

No. 735,564.

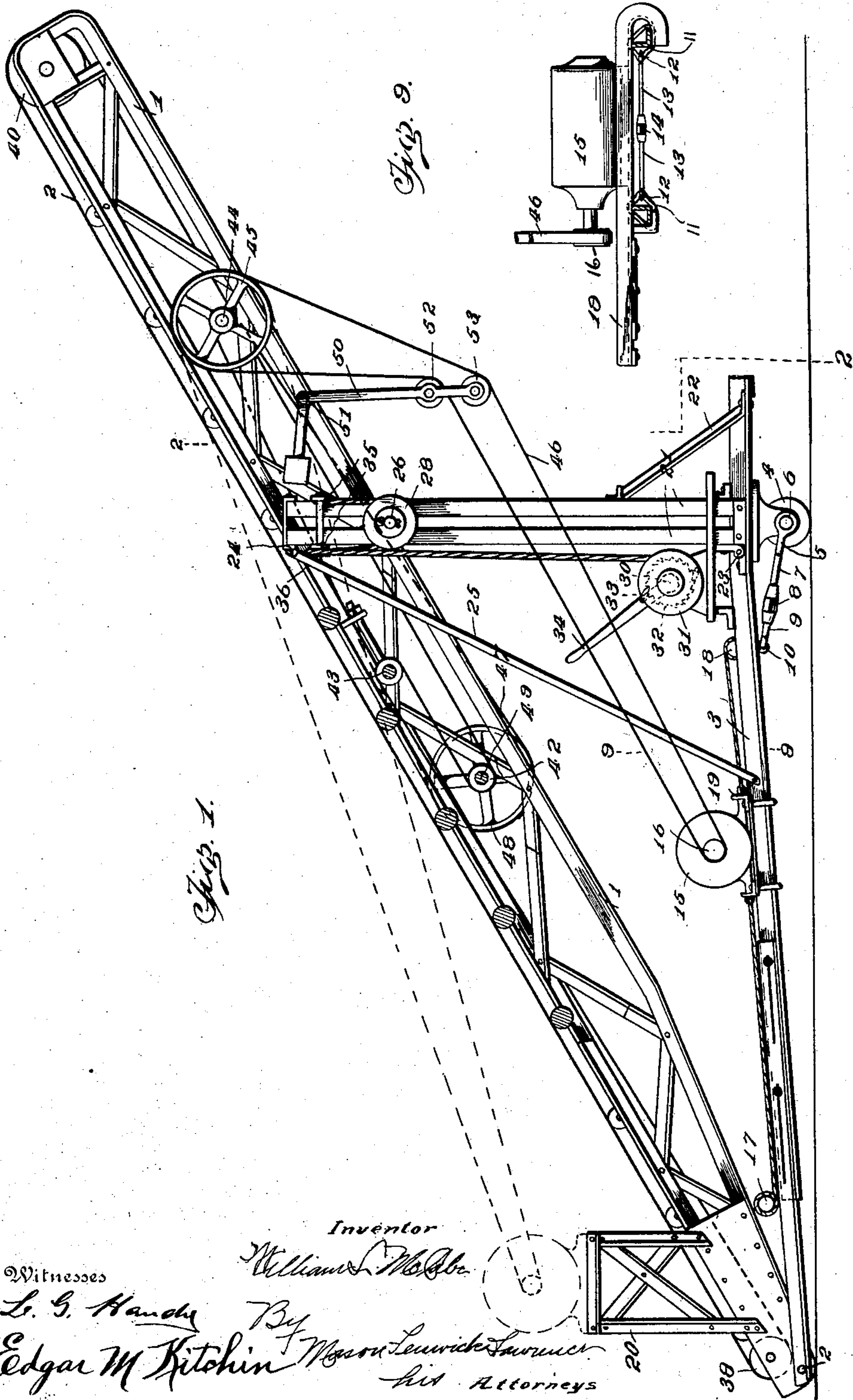
PATENTED AUG. 4, 1903.

W. L. McCABE.
PORTABLE CONVEYER.

APPLICATION FILED APR. 2, 1902.

NO. MODEL.

4 SHEETS—SHEET 1.



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Witnesses
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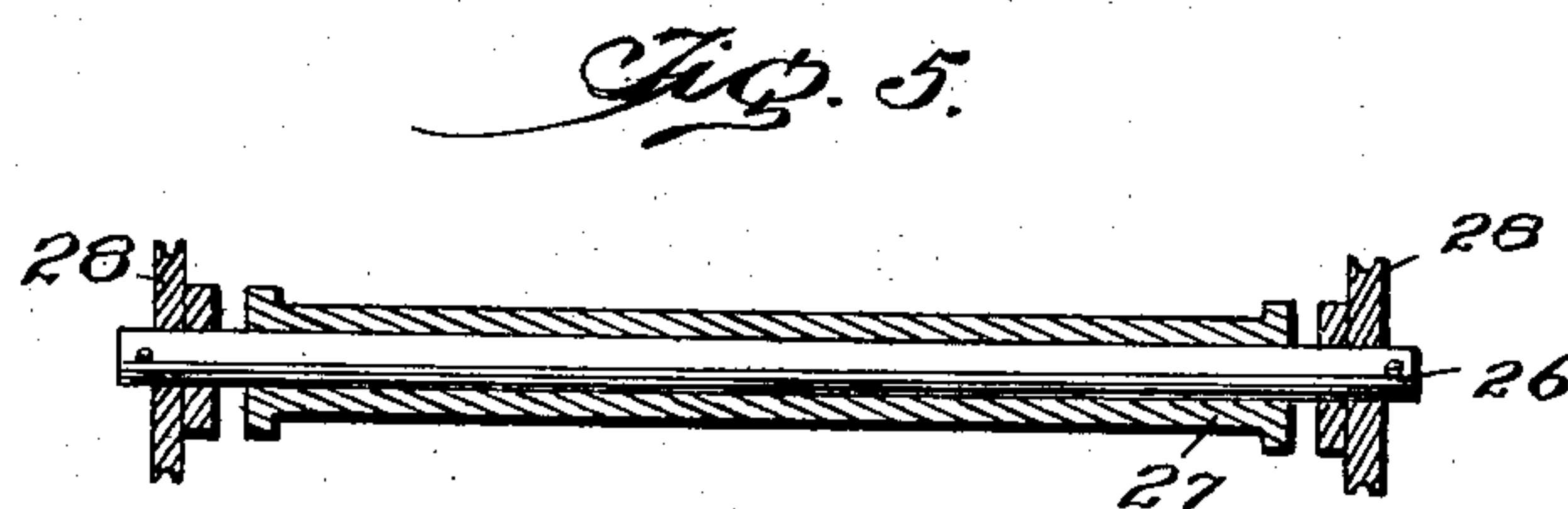
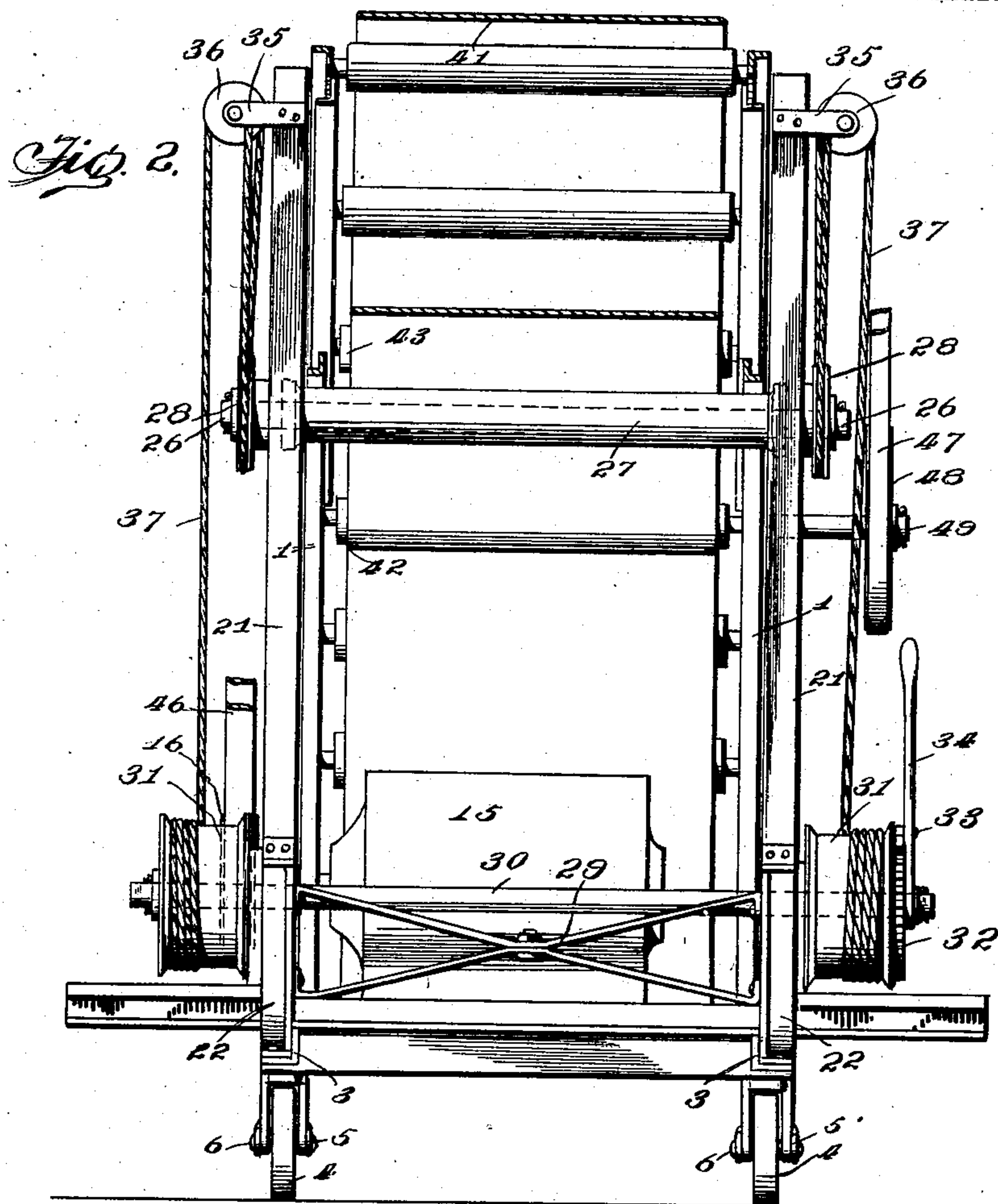
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4 SHEETS—SHEET 2.



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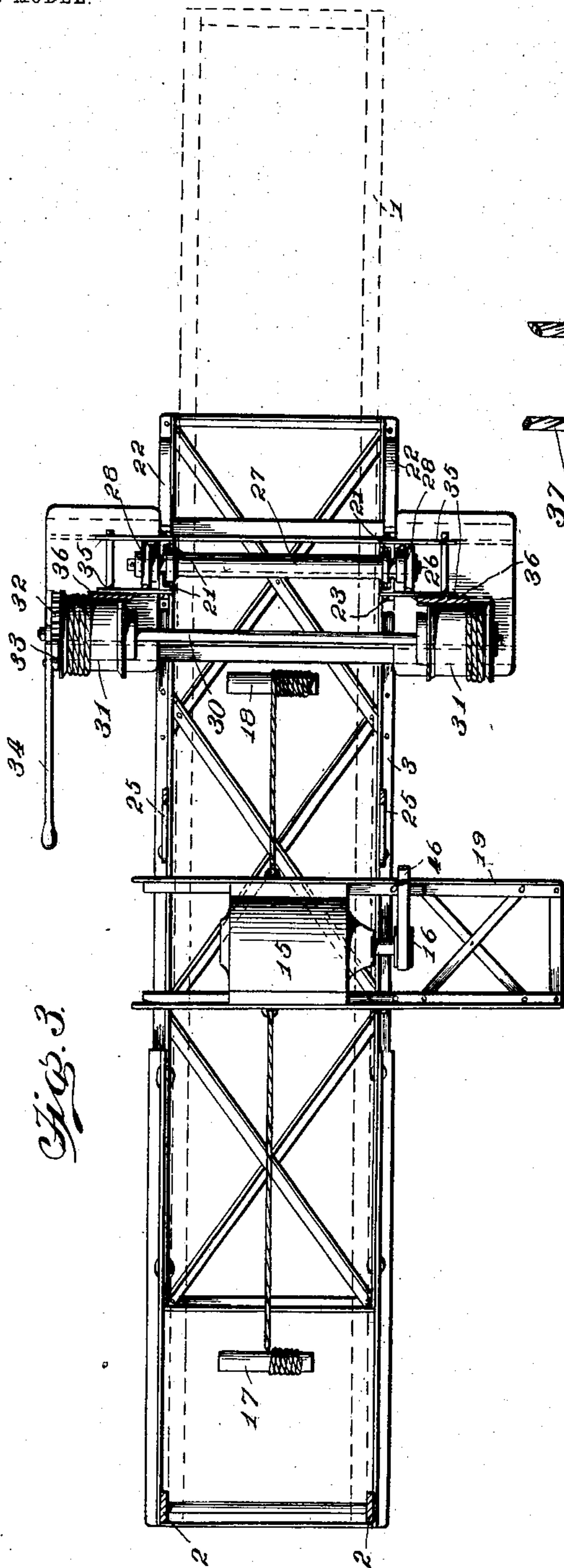


Fig. 3.

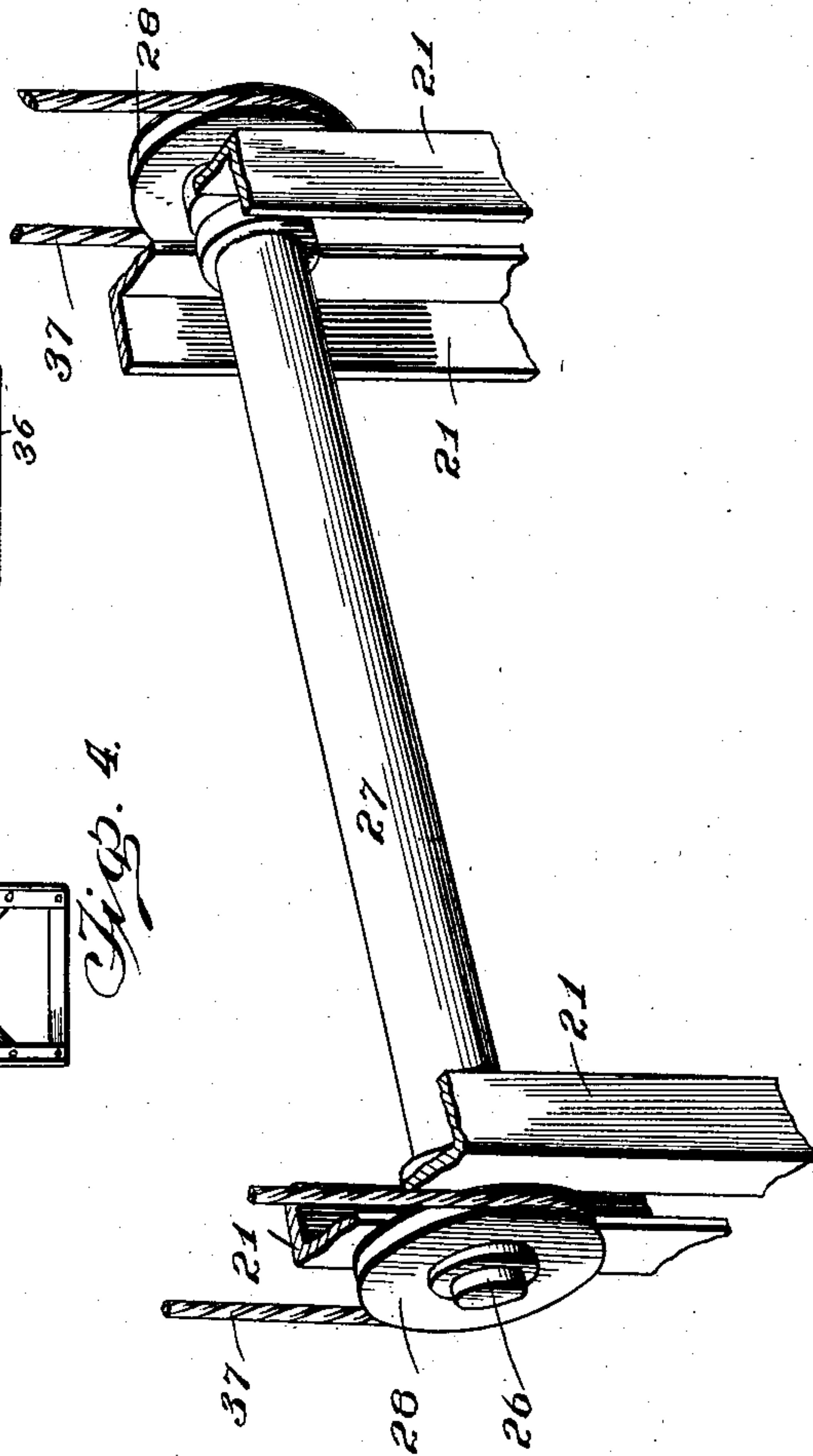


Fig. 4.

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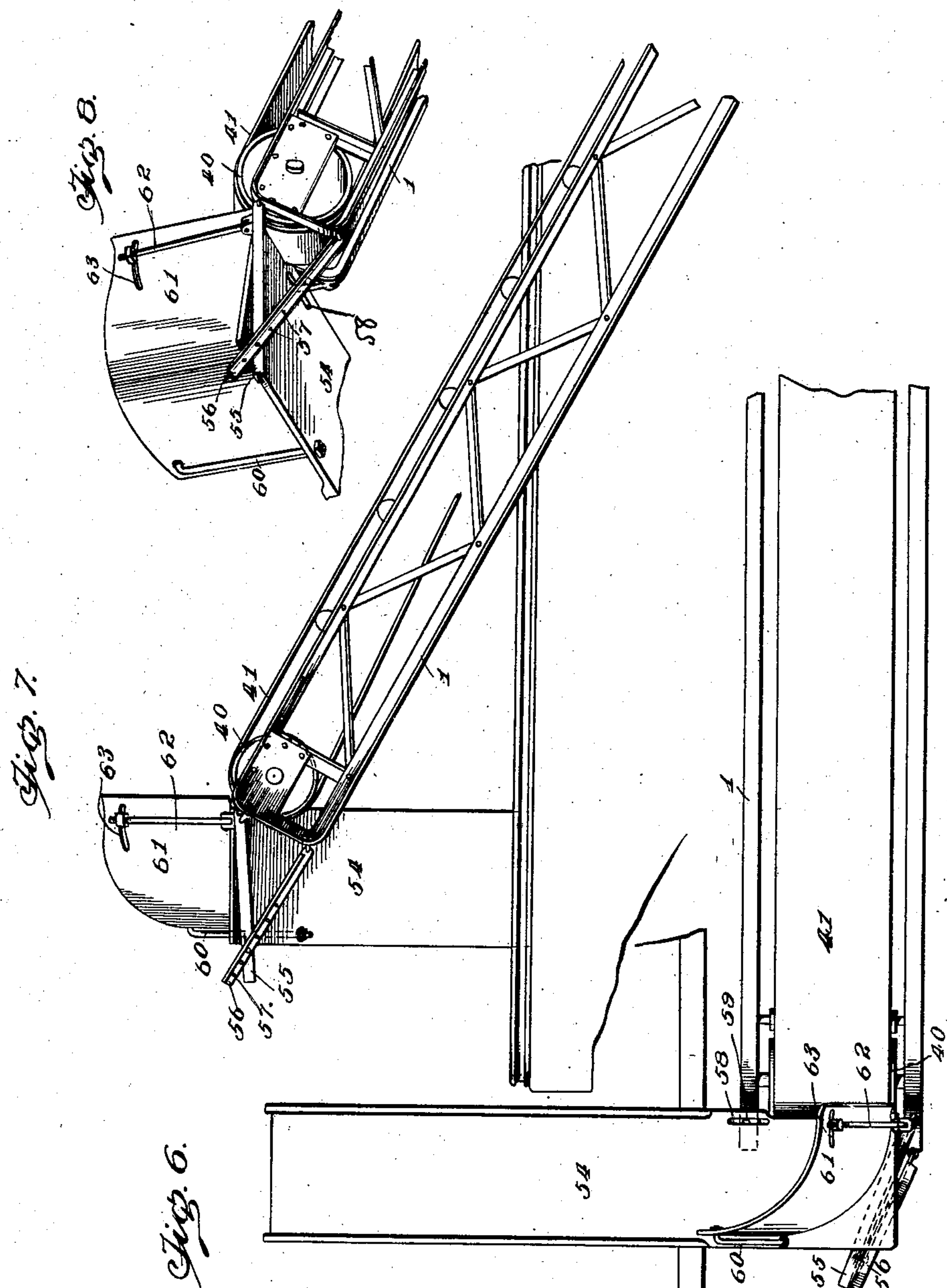
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UNITED STATES PATENT OFFICE.

WILLIAM L. McCABE, OF SEATTLE, WASHINGTON.

PORTABLE CONVEYER.

SPECIFICATION forming part of Letters Patent No. 735,564, dated August 4, 1903.

Application filed April 2, 1902. Serial No. 101,101. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. McCABE, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Portable Conveyers; 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 the same.

This invention relates to improvements in portable conveyers, and the object in view is the production of a compactly-constructed conveyer provided with means for facilitating positioning and adjustment.

It consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a view in side elevation of a conveyer embodying the features of the present invention. Fig. 2 represents an enlarged transverse vertical section of the same, taken on the plane of line 2 2 of Fig. 1. Fig. 3 represents a view in top plan of the supporting-platform, the relative position of the conveyer-frame being indicated in dotted lines. Figs. 4 and 5 represent enlarged detail views of the supporting-spool with surrounding parts. Fig. 6 represents a view in top plan of the discharge-chute with its guiding-shield, the conveyer being partially broken away. Fig. 7 represents a view of the same in side elevation. Fig. 8 represents a fragmentary perspective view of the shield and surrounding parts. Fig. 9 represents a detail section taken on the plane of line 9 9 of Fig. 1.

In the art to which the present invention relates it has been found desirable to provide means for facilitating adjustment of the discharge end of the conveyer, means for guiding the articles conveyed at an angle to the conveyer at the point of discharge therefrom, and to employ means for enabling the ready transportation of the entire structure. In order to attain these and other similarly desirable ends, I employ a suitable conveyer-framework, as 1, of well-known construction, having one end pivoted, as at 2; to any suitable platform, as 3, said platform preferably consisting of parallel angle-irons secured to-

gether by suitable cross-pieces, the platform being formed in two lengths, one of slightly less width than the other, the narrower length being arranged to slide longitudinally within the wider, whereby a telescoping action of the parts may be produced. The telescoping sections are preferably held in position relative to each other by bolts or pins passed through a longitudinal slot in one angle-iron and secured to the contiguous iron.

The inner pivoted end of framework 1 supports platform 3, and the outer end of said platform is preferably supported by suitable rotatably-mounted casters, as 4, each having a shackle, as 5, secured to its axle 6, said shackle being provided with an integral arm, as 7, carrying a turnbuckle, as 8, which turnbuckle is threaded onto a suitable rod 9. The rod 9 detachably engages the platform 3, as at 10, whereby the casters 4 will be held in a fixed position during transportation of the conveyer upon the casters, but may be turned to an angle to their normal plane when it is desired to move the conveyer laterally.

As best seen in Fig. 9, a collar, as 11, surrounds each side angle-iron of platform 3, each collar being provided with an eye, as 12, said eyes being connected by rods 13 13, threaded at their inner ends into a turnbuckle, as 14.

Mounted on the transverse horizontal braces of platform 3 is a motor, as 15, of any suitable and preferred type, carrying any desired driving means, as a pulley 16, normally extending beyond one of the longitudinal angle-irons of platform 3. The end of motor 15 opposite that carrying pulley 16 preferably lies in a vertical plane a sufficient distance inside its contiguous longitudinal angle-iron to permit of said pulley 16 being brought inside the vertical plane of its corresponding longitudinal angle-iron by a lateral adjustment of the motor. The motor is also mounted to slide longitudinally of platform 3, and suitable winding-drums, as 17 and 18, are arranged at or near the ends of said platform and connected by cables with said motor for adjusting the same to any desired position.

As best seen in Figs. 3 and 9, I preferably form an auxiliary laterally-projecting platform, as 19, integral with or connected to

platform 3 in any preferred manner, and my object is when desired to lift the motor 15 bodily and place the same in operating position upon the said platform 19. A second auxiliary platform, as 20, is supported upon a frame extending upwardly from and in the same vertical plane with framework 1 for receiving the motor 15, as indicated in dotted lines in Fig. 1, the supporting-beams of said frame being preferably connected to the sides of said framework 1 for permitting the articles conveyed to be passed therebetween.

Mounted upon platform 3, near the caster-supported end thereof, are two pair of standards, as 21 21, one pair on each side of the platform, the standards of each pair being spaced apart, the outer being braced by a bracket, as 22, and the inner hinged, as at 23, the upper ends of the respective standards being secured together by a strap, as at 24, to which is attached the upper end of a brace 25. The lower end of brace 25 is removably connected with platform 3. Between said standards extends a shaft, as 26, carrying a spool 27 and having grooved pulleys, as 28 28, fixed to its ends. The lower ends of the pairs of standards 21 are preferably braced in any suitable manner, as by transverse bars 29. A shaft, as 30, is arranged above platform 3 and carries a winding-drum, as 31, at each end thereof, suitable means, as a ratchet-wheel 32, designed to be engaged by a pawl 33, carried by an operating-lever 34, being provided for rotating shaft 30 and its drums. Each pair of standards 21 carries brackets 35, in which are revolubly mounted the shaft of a grooved pulley, as 36. Each pair of standards 21 has a cable, as 37, fixed near the upper end thereof and extending downwardly about its respective pulley 28, passed upwardly about its respective pulley 36, and again passed downwardly and secured to its respective drum 31. It will now be apparent that rotation of drums 31 in one direction will tend to raise shaft 26 and spool 27, and rotation of said drums in an opposite direction will lower said parts, the cables 37 being of a sufficient length to permit shaft 26 and spool 27 to be lowered any desired distance.

The framework 1 carries suitable drums, as 39 and 40, at the ends thereof for supporting a carrier-belt, as 41, the said belt in operation moving about drum 39 longitudinally of framework 1 and about drum 40. It next passes about a driving-drum, as 42, and is lapped upon itself in an opposite direction to that of its return movement, passes about a tension-drum 43, and then passing onward to and about drum 39, that part of the return of the belt between drum 43 and drum 39 lying approximate the upper portion of the belt, whereby the lower portion of framework 1 is left vacant for purposes hereinafter mentioned. The drum 43 may be provided with any suitable means for moving the same laterally longitudinally of the framework, whereby the amount of lap in the return portion of

belt 41 may be increased or decreased for controlling the tension of the belt.

A shaft, as 44, extends transversely through framework 1, carrying a driving-pulley, as 45, at one end and a smaller pulley (not shown) at the other, the former pulley being driven by a belt 46, receiving motion from pulley 16, and the latter pulley imparting motion through a belt, as 47, to a pulley 48, fixed to a shaft 49, carrying driving-drum 42. A lever, as 50, is pivoted, as at 51, to framework 1 and carries two idler-pulleys, as 52 and 53, spaced apart and designed to engage the respective portions of belt 46 for regulating the tension thereof. The lever 50 may be of the elbow type and, if preferred, may carry a suitable weight at its free end.

It will readily appear from the drawings that the framework 1 rests upon spool 27 and that the open space in said framework left by the particular arrangement of the driving-belt is designed to register with motor 15 for inclosing the same when the framework is lowered sufficiently.

In operation it is often found desirable to permit the upper end of framework 1 to rest upon the ship to which articles are being conveyed, and in such instances a guiding-chute, as 54, is preferably connected to said end of the framework and usually arranged at right angles thereto. An arm, as 55, is pivoted to the upper end of the framework, and a second arm, as 56, is pivoted beneath the same, the former preferably normally extending in a horizontal plane and the latter being provided with a series of apertures, as 57, and extending in a diagonal plane across the former, the two being preferably secured together by a pin passed through a given aperture 57 and a suitable aperture in arm 55. The apertures 57 permit of vertical adjustment of arm 55. The upper end of chute 54 rests upon arm 55, and a slot, as 58, is formed longitudinally of said chute, near that edge thereof nearest the framework 1, and a pin, as 59, carried by said framework, extending through said slot for retaining the chute against lateral movement, but leaving the same free to swing up and down with the movement of the vessel upon which it rests. A standard, as 60, extends upwardly from chute 54 and is secured to a guiding-shield, as 61, for retaining said shield in position, the said shield consisting of a sheet of suitable material curved from the point at which it is attached to standard 60, which lies in line with one edge of belt 41, to a point on the opposite side of the chute lying in line with the opposite edge of said belt. A standard, as 62, is pivotally attached to arm 55 to swing transversely of said framework, but held against lateral movement in the longitudinal plane of said frame. The upper end of standard 62 engages shield 61 near the upper edge thereof by means of a bolt passed through a segmental slot, as 63, in said shield.

It will now be apparent that articles con-

veyed by belt 41 will be directed against shield 61, which will guide the same at a right angle to their former movement and down chute 54. Any vertical movement of said chute will be accommodated by pin 59, with its slot 58, and by the pivotal attachment of standard 62, the vertical movement of the upper end of framework 1 being taken up by said pin-and-slot connection and by the segmental slot 63.

Although I have specifically set forth one particular embodiment of the present improvements, yet I desire it understood that I shall not limit myself to the minor details of structure, but shall deviate therefrom to any degree within the spirit and scope of the present invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A portable conveyer comprising a suitable framework, conveying means carried by said framework, a spool beneath and supporting said framework, a transverse shaft passed longitudinally through and carrying said spool, means for moving the spool vertically for altering the horizontal plane of one end of the framework, and means at the ends of the spool for guiding the same in its movement, substantially as described.

2. A portable conveyer comprising a suitable framework, conveying means arranged in said framework, a spool beneath and supporting said framework, means for moving said spool vertically for altering the horizontal plane of one end of said framework, and a standard at each end of said spool for guiding the same in its movement, substantially as described.

3. In a portable conveyer, the combination with a suitable platform, of a conveyer-frame pivotally attached thereto, means extending transversely of said platform for supporting said framework, means for moving said support vertically, and a pair of vertical standards arranged at each side of said platform and spaced apart for receiving the ends of and guiding said support in its movement, substantially as described.

4. A portable conveyer comprising a telescopic platform, a framework connected therewith and extending in the same plane, and conveying means carried by the framework, substantially as described.

5. In a portable conveyer, the combination with a suitable framework, and conveying means arranged therein, of a platform extending laterally from beneath said framework, a motor adjustably arranged on said platform, and means for conveying motion from said motor to said conveying means, substantially as described.

6. A portable conveyer, comprising a telescopic platform, a framework mounted thereon, and conveying means carried by the framework, substantially as described.

7. In a portable conveyer, the combination

with a suitable framework, a conveying-belt carried thereby and a chute pivotally attached thereto, of a guiding-shield carried at one end of said chute for directing articles carried by said conveying means onto said chute, said shield being bent so that its ends lie in line with the respective edges of said conveying-belt, substantially as described.

8. In a portable conveyer, the combination with a suitable framework, conveying means carried thereby and a chute pivotally attached to one end thereof, of a guiding-shield rigidly secured to said chute for directing articles carried by said conveying means onto said chute, said shield extending across in front of the end of said conveying means, substantially as described.

9. In a portable conveyer, the combination with a suitable framework, conveying means carried thereby, and a chute pivoted to one end of said framework, of a guiding-shield rigidly secured to the chute for directing articles carried by said conveying means onto said chute, and means pivotally connecting said shield with the framework, substantially as described.

10. In a portable conveyer, the combination with a suitable framework, a conveying-belt carried thereby and a chute arranged at one end of said framework, of a shield pivotally connected at its inner end to the framework in line with one edge of said belt, said shield being curved and its outer end secured to said chute in line with the other edge of said belt, substantially as described.

11. In a portable conveyer, the combination with a suitable support, of a framework pivoted thereto, a conveyer-belt arranged in said framework, means supporting a portion of the return of said belt near the upper portion of said framework whereby an open space is left in the framework, and a motor arranged beneath the open space in the framework, substantially as described.

12. In a portable conveyer, the combination with a platform, of a framework pivoted thereto and extending above the same, a conveying-belt arranged in said framework, means supporting a portion of the return of said belt near the upper portion of said framework whereby an open space is left in the framework, and a motor arranged on said platform beneath the open space in the framework, substantially as described.

13. In a portable conveyer, the combination with a platform, of a framework pivoted thereto and extending above the same, a conveying-belt arranged in the framework, belt-tightening means supporting a portion of the return of said belt near the upper portion of said framework whereby an open space is left in the framework, and a motor on said platform beneath the open space in the framework, substantially as described.

14. In a portable conveyer, the combination of a suitable pivotally-mounted framework, conveying means carried thereby, a spool ar-

5 ranged beneath the framework and supporting a portion of the same, and means for moving said spool to different horizontal planes, and a guiding-standard spaced upon each side of each end of said spool, substantially as described.

10 15. In a portable conveyer, the combination with a platform, of a conveying-framework pivoted at one end thereof, a shaft beneath said framework supporting the free end thereof, means for supporting and moving said shaft vertically, and means for preventing lateral movement of the same and guiding the shaft in a vertical plane during its movement, substantially as described.

15 16. A portable conveyer comprising a telescoping platform, a framework mounted thereon, conveying means in said framework, and a motor on said platform for operating said conveying means, substantially as described.

17. A portable conveyer comprising a telescoping platform, conveying means mounted thereon, and antifriction means supporting said platform, substantially as described.

20 18. A portable conveyer comprising a telescoping platform, conveying means mounted thereon, and casters supporting said platform, substantially as described.

25 19. A portable conveyer comprising a suitable framework, conveying means thereon, vertical standards on either side of said framework, and pulleys carried by said standards, cables secured to the standards and passed about said pulleys, a transverse shaft supporting said framework and provided with pulleys engaging said cables between their point of attachment and said first-mentioned pulleys, and means for moving said cables longitudinally, substantially as described.

30 40 20. In a portable conveyer, the combination with a suitable framework and conveying means thereon, of a pair of vertical standards spaced apart and arranged at each side of

said framework, a transverse shaft extending between the standards of said pairs and carrying a pulley at each end thereof, a spool revolubly inclosing said shaft and designed to support said framework, a pulley supported by each pair of standards, a winding-drum for each pair of standards, means for rotating said drums, and a cable secured to each pair of standards, passed about its respective first and second mentioned pulleys and secured to its respective drum, substantially as described.

55 21. In a portable conveyer, the combination of a pivotally-mounted framework, conveying means thereon, means mounted beneath the framework for supporting the same, and means for moving said support vertically, substantially as described.

22. A portable conveyer comprising a telescopic platform, conveying means mounted thereon, and a motor on said platform for imparting motion to said conveying means, substantially as described.

23. A portable conveyer, comprising a telescopic platform, a framework pivoted thereto, and conveying means carried by said framework, substantially as described.

70 24. In a portable conveyer, the combination with a platform, of a framework pivoted thereon, a plurality of vertical standards secured to said platform and extending upon each side of said framework, and a transverse shaft carried thereby beneath the framework, and means for moving said shaft vertically for altering the horizontal plane of a portion of the framework, substantially as described.

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

WILLIAM L. McCABE.

Witnesses:

JOHN L. FLETCHER,
EDGAR M. KITCHIN.