

No. 851,869.

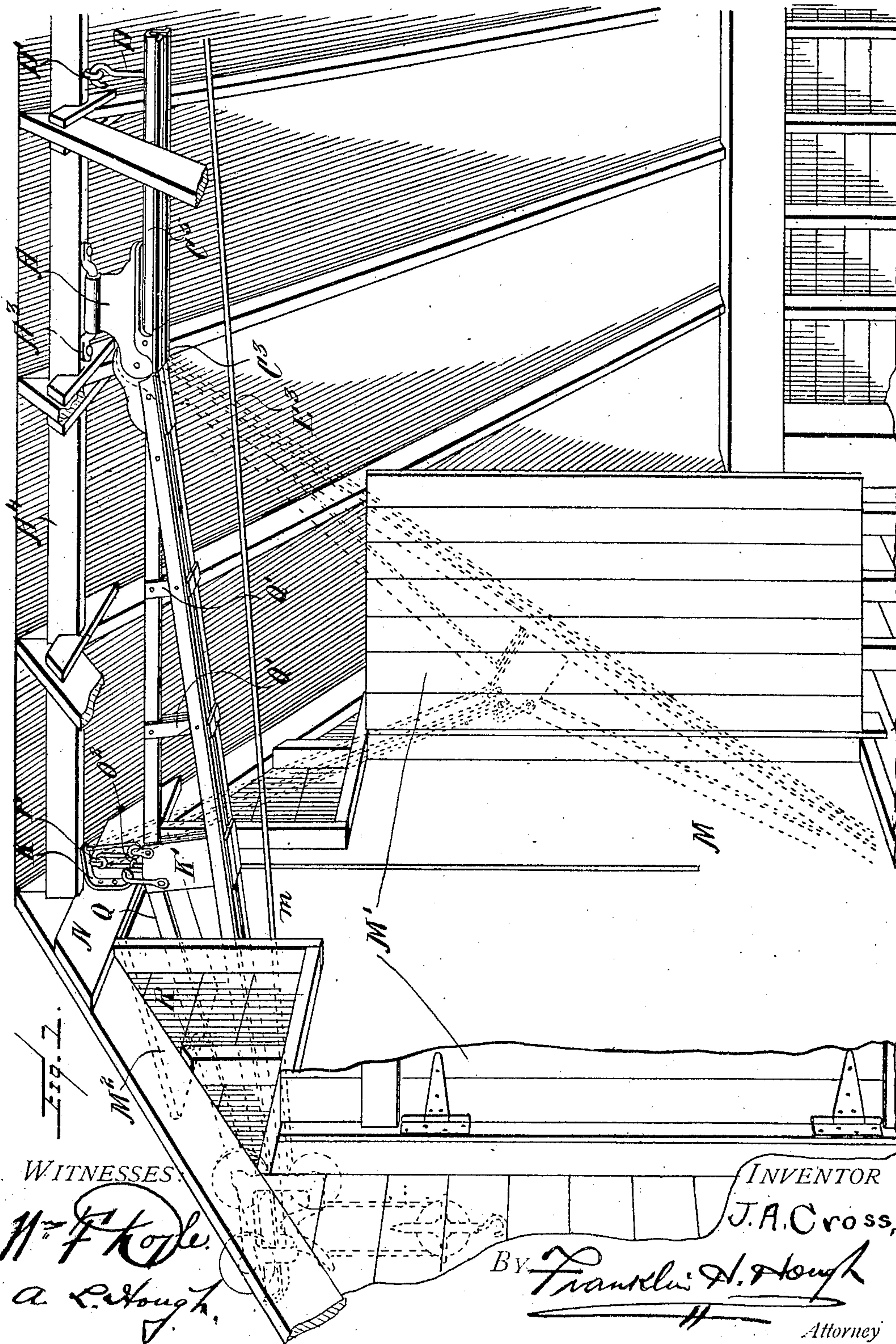
PATENTED APR. 30, 1907.

J. A. CROSS.

HINGED EXTENSION FOR HAY CARRIER TRACKS.

APPLICATION FILED JAN. 3, 1907.

2 SHEETS—SHEET 1.



WITNESSES.

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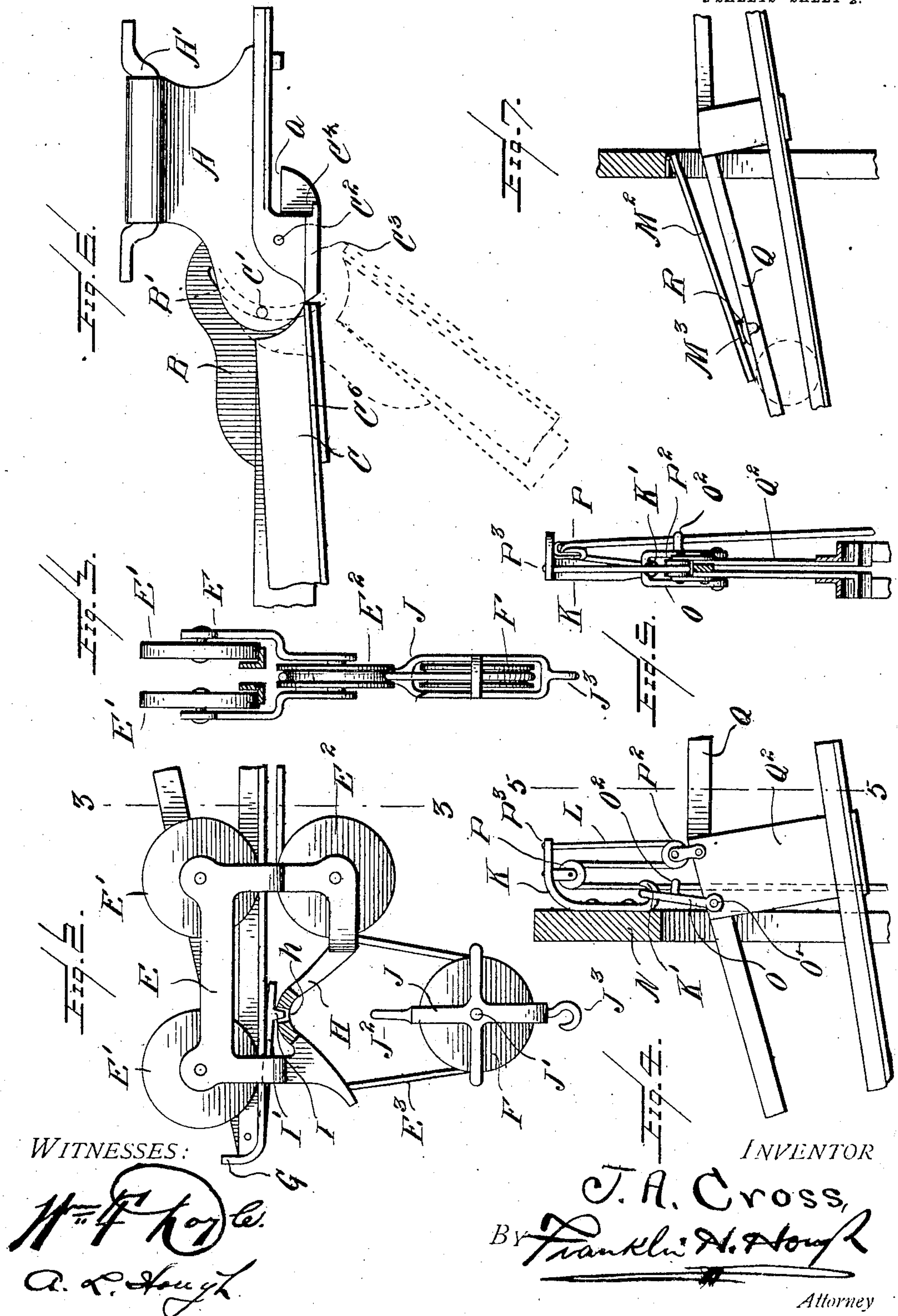
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UNITED STATES PATENT OFFICE.

JEROME A. CROSS, OF FULTONVILLE, NEW YORK.

HINGED EXTENSION FOR HAY-CARRIER TRACKS.

No. 851,869.

Specification of Letters Patent.

Patented April 30, 1907.

Application filed January 3, 1907. Serial No. 350,696.

To all whom it may concern:

Be it known that I, JEROME A. CROSS, a citizen of the United States, residing at Fultonville, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Hinged Extensions for Hay-Carrier Tracks; 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 appertains to make and use same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in hinged extension tracks and hoisting apparatus, and consists essentially in the provision of a hinged track connected at one end to a stationary track adapted to be supported from the ridge of a building and so arranged that when it is swung into operative position, may be supported in such position and automatically open a door in a building and through which the track extends when adjusted for use in hoisting.

The invention consists in other details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a perspective view showing my improved hinged extension track and hoisting apparatus adjusted for use within a building, showing the door raised and held open by the extension track. Fig. 2 is a side elevation of the carrier at the end of the hinged extension track. Fig. 3 is a sectional view on line 3—3 of Fig. 2. Fig. 4 is a side elevation of the apparatus for holding the extension track suspended. Fig. 5 is a section on line 5—5 of Fig. 4. Fig. 6 is a side elevation of the hinged joint and parts immediately connected thereto, and Fig. 7 is a side elevation of a portion of the extension track and illustrating the same as holding a door open.

Reference now being had to the details of the drawings by letter, A designates a hanger which is mounted upon a rod A' which is fastened by means of lag screws A³ or other suitable fastening means to the beam A⁴

securely held to the ridge of a building. Said hanger is slotted longitudinally at one end to receive the plate B which is either integral with or fastened to the hinged extension track C. Said plate B has a curved slot B' formed therein, as seen by dotted lines in Fig. 6, and a pin C' passes through the walls of the slotted end of the hanger A and also through said slot B', and serves to guide the extension beam in its pivotal movements. The plate B is pivotally mounted upon a pin C² which also passes through the walls of the slotted portion of the hanger.

Projecting from the opposite sides of the hanger are the flanges C³, the rear ends of which terminate in shoulders C⁴ upon which the permanent tracks C⁵ are adapted to rest, with their upper faces flush with the upper faces of the flanges C³, there being one upon each side of the hanger. Said extension track C has the lateral flanges C⁶ which, when the track is extended to the position shown in Fig. 1 of the drawings, connect with the flanges C³, whereby the carrier may travel by the hanger and onto the permanent tracks C⁵. It will be noted upon reference to Fig. 6 of the drawings that the hanger has a recess *a* formed horizontally in the under surface thereof and which is for the reception of the meeting end of the permanent track which, in the present instance, is shown as substantially inverted U-shape as illustrated in Fig. 1 of the drawings. Suitable bolts or other fastening means may be employed for holding the permanent track to the hanger, and auxiliary means, such as hooks D, as shown in Fig. 1 of the drawings, may be fastened to the permanent track and connected to eyebolts D' held to the beam A⁴. Said extension track, which is normally held at an inclination when adjusted for use, has its forward end slightly upwardly turned, forming a portion which is substantially level for the purpose of allowing the carrier to properly receive the traveling pulley with its load which it could not do if the carrier rested at an incline. The carrier after having secured its load and having been released from the fixed lock attached near the end of the track, has an upward grade to make which causes the carrier to start off gradually without jerk or shock; also when the empty carrier is being returned to end of track, it will practically run down this grade from its own gravity with momentum sufficient to carry it upon

the level section of track, release the traveling pulley and lock itself to track ready to receive another load.

The carrier, designated in Fig. 2 of the drawings, consists of the frame E in which the wheels E' are mounted to travel upon the two flanges C⁶, one upon either side of the extension track, and E² designates a grooved sheave also journaled upon the hoisting frame and about which a rope or cable E³ passes which also passes about a grooved sheave F which is supported thereby, one end of said rope or cable being fastened to an extension of said hoisting frame, as shown clearly in the drawings. In order to limit the outer movement of the frame of the carrier, an upturned flange G is formed at the end of the extension track, against which the outer of the wheels E' are adapted to contact. The under portion of the carrier frame is arched, as shown at H, and is provided with an aperture h at the highest portion of said arch and adapted to receive a lug I formed upon the end of the resilient bar I', whereby, when the carrier is in the position shown in Fig. 1 of the drawings, it may be held in such position until a load is hoisted and in readiness to be drawn up the inclined extension track and upon the permanent or fixed track. J designates a yoke carrying the pin J' upon which the sheave F is journaled, and the upper end of said yoke terminates in a point J² which is adapted, as the yoke J is raised, to its highest limit, to contact with the lug I and throw the same out of the aperture formed in the arched portion of the frame E whereby the carrier may be released. A hook J³ is formed at the lower end of the yoke J and to which the material to be hoisted may be connected.

Referring to Figs. 1 and 4 of the drawings, will be seen a bracket arm K fixed to a cross-beam N, and the lower end of said bracket arm terminates in a hook K' adapted to receive the clevis O which is pivotally mounted upon a pin O' passing through the truss Q which is fastened to the extension track, said truss being connected to the track by the braces Q'. Said clevis has an eye O² shown clearly in Figs. 1 and 4 of the drawings, and through which a rope L is adapted to pass, which rope passes over a sheave P supported by the bracket arm K, and thence underneath a sheave P² fastened to the plates Q² connected to said truss members and thence fastened at P³ to the end of the bracket arm K. Said rope L is for the purpose of causing the clevis O to be swung over the hook K' when the extension track is raised to an operative position.

M designates an opening in the end of the building, said opening being closed by the doors M', and the upper portion of the opening M is contracted, as at m, which contracted portion is adapted to be closed by means of

an outwardly swinging door M², the doors M' swinging into the building, as will be noted upon reference to Fig. 1 of the drawings. Upon the upper edges of the forwardly extending truss beams Q is a buffer R, shown clearly in Fig. 7 of the drawings, and against which a projecting portion M³ of the outwardly swinging door M² is adapted to contact when the extension track is adjusted for use, said buffer holding the door open and out of the paths of the wheels E' upon the conveyer frame.

The operation of my apparatus will be readily understood, and is as follows. When not in use, the extension track is positioned inside the building, as shown in dotted lines in Fig. 1 of the drawings, and when adjusted for use, in the position shown in solid lines in Fig. 1 of the drawings. As the extension track is thrown to the position shown in solid lines in Fig. 1, the buffer R coming in contact with the extension M³ upon the swinging door M² will cause the latter to open to the position shown in dotted lines in Fig. 1 of the drawings. When the extension track is raised to its highest limit, the clevis O may be thrown over the hook K' by means of the rope L, thus holding the track suspended. As the carrier reaches its outer limit, it is automatically held by means of the lug I upon the resilient bar I' and when the sheave F is hoisted so that the point J² will contact with the lug h, the carrier will be released, and as power is applied to the rope E³, which extends into the building and preferably over a sheave not shown, the carrier frame with its load may be gradually started upon the extreme end of the extension track which is substantially level and thence drawn up the inclined extension track by the hinged connection and upon the permanent track and conveyed to any location where it is desired to release the load. The carrier may be returned to its starting position either by gravity or by means of a rope or cord which may be attached thereto and extend down to any suitable location. When it is desired to throw the apparatus out of an operative position, the clevis may be detached from the hook upon the bracket arm K and the hinged track lowered through the opening M of the building, and as the extension track lowers, the door M² will fall closed.

What I claim is:—

1. An extension track apparatus comprising a hanger and means for supporting the same, a fixed track secured to said hanger, a hinged extension track pivotally connected to the hanger, means for holding the hinged track in an operative position, a door automatically raised by the hinged track as it is raised to an operative position, and a carrier frame mounted upon the hinged extension track, as set forth.

2. An extension track apparatus comprising

ing a hanger and means for supporting the same, a fixed track secured to said hanger, a hinged extension track pivotally connected to the hanger, means for holding the hinged track in an operative position, a door automatically raised by the hinged track as it is raised to an operative position, a carrier frame mounted upon the hinged extension track, and means for locking and releasing the carrier frame, as set forth.

3. An extension track apparatus comprising a hanger and means for supporting the same, a fixed track secured to said hanger, a hinged extension track pivotally connected to the hanger, means for holding the hinged track in an operative position, the outer end of the extension track being upwardly turned, a resilient bar fixed to the end of the extension track and having a lug thereon, a carrier frame mounted upon the extension track and having an aperture formed in the frame thereof adapted to receive the lug upon said resilient bar, a yoke carrying a sheave, a projection upon said yoke adapted to raise said lug out of the aperture in said frame, and a rope secured to the carrier frame and supporting a sheave upon said yoke and passing over the sheave upon the carrier frame, as set forth.

4. An extension track apparatus comprising a hanger and means for supporting the same, a fixed track secured to said hanger, an extension track hinged to said hanger and means for holding the same at an inclination when in an operative position, the outer end of said track being substantially horizontally disposed, means for supporting the swinging end of the extension track, a carrier frame, wheels journaled therein mounted upon the extension track, a sheave carried by said frame, a hoisting rope fixed at one end to said frame, and passing over said sheave, a hoisting sheave about which said cable passes, and a yoke carrying said hoisting sheave, as set forth.

5. An extension track apparatus comprising a hanger and means for supporting the

same, a fixed track secured to said hanger, an extension track hinged to said hanger, a clevis secured to the truss frame of said extension track and provided with a lateral projection having an eye at its end, a sheave carried by said truss frame, a fixed bracket arm, a hook formed upon said arm adapted to receive said clevis, a rope secured to said arm and passing over said sheave, a sheave upon the bracket arm over which said rope passes, the latter adapted to pass through said eye of the clevis, a carrier frame mounted upon the extension track, and a hoisting cable connected to said frame, as set forth.

6. In combination with a hanger and means for supporting the same, one end of said hanger being slotted, an extension track, a plate secured to the inner end thereof and pivotally mounted in the slot of said hanger, said plate having a curved guide slot formed therein, a pin carried by the hanger and passing through said slot, means for hoisting and holding the extension track in an operative position, and a carrier frame adapted to travel upon said track, as set forth.

7. In combination with a hanger and means for supporting the same, one end of said hanger being slotted, an extension track, a plate secured to the inner end thereof and pivotally mounted in the slot of said hanger, said plate having a curved guide slot formed therein, a pin carried by the hanger and passing through said slot, the opposite sides of said hanger having laterally extending flanges and a horizontal recess, a permanent track having an upright portion adapted to be seated in said recess, means for raising the extension track and holding it in an operative position, and a carrier frame adapted to travel upon said track, as set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JEROME A. CROSS.

Witnesses:

JAMES B. CROSS,
WM. W. FURBECK.