

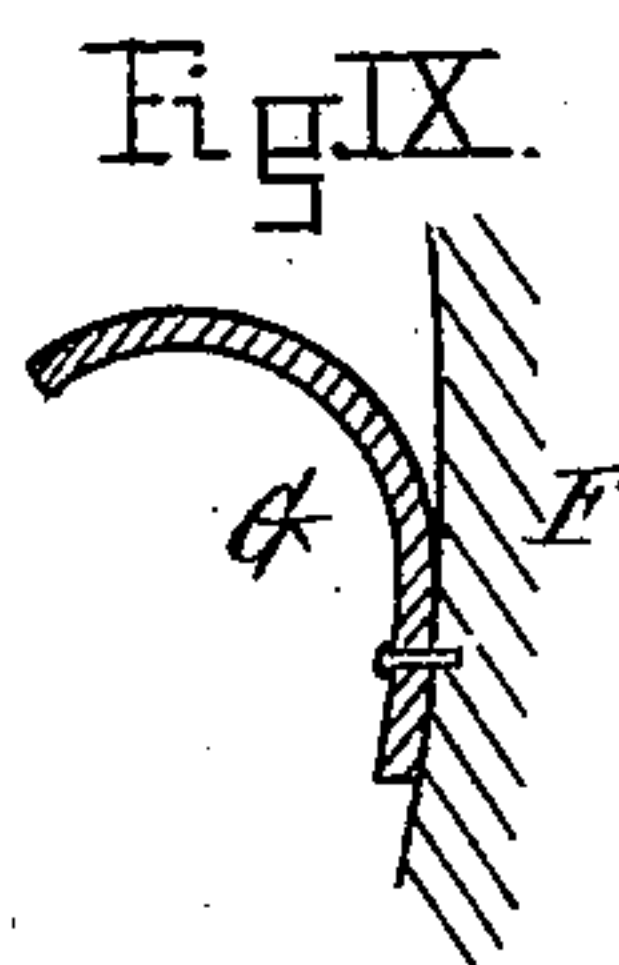
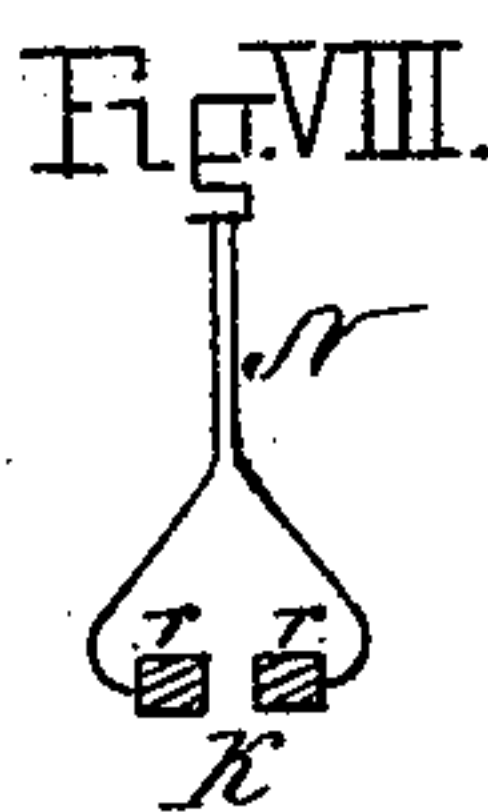
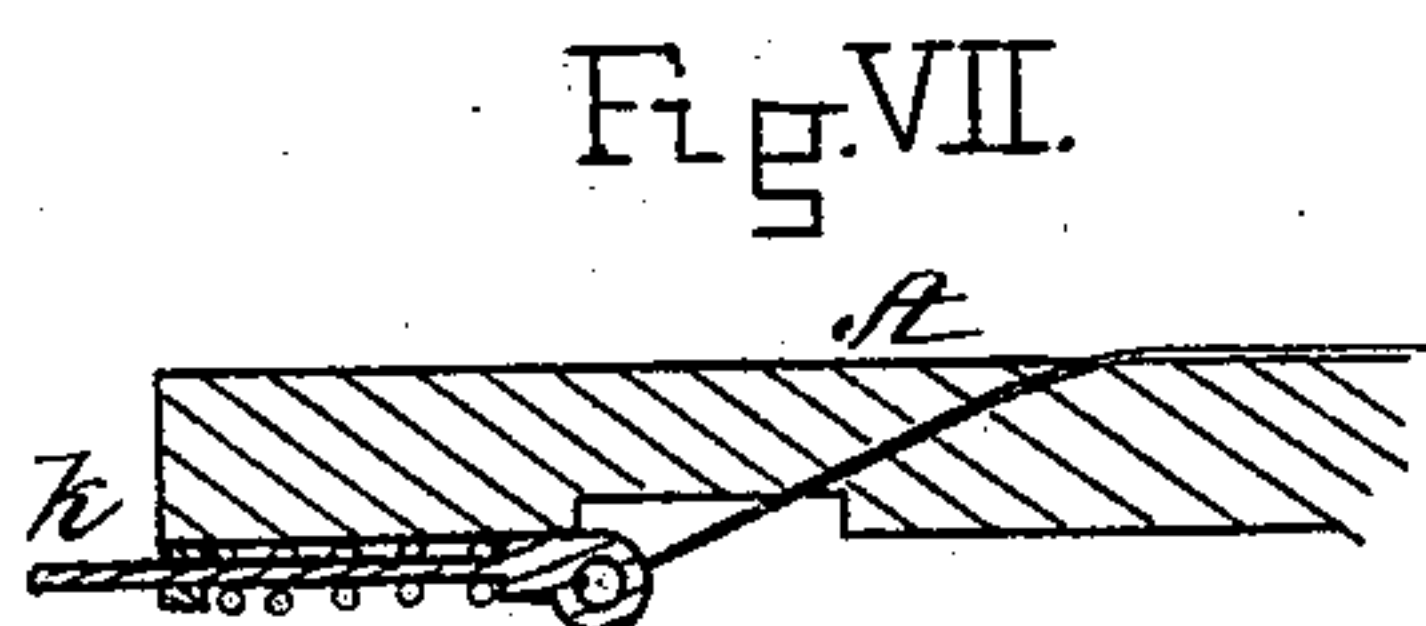
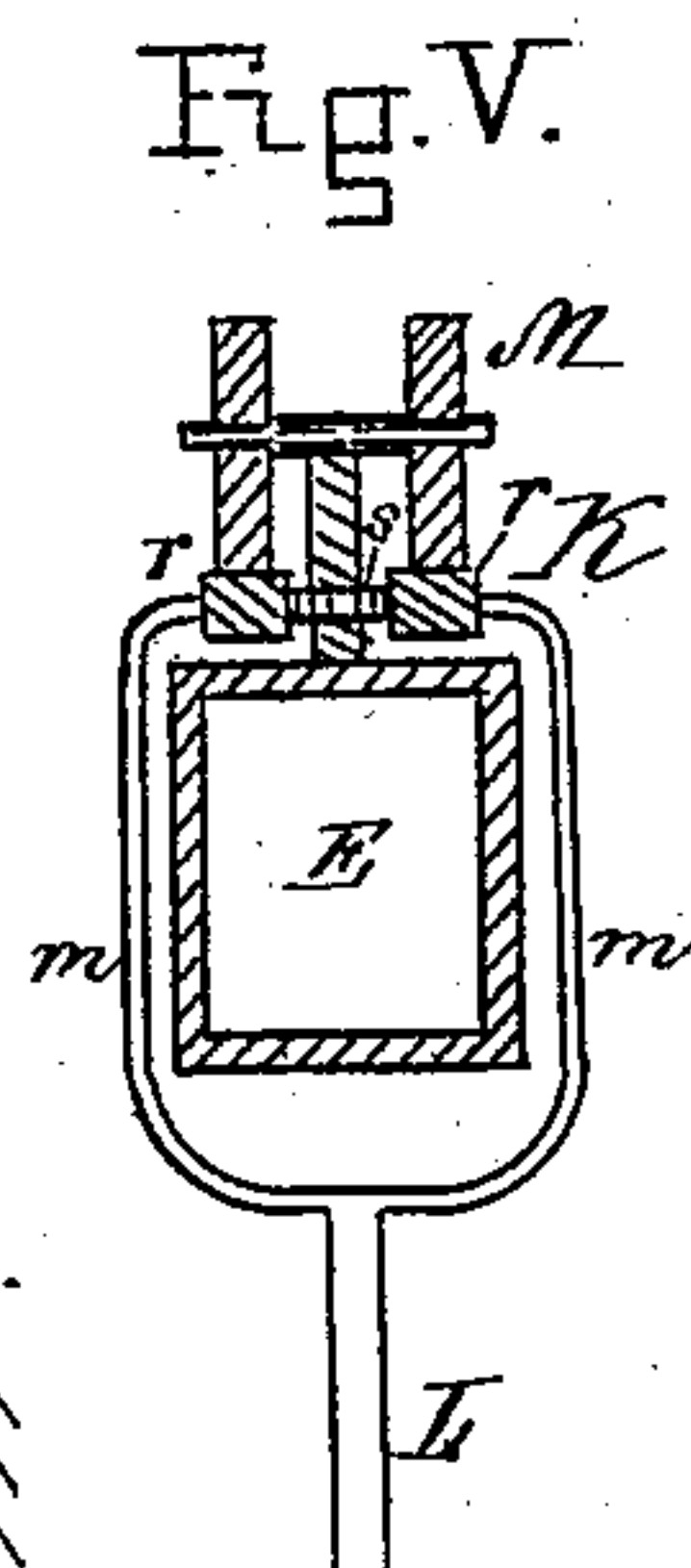
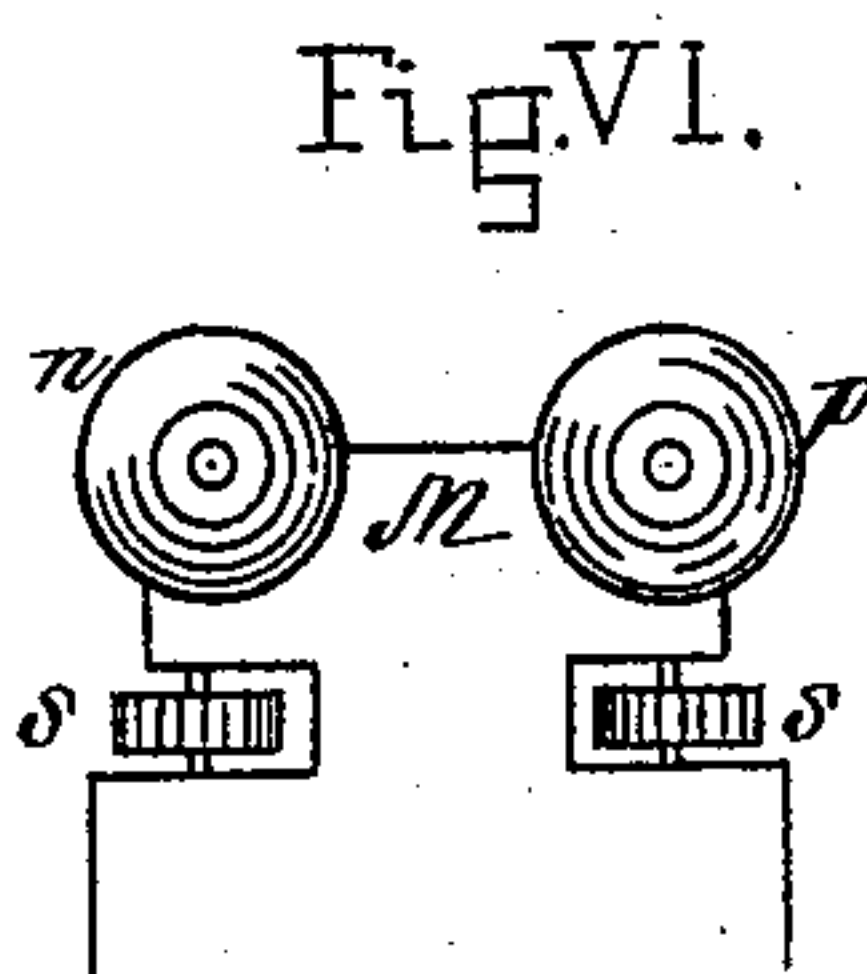
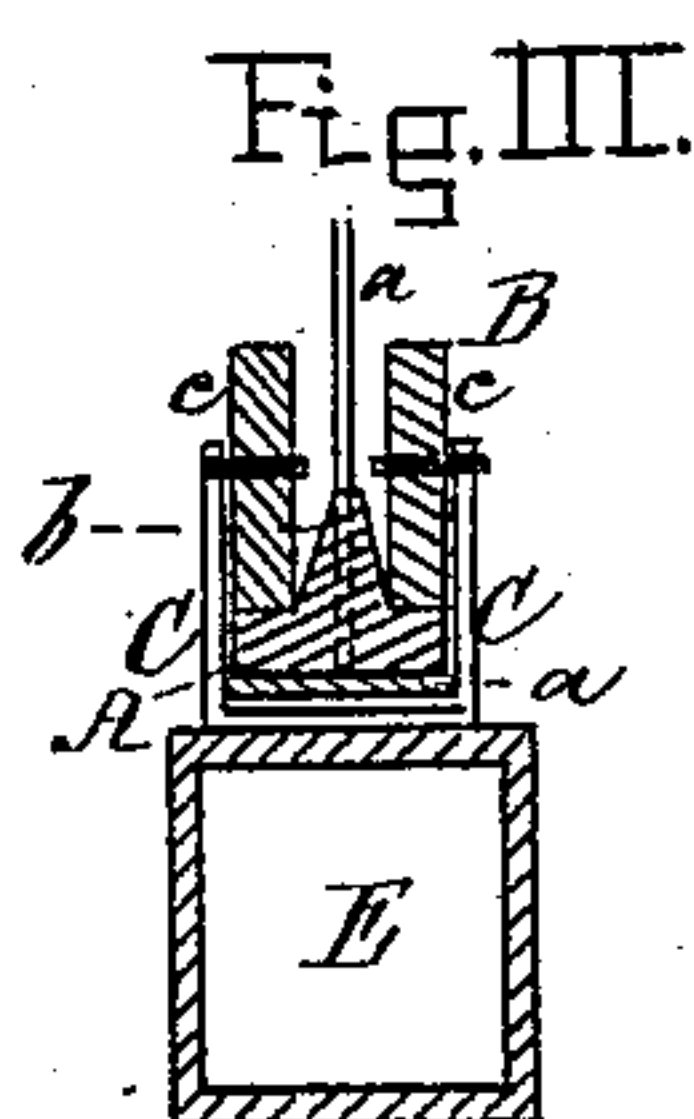
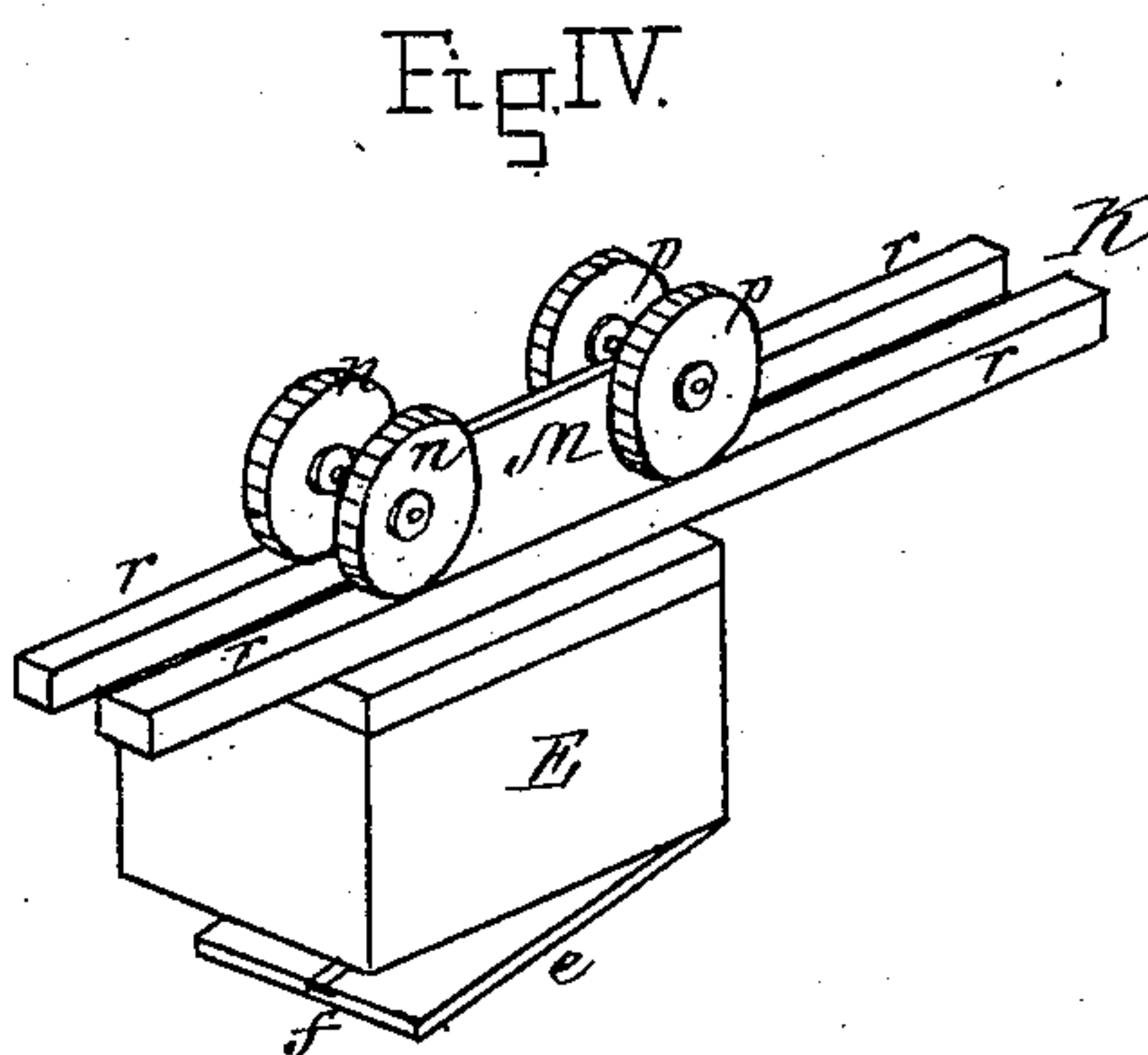
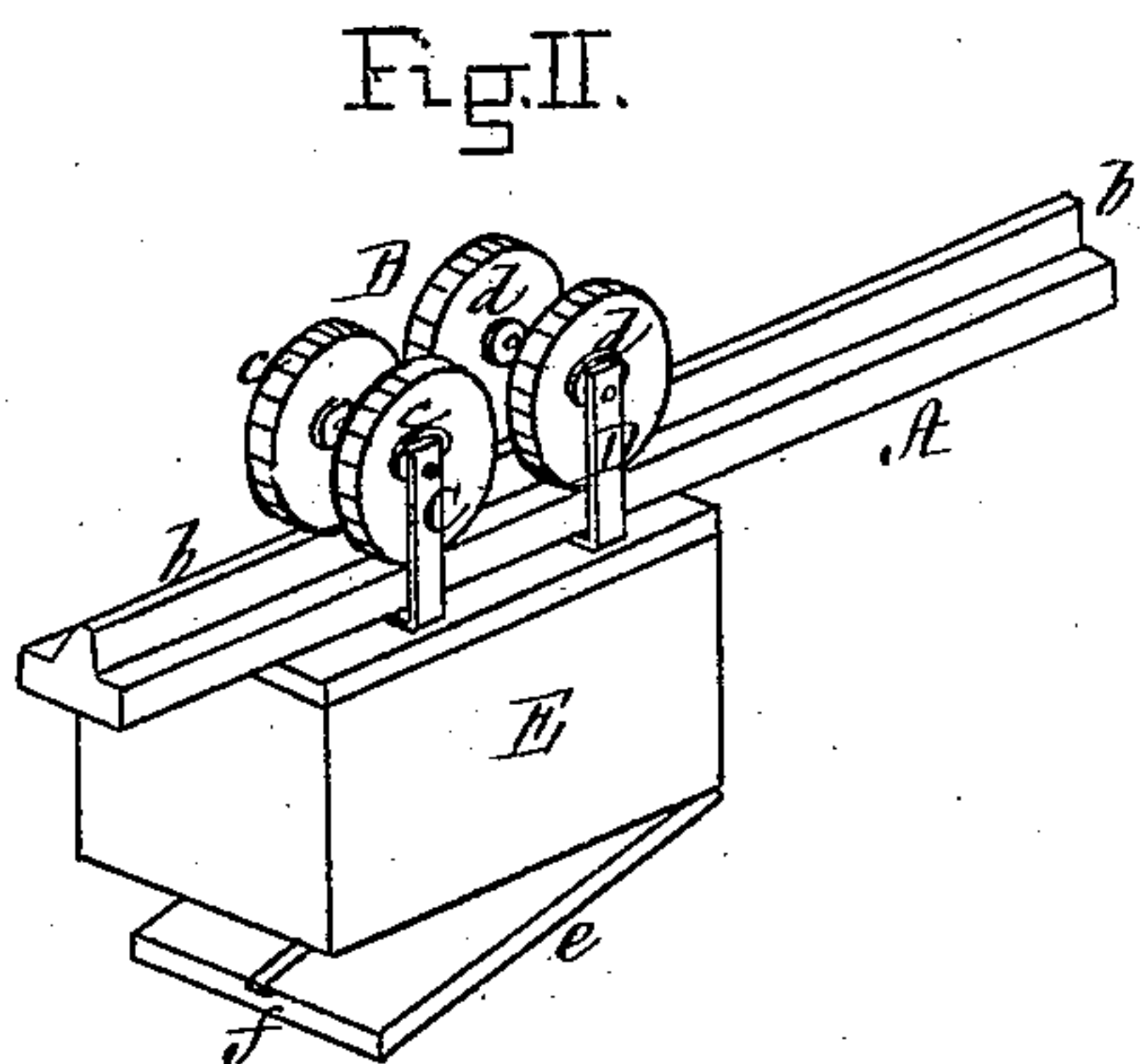
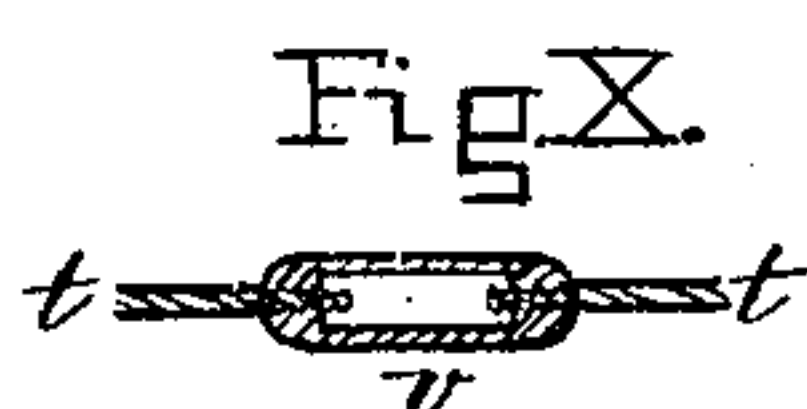
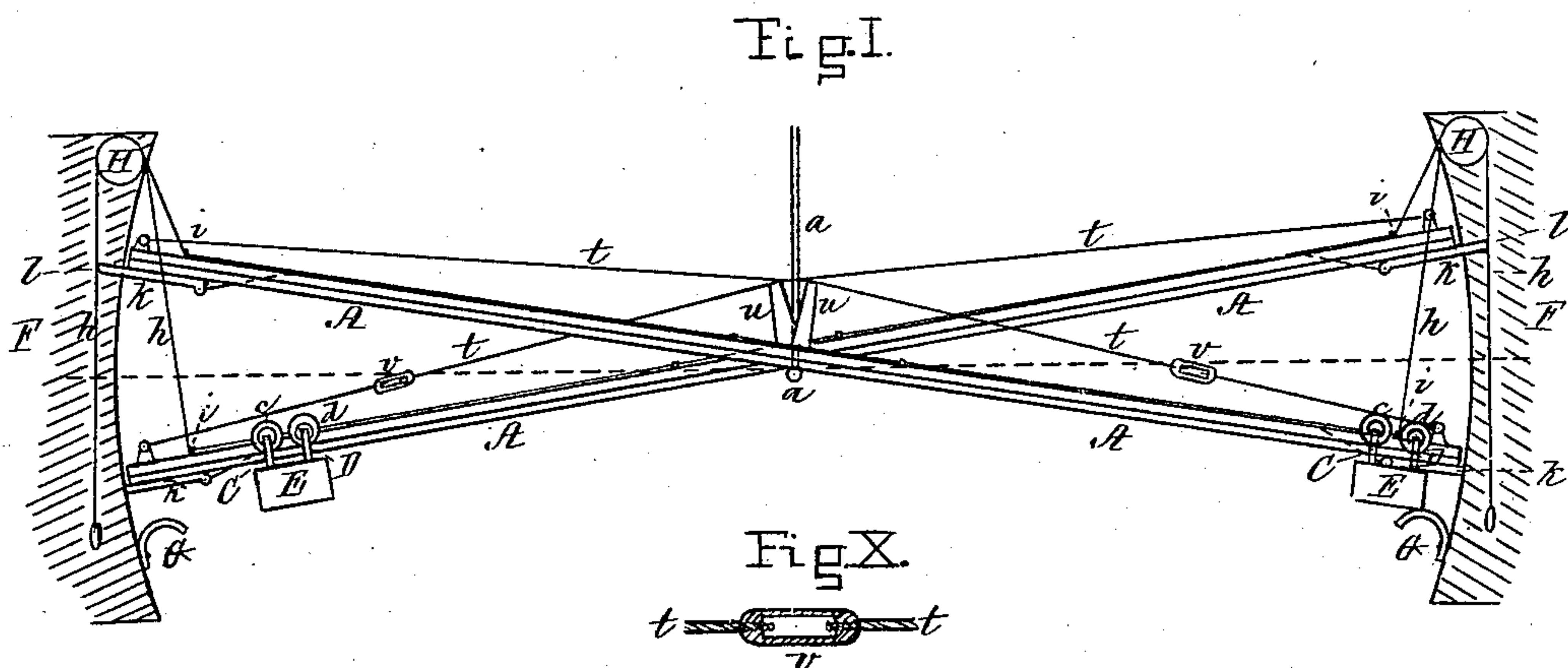
(No Model.)

C. GRANT, Jr.

AUTOMATIC CASH AND PARCEL CARRIER.

No. 287,278.

Patented Oct. 23, 1883.



Witnesses,
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UNITED STATES PATENT OFFICE.

CHARLES GRANT, JR., OF BOSTON, MASSACHUSETTS.

AUTOMATIC CASH AND PARCEL CARRIER.

SPECIFICATION forming part of Letters Patent No. 287,278, dated October 23, 1883.

Application filed September 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GRANT, JR., of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Automatic Cash and Parcel Carriers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

10 Figure 1 represents a railway-track and a carrier for the transmission of cash or parcels arranged for use in stores, and constructed in accordance with my invention. Fig. 2 is a perspective view of one form of my improved track with a carrier adapted thereto. Fig. 3 is a transverse section through the same. Fig. 4 is a perspective view of another form of my track and carrier adapted thereto. Fig. 5 is a transverse section through the carrier and track shown in Fig. 4. Fig. 6 is an elevation of the carrier shown in Fig. 4; Figs. 7, 8, 9, and 10, details to be referred to.

My present invention consists in a track having a single rail of inverted-V shape in cross-section suspended or supported at or near its center, in combination with a carrier having four wheels disposed in pairs—the wheels of a pair having their bearings in a standard rising from the cash or parcel receptacle—the opposite wheels of each pair running on the horizontal portions of the opposite sides of the rail, and being kept in position thereon by the centrally-located inverted-V-shape rib, which counteracts the tendency of the wheels to ride up thereon, and also strengthens the rail and prevents the warping of the same.

My invention also consists in a track having two rails suspended or supported at or near its center, in combination with a carrier having two pairs of wheels traveling on the upper side of the track, and with a pair of frictional guide wheels or rolls (one at each end of the carrier) bearing on the inner sides of the rails.

45 My invention also consists in a guideway at each end of the single or double railed track, provided with a spring which performs the office of arresting the speed of the carrier at the end of its path without undue concussion, and also retains it until the track is inclined

in the opposite direction, ready for the return of the carrier to the other end of the track.

My invention also consists in a means of locking the ends of the track when inclined in either direction; and it also consists in a means of unlocking and elevating the opposite ends of the track to incline it, as desired, for the carrier to travel to and from the desk of the cashier or that of the parcel-receiver.

To enable others skilled in the art to understand and apply my invention, I will proceed to describe the manner in which I have carried it out.

In Fig. 1 of the said drawings, A represents a track hung or suspended at its center from the bottom of a standard, *a*, extending down from the ceiling, the track consisting of a single rail, Fig. 2, having a centrally-located rib, *b*, of inverted-V shape in cross-section, Fig. 3, upon which travels a carrier, B, having two pairs of wheels *c c*, *d d*, having their bearings in standards C D, formed of two bent metal plates, each secured to the top of the cash or parcel receptacle E, provided with a hinged bottom, *e*, opening outward and downward, and with a spring-bolt, *f*, which catches into the end of the receptacle when it is to be closed. The opposite wheels, *c d*, of each pair run on the horizontal upper surface of the opposite sides of the rail, and are kept in position thereon by the downwardly and outwardly inclined sides of the inverted-V-shape rib *b*, which counteracts any tendency of the riding up of the wheels thereon, said central rib also serving to strengthen and prevent the warping of the rail.

At each end of the track is located a guideway, F, attached to the wall or to a post, the inner surface of each of said ways being in close proximity to the end of the track contiguous thereto, and forming an arc of a circle struck from the point where the track is suspended as a center.

G is a bent spring, (of the form shown, Fig. 9,) having one end secured to the side of each way, and its other end free, to catch under the contiguous end of the carrier, said spring serving to check the speed of the carrier and gradually reduce the force of impact as it rolls by its gravity down to the end of the

track, the spring also serving to retain it in this position till the contents of the receptacle are either placed therein by the salesman or removed therefrom by the cashier or parcel-receiver, after which the track is inclined in the opposite direction, in a manner presently to be explained, to allow of the return of the carrier to the opposite end of the track.

Over the salesman's position at the counter, and also over the desk of the cashier or parcel-receiver, is located a pulley, *H*, over which is led a cord, *h*, passing through an eye or staple, *i*, fastened near the end of the top of the track, and down through said track or on its outside to the inner end of a spring-bolt, *k*, secured to the end of the track, (see Fig. 7,) the opposite end of the cord being provided with a loop or tassel, which hangs within reach of the salesman, cashier, &c.

Within each guideway, at a point where the upward motion of the end of the track is to be limited, is formed a recess, *l*, for the reception of the end of the bolt *k*, which is pressed therein by the resistance of its spring when the bolt arrives in line opposite said recess.

The track, being inclined down toward the salesman's position at the counter, and the carrier being at the lower end of the track, with the upper end of the same locked by its spring-bolt *k*, the salesman deposits within the carrier the cash derived from the sale or the goods sold, and then pulls down on the cord *h*, which first withdraws the bolt at the opposite (upper) end of the track from the recess *l* in the guideway over the cashier's or parcel-receiver's desk, and then, continuing to pull on the cord, the salesman elevates his end of the track till the spring-bolt there located is brought in line with and enters the recess *l* in the guideway nearest to him. This operation tilts the track down toward the desk of the cashier or parcel-receiver, and the carrier, being removed from the pressure of the retaining-spring *G*, descends by its gravity to the cash or goods receiver, to be emptied.

In apartments where the ceiling is low and the track of considerable length, sufficient room may not be had to suspend the track and allow of its ends being raised, as desired, to give the necessary pitch to the track; and to adapt my invention to such situations I intend to employ a double-rail track, *K*, having its center supported by a post, *L*, provided with bifurcations *m m*, proceeding from its top and entering the outsides of the rails in such manner as not to be in the path of the carrier or its receptacle, (see Fig. 5,) in which case I intend to use a carrier, *M*, having two pairs of vertical wheels, *n n p p*, running on the upper side of the rails *r r*, and two horizontal friction guide wheels or rolls *s s*, bearing on the inner faces of the rails; but in either location,

apartments or stores having high or low ceilings, I retain the essential features of my invention, which consist in a track pivoted at or near its center with a carrier having two pairs of wheels traveling thereon, and with devices for locking the track when inclined in either direction, and with means for alternately unlocking and elevating the ends of the same.

To prevent sagging or deflection of the track from a straight line, I intend to connect its ends by a couple of rods or wires, *t t*, led over a standard, *u*, rising from the center of the track and tightened, when desired, by turning a double screw-nut, *v*, in the form of a link, Fig. 10, over right and left hand screw-threads, with which the contiguous ends of the rods or wires are provided. The double-rail track *K* may also be suspended by a bifurcated rod, *N*, Fig. 8.

I claim—

1. In combination with a track suspended or supported at or near its center, a carrier having two pairs of wheels, and a means of elevating each end of the track, constructed to operate substantially as and for the purpose set forth.

2. A track consisting of a single rail, *A*, having a central inverted-V-shape rib, *b*, and supported or suspended at or near its center, in combination with a four-wheel carrier and mechanism for locking, unlocking, and elevating the ends of the track, substantially as and for the purpose described.

3. A track consisting of a pair of rails suspended or supported at or near its center, in combination with mechanism for locking, unlocking, and elevating the ends of the same, and a carrier having two pairs of vertical wheels running on the tops of the rails, and with a pair of frictional guide wheels or rolls bearing on the inner faces thereof, for the purpose specified.

4. The guideways *F*, with their stop and retaining springs *G*, in combination with a four-wheel carrier and a track pivoted at or near its center, having suitable means of locking, unlocking, and elevating the ends of the same, as and for the purpose set forth.

5. A track pivoted at or near its center with its standard *u*, in combination with the rods or wires *t t*, provided with right and left hand screw-threads, and a screw-nut, *v*, adapted to turn thereover for preventing the deflection of the track, as described.

Witness my hand this 30th day of August, 1883.

CHARLES GRANT, JR.

In presence of—

CHAS. M. REED,
N. W. STEARNS.