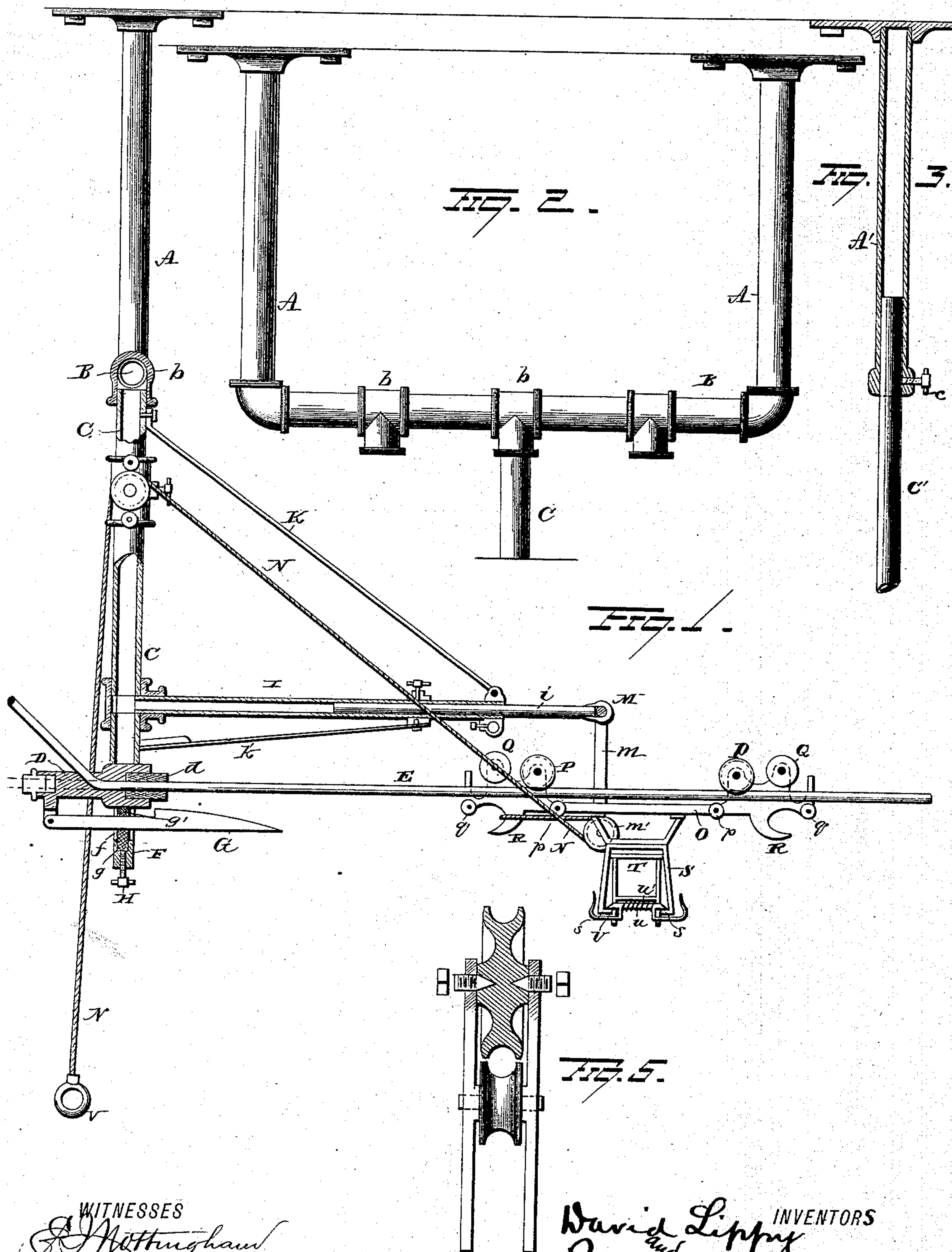


No. 326,131.

Patented Sept. 15, 1885.



WITNESSES

Geo. A. Downing,

David Lippay
Peter Ott
P.A. Seymour

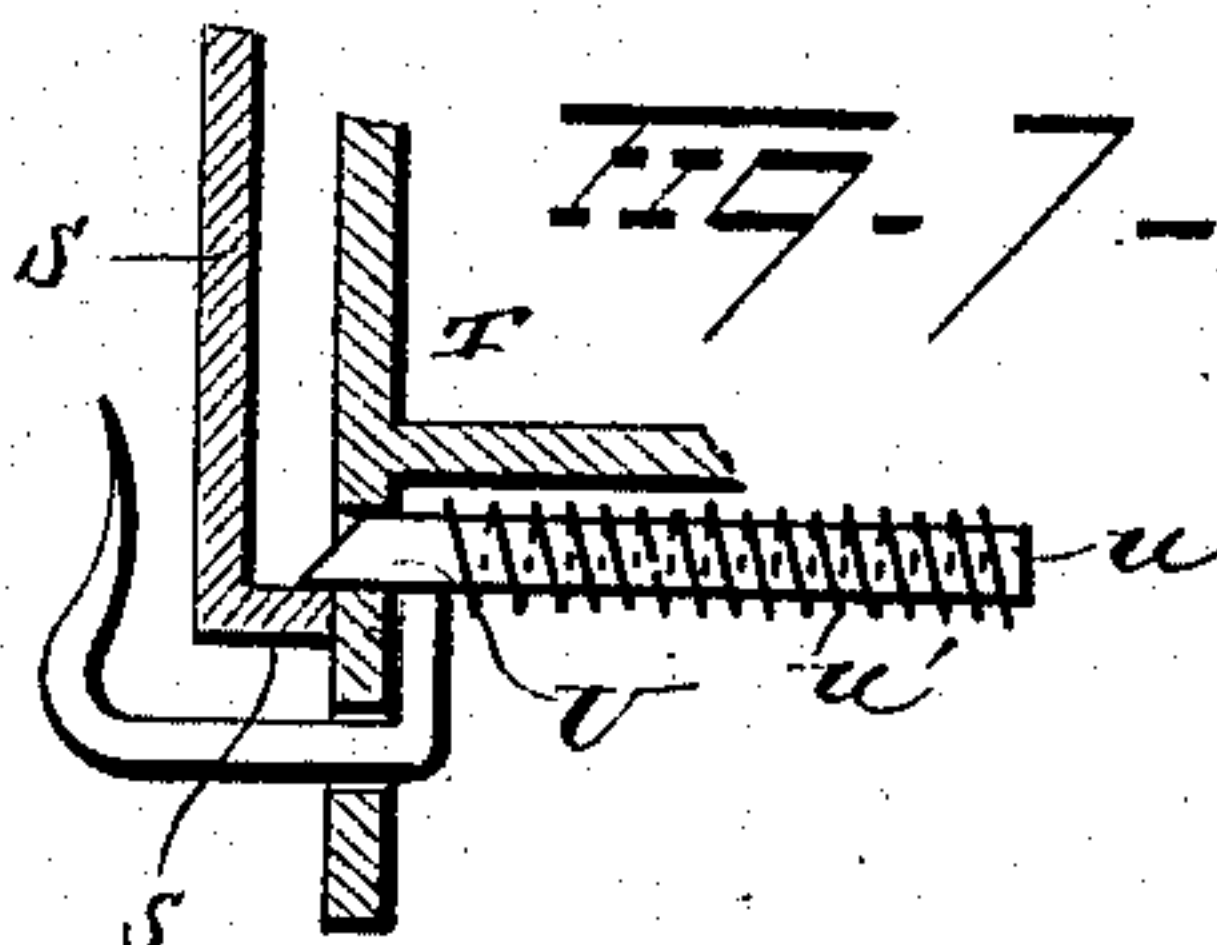
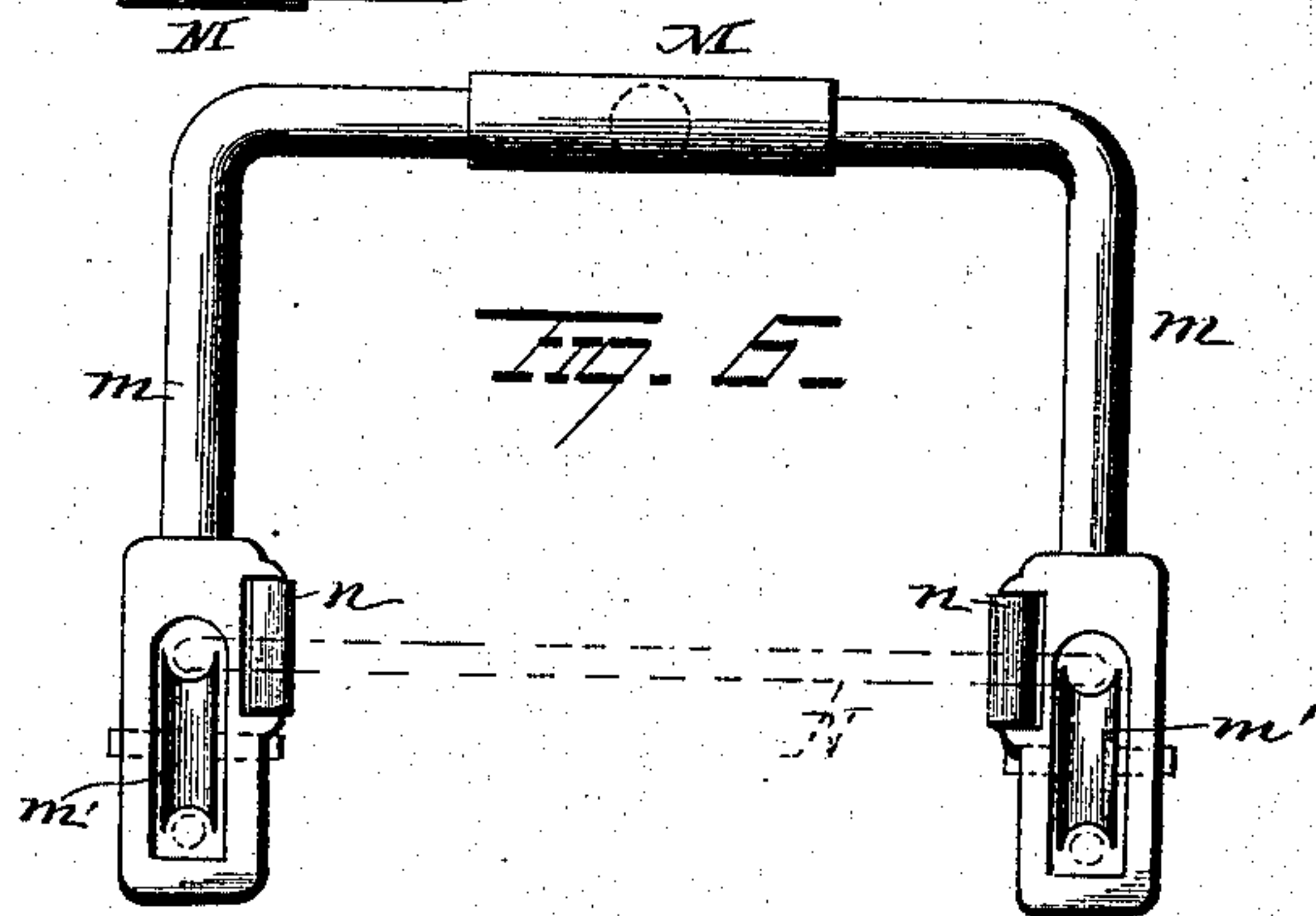
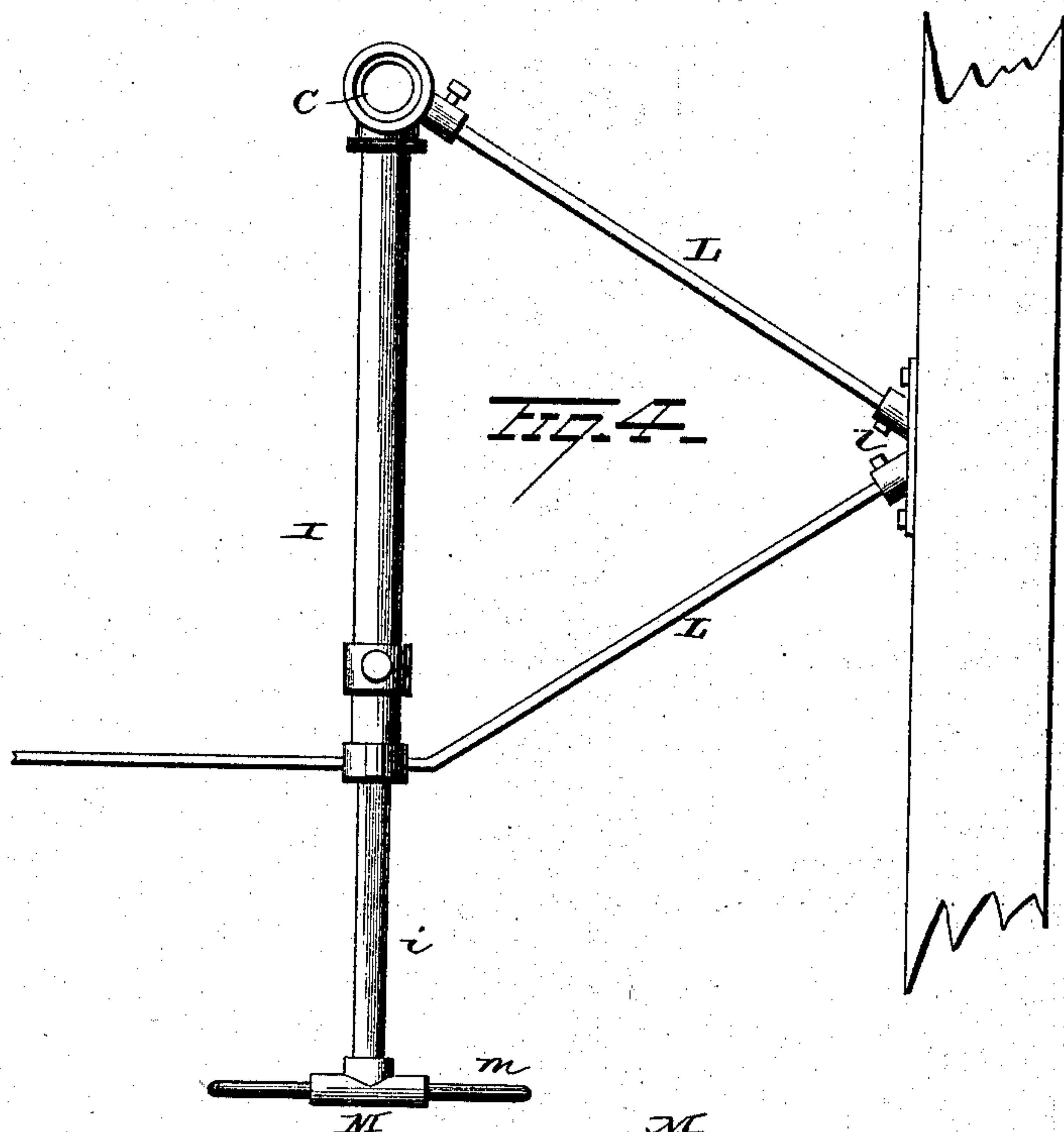
(No Model.)

D. LIPPY & P. OTT.
CASH CARRIER.

2 Sheets—Sheet 2.

No. 326,131.

Patented Sept. 15, 1885.



WITNESSES
E. Nottingham
Geo. F. Downing

David Lippy and Peter Ott INVENTORS
By *H. A. Seymour* Attorney

UNITED STATES PATENT OFFICE.

DAVID LIPPY AND PETER OTT, OF MANSFIELD, OHIO.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 326,131, dated September 15, 1885.

Application filed August 6, 1885. (No model.)

To all whom it may concern:

Be it known that we, DAVID LIPPY and PETER OTT, of Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Cash-Carriers; and we 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 appertains to make and use the same.

Our invention relates to an improvement in cash-carriers.

The object is to more fully complete the system for which we have at present a pending application, and in so doing to provide an improved carriage and car, and to further provide a bumper and adjustable spring-stop, by means of which the carriage will be brought gradually to a full stop, and given a greater or lesser impulse, as the distance it is to travel may require; a further object being to provide an improved construction of the supporting brackets and hangers for guiding the impelling-cord.

With these ends in view our invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the system in vertical longitudinal section. Fig. 2 is a view of the bracket employed at the cashier terminus. Fig. 3 is a view of the bracket employed at a station. Fig. 4 is a plan view of the braced arm supporting the hanger for guiding the impelling-cord. Fig. 5 is a transverse section of the carriage, taken through the line *xy* of Fig. 1. Fig. 6 is an enlarged view of a portion of the hanger, and Fig. 7 is an enlarged view of the spring-catch for securing the cash-box in the car.

A A represent a pair of depending standards, preferably hollow, and connected at their lower ends by a horizontal bar, B. The bar B is also preferably hollow and united to the standards A by elbow-joints. At suitable intervals throughout its length the bar B is provided with T-joints *b*, for the purpose of attaching single depending standards C thereto. The length of the bar B and the number of T-joints inserted therein will be determined

by the number of tracks which it is found desirable to have centered at the cashier's desk.

A single depending standard, A', having the section C' telescoped within it, and provided with a set-screw, *c*, to adjust the section C' at different heights, as shown in Fig. 3, is particularly well adapted for supporting the station end of the track within easy reach of the clerk. The object of constructing the support C' adjustable is to enable the track to be adjusted to a level position when for any cause either end may have sagged, or for setting the track at any angle of inclination which may be found desirable.

To the lower ends of the supporting-standards C C' are secured the track guides or holders D, the inner faces of which are recessed to receive the elastic bumpers *d*, through which the track E passes.

To the lower side of the track guide or holder D is secured a depending tubular projection, F, provided with an elongated slot, *f*, the latter extending through the projection in a direction parallel with the track E. Through the slot *f* extends the shank of a long pointed hook, G, the end of the shank being pivotally secured to the outer end of the track guide or holder. The shank of the hook G is allowed vertical play in the slot, and is automatically held in a normally-elevated position in the slot by means of a spring-cushion, *g*, inserted below it within the tubular projection F. A spring-cushion, *g'*, is also inserted within the tube F, above the shank of G, to prevent noise. A set-screw, H, inserted in the lower end of the projection F, impinges against the lower cushion, *g*, and serves to increase its tension upon the shank of the hook G.

A cord-hanger-supporting arm, I, extending parallel with the track, is secured at one end to the supporting-standard C, a short distance above the track, and is provided at the opposite end with a telescopic section, *i*, and means for locking the section *i* in longitudinal adjustment within the section I. A brace-rod, K, is connected at one end with the arm I and at the opposite end with the support C. A combined brace and brake-plate, *k*, is secured to the lower side of the arm I and to the support C in an inclined position, the purpose of which in gradually bringing the carriage to a

stop will hereinafter appear. The arm I is further held in position by means of a pair of side braces, L, extending from its extremities to a pair of sockets, l, in which they are adjustably secured by set-screws or other suitable means.

To the free end of the arm-section *i* is secured a T-coupling, M, in which the bight of a U-shaped hanger, *m*, is secured. The ends of the branches of the hanger *m* are each provided with a sheave or pulley, *m'*, over which the impelling-cord N is adapted to run. The sides of the branches of the hanger *m* which lie toward each other are each provided with a vertical anti-friction roller, *n*, to shield the cord from wear by chafing against the side of the sheave-casing.

The carriage consists of an elongated frame or body, O, suspended from the opposite ends of the axles of a pair of groove-faced supporting-wheels, *o*, one being located near each end. A pair of grooved rollers, P, are journaled in the body beneath the track, to prevent the body from rubbing against the under side of the track when the car jumps.

We find it advantageous to face the rollers P with some elastic material—felt or rubber, for example—to prevent noise.

The extreme ends of the carriage are provided with larger rollers Q, located above the track, and with smaller rollers *q*, located below the tracks, both preferably faced with or constructed entirely of rubber, and adapted to engage the brake-plate *k* and beveled face of the hook G, respectively, and thereby bring the carriage, when moving into contact with them, gradually to a full stop, with the end of the carriage in contact with the bumper and the smaller rollers *q* in engagement with the hooks G, by which the carriage is locked in position. The ends of the carriage are further provided with the depending hooks R, turned toward the termini of the track.

The car S is hung from the central portion of the carriage, and consists of a circular casing somewhat smaller at the upper than at the lower end, the upper end being closed and the lower end being open. The lower end is provided with an inwardly-extending annular flange, *s*.

The cash-box T is of cylindrical form and adapted to be inserted within the casing S through its lower open end. To lock the box T in position within the casing, and to enable it to be removed therefrom, I provide the spring-catches U. One form of catch which I find it convenient to use consists of a pair of sliding bars, *u*, surrounded by a spiral spring, *u'*, the ends of which are secured to the bars near their extremities, and the tension of which tends to hold the ends of the bars *u* advanced sufficiently to take on the flange *s*. Catch-operating arms extend outwardly a little beyond the casing of the car in a convenient position to be grasped between the thumb and finger and pressed together sufficiently to al-

low the box T to be withdrawn from the casing.

The ends of the bars *u* are beveled on the upper sides, and these beveled surfaces take against the edges of the flange *s* when the box is inserted, and thus force the ends of the bars toward one another sufficiently to pass the flange by the upward pressure on the box. By the above construction the box may be removed from and placed within the casing rapidly and easily.

The impelling-cord N, in the form of a loop, extends between the two sheaves in the branches of the hanger *m*, on the side toward the terminus of the track, thence around the sheaves, thence over a pair of sheaves or pulleys secured to the upper portion of the support C, and thence down to a handle, V, to which it is secured.

The operation may be briefly described as follows: Suppose the carriage to be locked by the hook G in position at one of the termini of the track, the bight of the cord N being in position over the hook R and on the upper face of the hook G. By drawing down on the handle V the cord will be drawn tightly, and will finally depress the hook G sufficiently to allow the carriage to escape from its engagement therewith. The strain upon the cord will immediately act upon the carriage and give it a quick impulse, which will carry it the length of the track. The longer the track the greater will be the impulse required to drive the carriage over it, and the strength of the impulse will be increased by increasing the tension of the spring-cushion *g*. The impulse may also be increased by extending the horizontal arm I, and thus giving the cord a more extended length of draft on the carriage.

The several parts above described are of simple construction and combine to form a light, durable, and practicable system for use in warerooms of all sizes and description. The travel of the carriage is rapid. It is propelled by the strength of the operator, the power required being so slight as not to be noticeable, and as no inclination of the track is necessary it may be located within easy reach of the clerk or cashier.

It is evident that slight changes might be resorted to in the forms and arrangements of the several parts without departing from the spirit and scope of our invention; hence we do not wish to limit ourselves strictly to the construction herein set forth; but,

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

1. In a cash-carrier system, a depending bracket having a horizontal bar provided with T-couplings located at suitable intervals thereon for the attachment of track-supporting standards, substantially as set forth.

2. In a cash-carrier system, the combination, with a depending bracket having a hori-

zontal bar provided with couplings located at suitable intervals thereon and adapted to secure track-supporting standards at the cashier's terminus, of single vertically-adjustable standards adapted to support the track at the clerk's terminus, substantially as set forth.

3. The combination, with the track-supporting standards, of track guides or holders secured to the lower ends of the standards, and elastic bumpers secured in recesses formed in the inner ends of the guides or holders, and the track extending centrally through the bumpers, substantially as set forth.

4. The combination, with the track-supporting standards, the track guides or holders secured to their lower ends, and a carriage adapted to be reciprocated on the track, of bevel-faced carriage-retaining hooks pivotally secured to the outer ends of the track guides or holders and held in elevated adjustment below the track by spring-cushions, substantially as set forth.

5. The combination, with the track-supports and carriage, of carriage-retaining hooks pivotally secured below the track, spring-cushions for holding the hooks in the desired normal adjustment, and means for increasing or diminishing the tension of the spring-cushions, substantially as set forth.

6. The combination, with the track, the track-supports, and the carriage adapted to run on the track, of a hanger adapted to give the desired direction to the carriage-impelling cord, said hanger consisting, essentially, of a U-shaped depending standard secured to the end of a horizontally-adjustable arm located above the track, the ends of the U-shaped standard being provided with sheaves and anti-friction rollers, substantially as set forth.

7. The combination, with the track, the track-

supports, the carriage adapted to be reciprocated on the track, and the horizontal arm for giving direction to the impelling-cord, of the brake-plate located in an inclined position between the said arm and track and adapted to engage a friction-wheel on the carriage, substantially as set forth.

8. The combination, with the longitudinally-adjustable arm adapted to change the direction of and support the impelling-cord, of the top brace and the adjustable side braces for adjusting and steadying the arm, substantially as set forth.

9. The combination, with the carriage-body and its supporting-wheels, of the anti-friction rollers journaled in the body and adapted to prevent the body from touching the track, substantially as set forth.

10. The combination, with the carriage-body and its supporting-wheels, of the greater friction-rollers located above the track and the smaller anti-friction rollers located below the track, for the purpose substantially as set forth.

11. The combination, with the carriage adapted to be reciprocated on the track, and the circular car depending therefrom, of the cash-box adapted to be inserted in the car through its lower end, and the spring-catch for locking it in position within the car, substantially as set forth.

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

DAVID LIPPY.
PETER OTT.

Witnesses:

S. G. CUMMINGS,
G. F. CARPENTER.