified.

2. The combination of a track, drop-switch, vertically movable basket, and detent, constructed and arranged to lock the switch as the basket descends, and to unlock the switch as the basket approaches the track, substantially as set forth.

3. The combination, with the drop-switch of a store-service apparatus, of a detent provided with an arm extending beneath the switch, and with an arm arranged to make contact with the basket, for the purpose specified.

4. The combination of the switch B, detent provided with arms *b d* and fingers *e i*, and drop-basket C, substantially as described.

5. The combination, with the track and end

drop-basket, of a detent arranged and constructed to limit the movement of the carriers after the basket has been drawn down, and to be moved to release the carriers as the basket approaches the track, substantially as specified.

6. The combination, with the track and drop-basket, of a detent pivoted to the track and provided with a cross-bar, *m*, and pendent arms *p*, substantially as specified.

7. The combination, in a store-service apparatus, of a track, a basket, cords connected to the track, and a spring drum or drums upon the basket, around which said cords are wound, substantially as set forth.

8. In a store-service apparatus, a drop box or basket provided with one or more cord-winding devices for receiving the cords connected to the track by which the basket is suspended, substantially as set forth.

9. The combination of the flexible cords or suspensions connected at the upper ends to the track, a basket, and winding attachments on the basket to which the cords are attached, substantially as specified.

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

HARRIS H. HAYDEN.

Witnesses:

WM. TRUSLOW,

CHAS. RUSHBROOK.