(No Model.)

E. L. GILES.

CONDUCTOR FOR STORE SERVICE CARRIERS.

No. 301,227. Patented July 1, 1884.

Fig. 1.

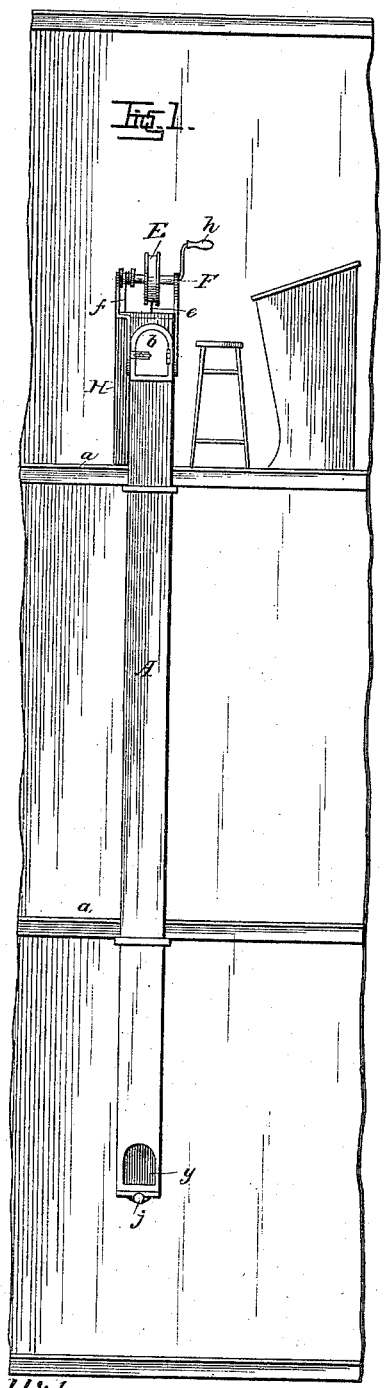


Fig. 2.

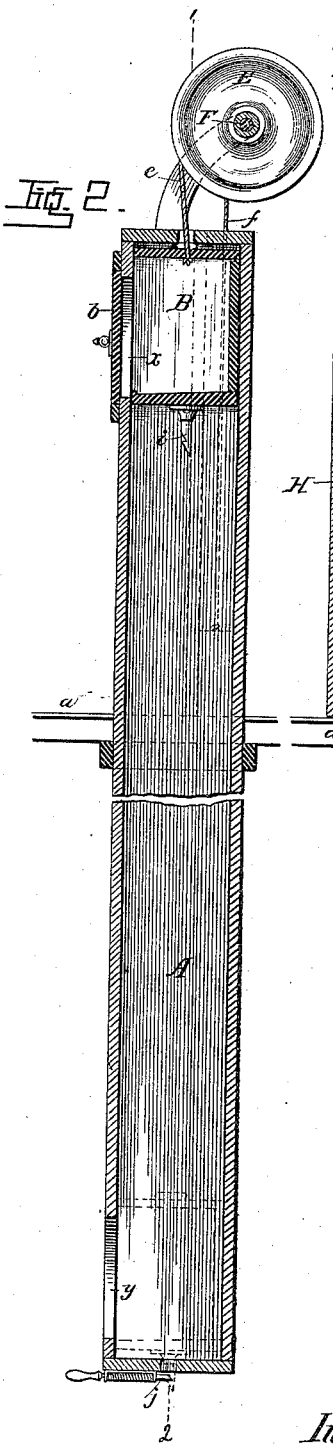
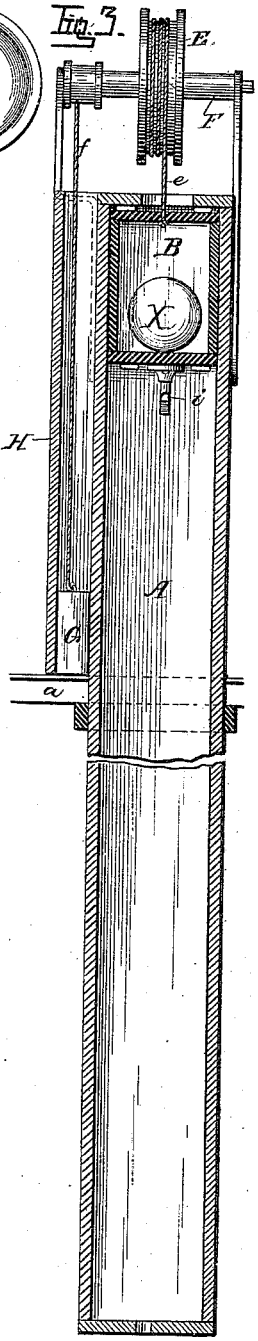


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWIN LUTHER GILES, OF LOWELL, MASSACHUSETTS.

CONDUCTOR FOR STORE-SERVICE CARRIERS.

SPECIFICATION forming part of Letters Patent No. 301,227, dated July 1, 1884.

Application filed March 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWIN L. GILES, a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Conductors for Store-Service Carriers, of which the following is a specification.

My invention has for its object to facilitate the transfer of the carriers used in store-service apparatus from higher to lower levels—as, for instance, from one story of a building to another; and my invention consists of certain structure, hereinafter fully described, whereby this result is secured.

In the drawings, Figure 1 is a sectional elevation of a building, showing several floors with my improved transfer device. Fig. 2 is a vertical section of the said device enlarged. Fig. 3 is a vertical section on the line 1 2, Fig. 2.

The conductor A is shown in the form of a long wooden tube or case; but it may be a metal tube or a conduit consisting of parallel rods, and it extends through the floors *a* of the building, and has at the upper end an opening, *x*, to which is fitted a door, *b*, and at the lower end an opening, *y*. This conductor is arranged adjacent to the desk or station Z when the carriers are received from the elevated or other ways X of the store-service apparatus. The box B is fitted nicely to the conductor, but so as to slide easily therein, and a cord, *e*, connected to the top of the box, is wound around a drum, E, carried by a shaft, F, turning in bearings supported by the conductor. A counter-weight, G, slides in a guide tube or channel, H, at the side of the conductor A, and is connected to a cord, *f*, which is wound around the shaft F in a direction opposite to that in which the cord *e* is wound around the drum, the guide-tube being shorter than the conductor in proportion as the shaft is smaller in diameter than the drum.

The carrier X which is to be conducted to a lower floor is placed in the box B when the latter is opposite the opening *x*, and by its weight will cause the box to descend until the carrier is opposite the opening *y*. To cause the automatic discharge of the carrier the bottom *w* of the box may be inclined, as shown, so that the carrier will roll from the box as soon as the latter is opposite the opening *y*, the weight G being so proportioned to the box and carrier that it will cause the shaft to revolve and lift the box as soon as the carrier passes therefrom. By this means the carriers may be rapidly conducted from one floor to another without that danger of injury which results from permitting the balls to drop from the higher to the lower level.

It will of course be evident that the form of the conductor and character of the box or receptacle B will depend upon the character of the cash-carrier.

In cases where it is necessary to lift the box by a positive motion I provide the shaft F with a handle, *h*, by which the shaft may be turned; and to secure the box temporarily in its lowest position I provide it with a hasp, *i*, which may be brought to engage with a spring-bolt, *j*, to lock the box in place until the bolt is withdrawn.

It is sometimes desirable to convey the loaded carrier from a lower floor to one above, and send the carrier back empty by using the crank-handle to run it down. In some cases the load in the carrier or elevator may vary in weight, and the counter-balance may not be right to move them at the proper speed. To overcome this objection the door *b* is made to close air-tight, and the aperture through which the cord passes is made small to allow the air to escape gradually, and thus prevent the elevator from striking the top too hard when lightly loaded. In the same way a door may be fitted at the bottom opening for the same purpose.

Without limiting myself to the precise construction of parts shown, I claim—

1. The combination, in a building, of a store-service apparatus provided with detachable carriers, a desk or station where said carriers are received, a tube or conduit extending through one or more floors of the building, and elevating appliances, substantially as described, whereby to move the cash-carriers from one floor to another in said tube, substantially as specified.

2. The combination, with store-service apparatus having detachable carriers, of a conductor extending through one or more floors of the building containing the apparatus, a receptacle sliding in said conductor, and a

weight connected to elevate the receptacle when empty and to permit the latter to descend under the load of the carrier, substantially as set forth.

3. The combination, in a building, of the conducting-tube extending through one or more floors of the building, and the counterbalanced carrier sliding therein and provided with an inclined bottom, for the purpose set forth.

4. The combination of the conducting-tube, sliding box, counter-weight, and shaft carrying a drum and provided with a handle, for the purpose specified.

5. The combination, with the tube A and counterbalanced box B, of a catch arranged to secure the box in position at the lower end of the tube, for the purpose set forth.

6. The combination, with a tube having an opening at one end, of a door for closing the opening air-tight, an elevator sliding in said tube, and a small aperture in the end of the tube, through which the air is gradually forced as the elevator approaches the end of the tube, as set forth.

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

EDWIN LUTHER GILES.

Witnesses:

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