

No. 774,256.

PATENTED NOV. 8, 1904.

N. H. LARRY.
CONVEYER.

APPLICATION FILED MAY 18, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

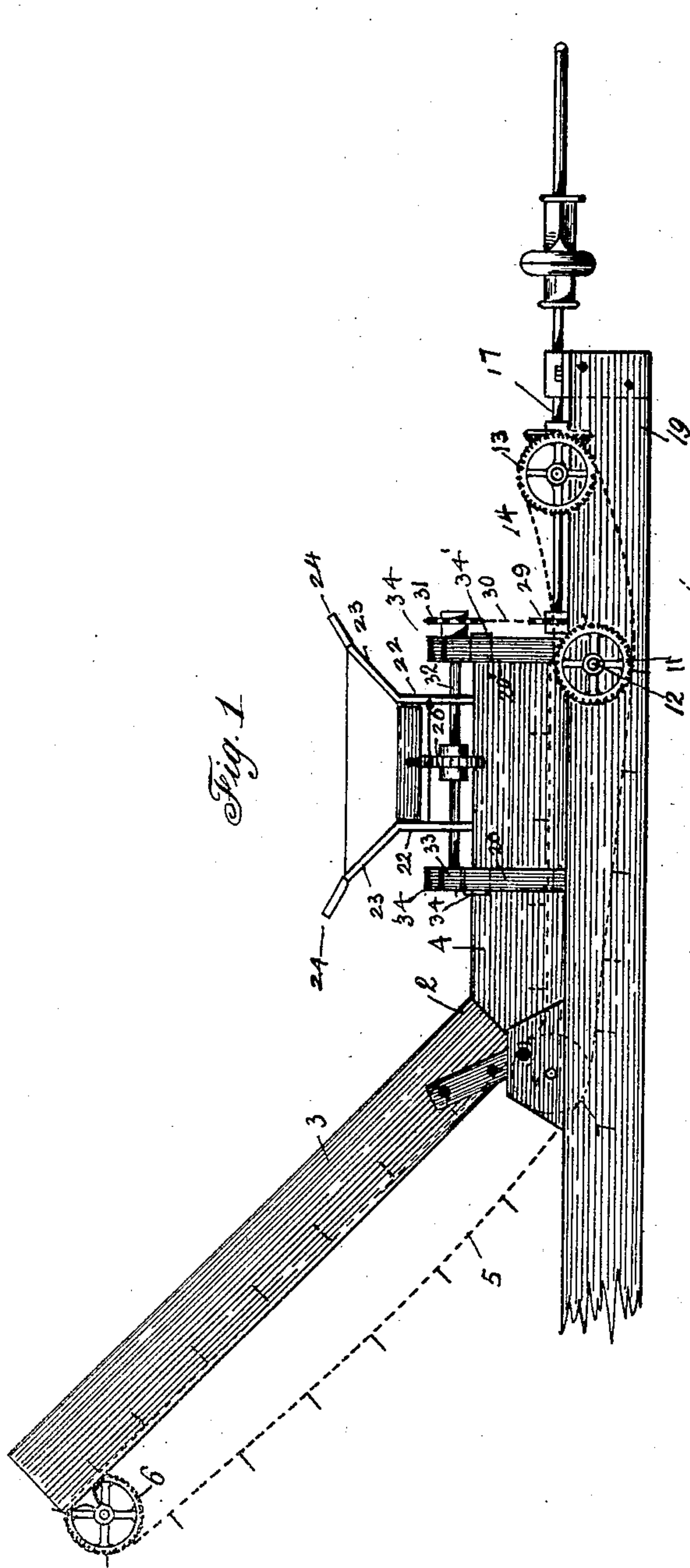


Fig. 1

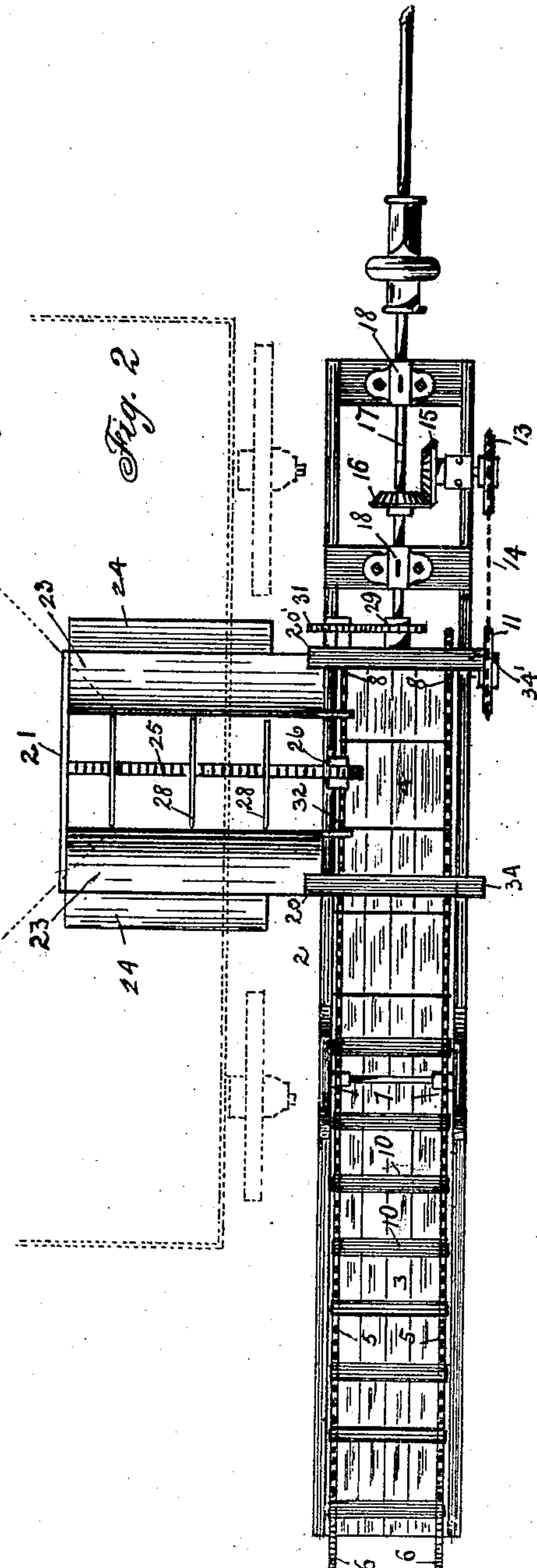


Fig. 2

Witnesses
A. Trotschka
L. Abraham

Inventor
Nicholas H. Larry
By *Fred W. Dammers*
Att'y

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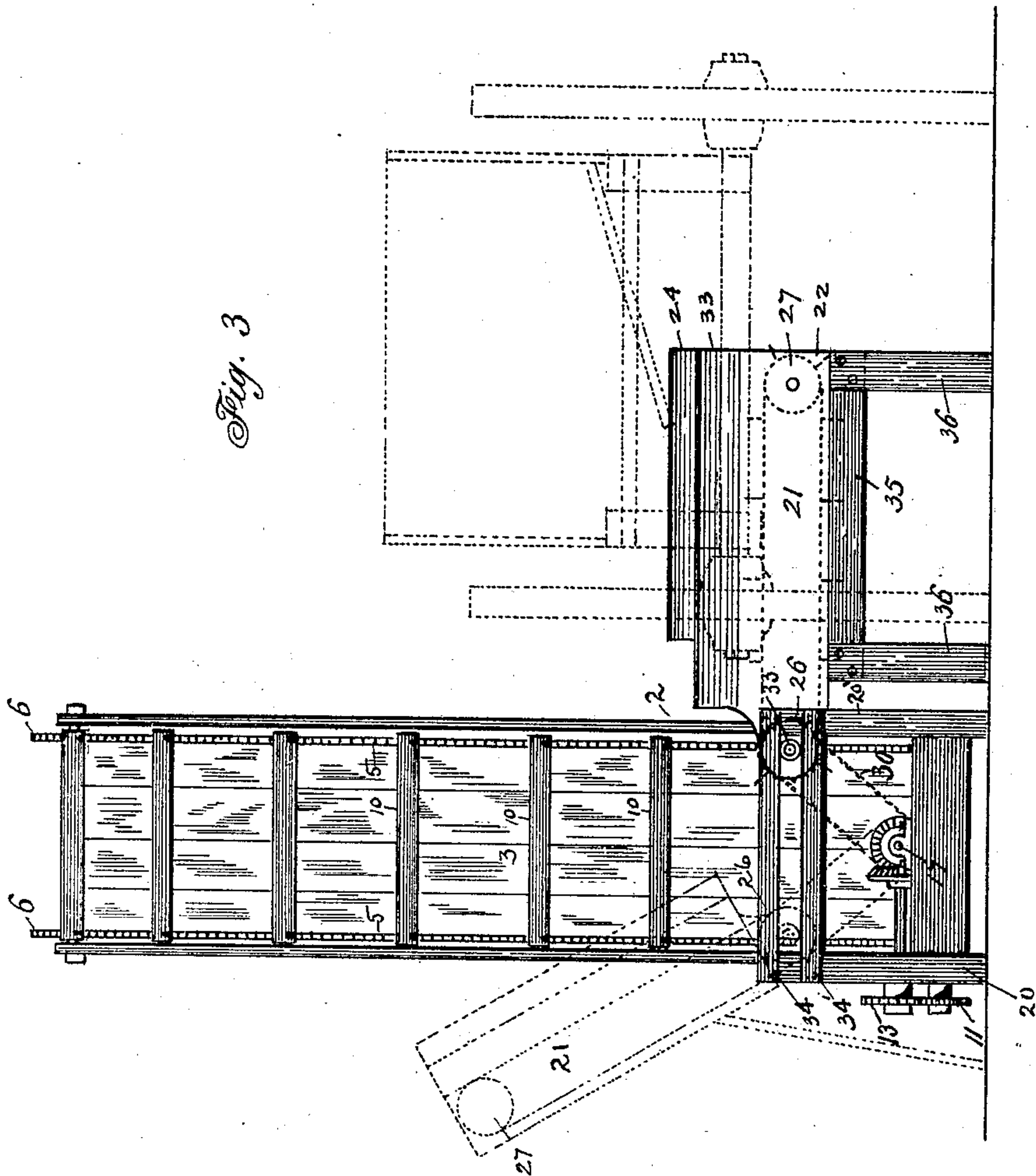
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2 SHEETS—SHEET 2.



Witnesses
A. Kockschay Jr.
L. Abraham.

Inventor
Nicholas H. Larry
By *Fred H. Powersock*
Attry.

UNITED STATES PATENT OFFICE.

NICHOLAS H. LARRY, OF CHAMPAIGN, ILLINOIS.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 774 256, dated November 8, 1904.

Application filed May 18, 1904. Serial No. 208,501. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS H. LARRY, a citizen of the United States, residing at Champaign, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Conveyers, of which the following is a specification.

This invention relates to conveyers of the type employed for conveying grain to the upper stories of warehouses, mills, elevators, cribs, &c., and has particular reference to feeders for such conveyers.

Grain-conveyers of the type referred to are usually constructed with a short horizontal leg for receiving the load from a wagon, and said leg forms a continuation of the main or inclined portion of the conveyer. In making use of such conveyers for transferring a load of grain from a farmer's wagon to a bin or crib the wagon is placed with its rear end to the horizontal leg of the conveyer and the load either shoveled or dumped (by lifting the wagon with hoisting machinery) into the horizontal or receiving portion of the conveyer. Numerous objections are made to this general method, among which may be named more or less difficulty in backing a loaded wagon into position against a conveyer, more or less risk in hoisting the forward end of a loaded wagon, the expense of providing such hoisting apparatuses, impracticability of backing a wagon up against a conveyer placed between two buildings due to lack of space, &c.

The object of my invention is to provide an improved feeder or intermediate conveyer between main conveyer and wagon, whereby a load may be placed alongside of the conveyer and conveniently unloaded even in a narrow space between buildings which provide just room enough for a wagon-track and a conveyer placed against the wall of the storage-house; and the particular object of the invention is to provide a conveyer-feeder well adapted for use in connection with an improved wagon-bed which forms the subject of a separate application of even date herewith.

The invention consists in the novel construction and arrangement of parts, all as hereinafter more fully described, and particularly pointed out in the claims, and will be better

understood by reference to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of an ordinary grain-conveyer together with an end view of a feeder therefor embodying my invention. Fig. 2 is a top plan view, the dotted lines showing the position of a wagon-bed over the conveyer-feeder, which is the subject of my invention. Fig. 3 is a side view of the conveyer-feeder and an end view of the conveyer proper, the dotted lines indicating, respectively, the position of the conveyer-feeder when tilted back and a wagon under which the feeder has been placed.

In the drawings, 2 represents an ordinary conveyer comprising the troughs 3 and 4, the endless sprocket-chains 5 5 passing over sprockets 6 6, 7 7, and 8 8, and the paddles 10. The conveyer-chains 5 5 are driven through sprocket 11, fast on shaft 12, carrying chain-sprockets 8 8. Sprocket-wheel 11 is driven through sprocket-wheel 13 and chain 14, which are in turn driven by bevel-gears 15 and 16, the latter being on the main driving-shaft 17, journaled in bearings 18 18 on the drag, base, or frame 19, supporting the whole apparatus. The shaft 17 is driven by any suitable power, usually a horse-power, such as are used on farms.

Referring now to the portions which are related to my invention, 20 20' are two upright frames straddling the portion 4 of the conveyer.

21 is the conveyer-feeder, being a short conveyer with a preferably hopper-form trough, comprising vertical sides 22 22, inclined sides 23 23, and top boards 24 24. This conveyer-feeder has substantially the same construction as the main conveyer so far as the sprocket wheel and chain arrangement is concerned, except that I have shown the feeder with a single chain 25, driven by sprocket-wheels 26 and 27, the latter shown by dotted lines, Fig. 3.

28 28 are the upright boards or paddles secured to the chain 25. The sprocket-wheels 26 and 27 of the conveyer-feeder are driven through a sprocket-wheel 29 on the inner end of the main driving-shaft 17, sprocket-chain 30, sprocket-wheel 31, fast on shaft 32, which

also carries sprocket-wheel 26. The shaft 32 is journaled in rollers 33, one of which is shown in Fig. 3, the bearing-roller on the opposite end of the shaft being identical. Each of the bearing-rollers 33 is loosely mounted to roll between a pair of parallel bars 34 and 34', the latter constituting a track-rail for the rotary shaft-bearing 33. The inner end of the conveyer-feeder is rotatively mounted on the shaft 32, which passes through suitable apertures in the sides 22 22 of the trough 21. The conveyer-feeder can therefore be tilted back out of the way of a wagon, as shown by dotted lines to the left in Fig. 3. When the wagon has been placed alongside the conveyer 2, as shown by dotted lines in Fig. 3, the conveyer-feeder is first lowered and then slid forward under the wagon into the position shown in full lines on the bearings 33, which serve both as stationary bearings for the shaft 32 and wheels upon which said shaft is moved bodily from end to end of the tracks comprising rails 34 34'.

The conveyer-feeder may be made of such length as to extend completely across the rear end of a wagon after the latter has been pulled up close to the side of the conveyer and the load unloaded through the rear end of the wagon. The dotted lines showing the outlines of a wagon in Fig. 3 and a portion of a wagon plan in Fig. 2 contemplate the use of the conveyer-feeder in connection with a hopper-bottom wagon such as described and claimed in a separate application, in which event the conveyer-feeder is pushed under the wagon between the front and rear wheels, as clearly indicated in Fig. 2. Any suitable means may be employed for supporting the conveyer-feeder under a wagon, and I have illustrated in Fig. 3 a simple support comprising a frame having a horizontal top supported on legs 36 36.

In operation, assuming that the conveyer-feeder is tilted back, as indicated by dotted lines in Fig. 3, the load or wagon is driven close to the side of the conveyer 2, after which the conveyer-feeder is lowered or rotated downward on the axis or shaft 32, when its free end will be in substantially the same vertical plane as the near side of the wagon-box. The conveyer-feeder is then moved under the wagon-box on rollers 33 directly under the bottom opening in the wagon-box and the grain admitted through said opening into the trough 21, the conveyer in which will when put in motion carry the grain into the conveyer portion 4 and thence upwardly to the upper part of the bin, over which the upper end of the conveyer is supported in the usual manner. (Not herein shown.) When the wagon-box has been emptied, the conveyer-feeder is moved back free from the near side of the wagon-box and tilted back out of the

way of the wagon, which may then be pulled away.

It is obvious that numerous modifications may be made in the minor details of my invention, and I therefore do not wish to confine my invention to the specific details of construction herein shown and described.

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

1. The combination with a conveyer, of a feeder, means for actuating same by said conveyer, means for moving grain on said feeder to said conveyer, said feeder being adjustable horizontally over the path of said conveyer.

2. The combination with a conveyer, of a feeder adapted to convey grain to said conveyer, said feeder being mounted for slidable adjustment along a straight path transversely of the path of said conveyer.

3. The combination with a conveyer, of a feeder adapted to convey grain to said conveyer, means for actuating said feeder and means whereby said actuating means may be adjusted over the path of movement of said conveyer.

4. The combination with a conveyer, of a feeder therefor adapted to convey grain to said conveyer, said feeder being mounted for slidable as well as pivotal adjustment with relation to said conveyer, said slidable adjustment being along a straight path crossing the path of said conveyer.

5. The combination with a conveyer, of a feeder adapted to convey grain to said conveyer, a driving-shaft upon which said feeder is pivotally mounted, and slide-bearings for said shaft whereby the latter may be moved across the path of movement of said conveyer.

6. The combination of a conveyer, a feeder therefor, and a driving-shaft for said feeder adjustably mounted over a portion of the path of said conveyer.

7. The combination with a conveyer, of a conveyer-feeder and means for actuating same by the actuating means for said conveyer, a shaft upon which said feeder is pivotally mounted, and movable bearings for said shaft mounted over a portion of the path of said conveyer.

8. The combination with a conveyer having a horizontal and an inclined leg, of a feeder mounted for adjustment across said horizontal leg, a driving-shaft upon which said feeder is pivotally mounted and means for actuating said shaft from the driving mechanism of said conveyer.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

NICHOLAS H. LARRY.

Witnesses:

EDW. R. BARRETT,
J. W. BECKSTROM.