

(No Model.)

J. MACDONALD.

BELT CONVEYER AND TRIPPER.

No. 396,500.

Patented Jan. 22, 1889.

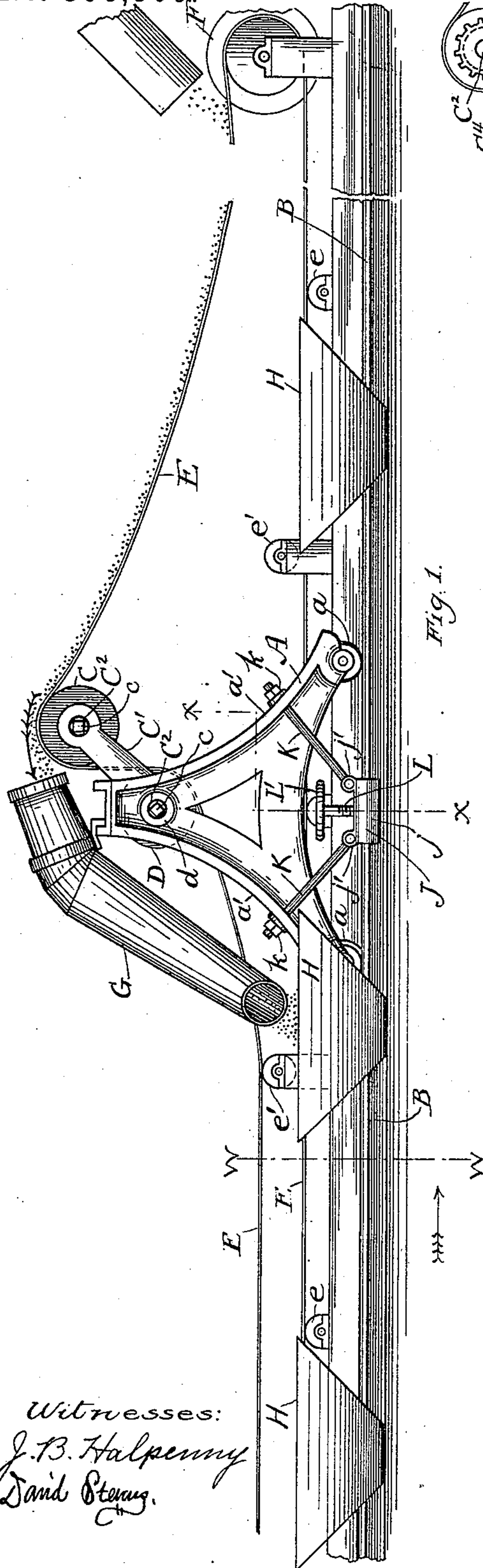


Fig. 1.

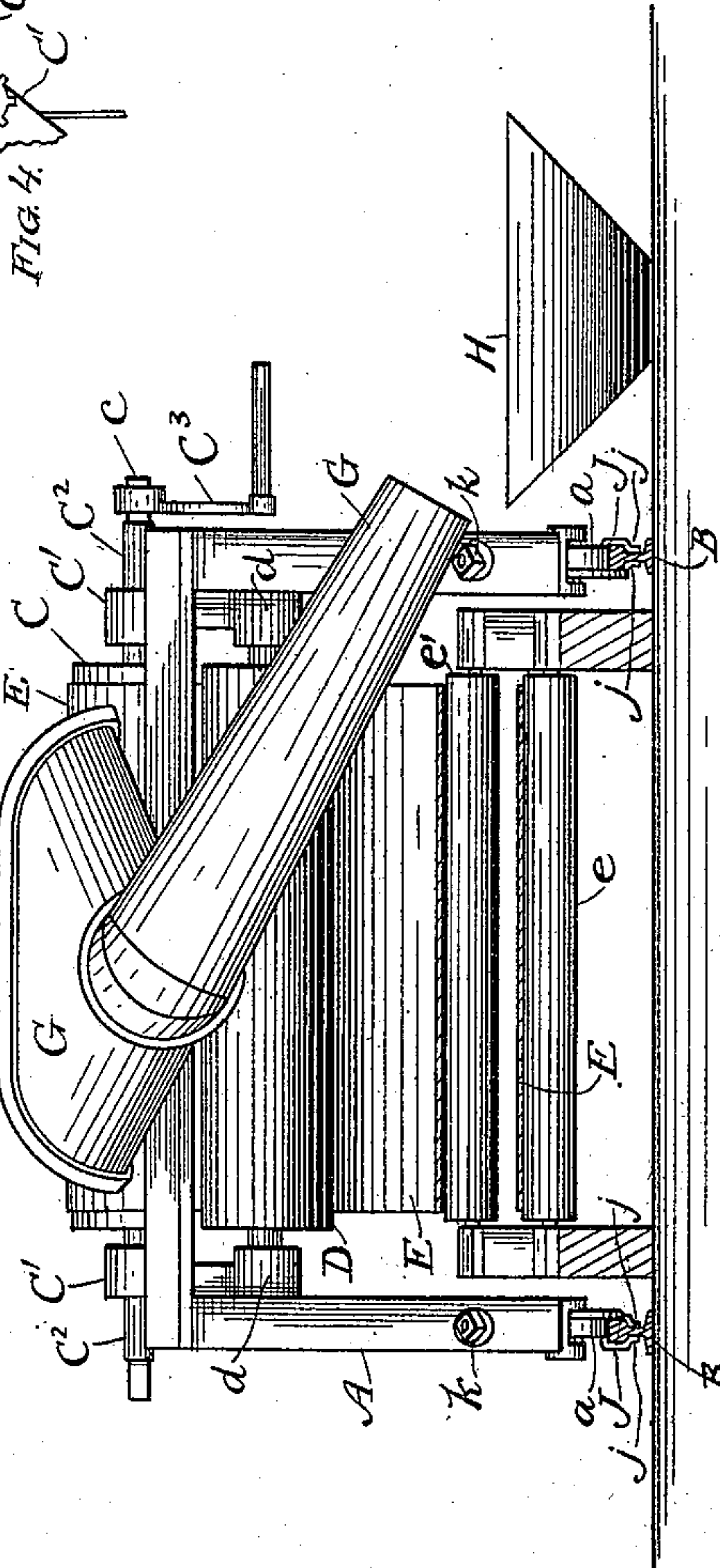
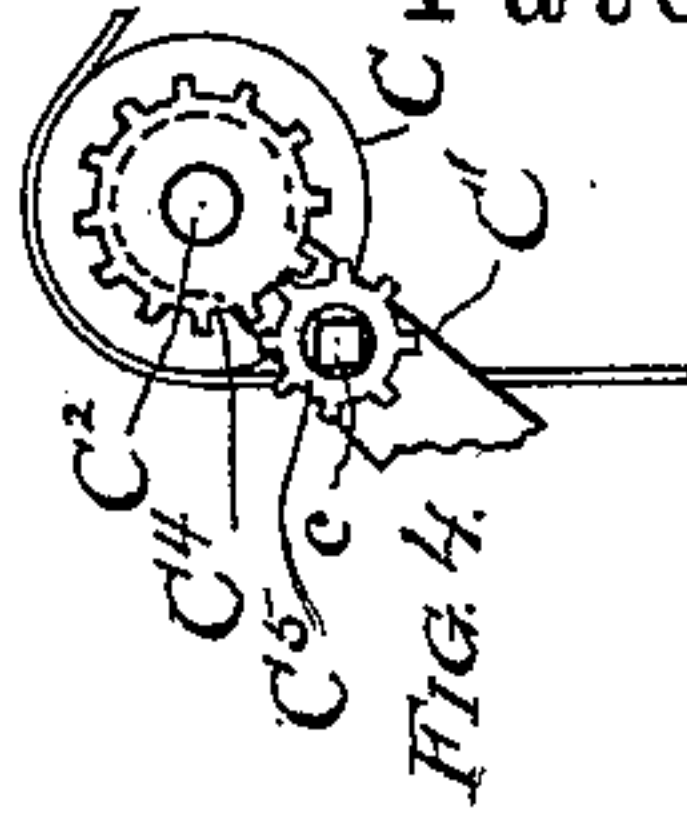


Fig. 2.

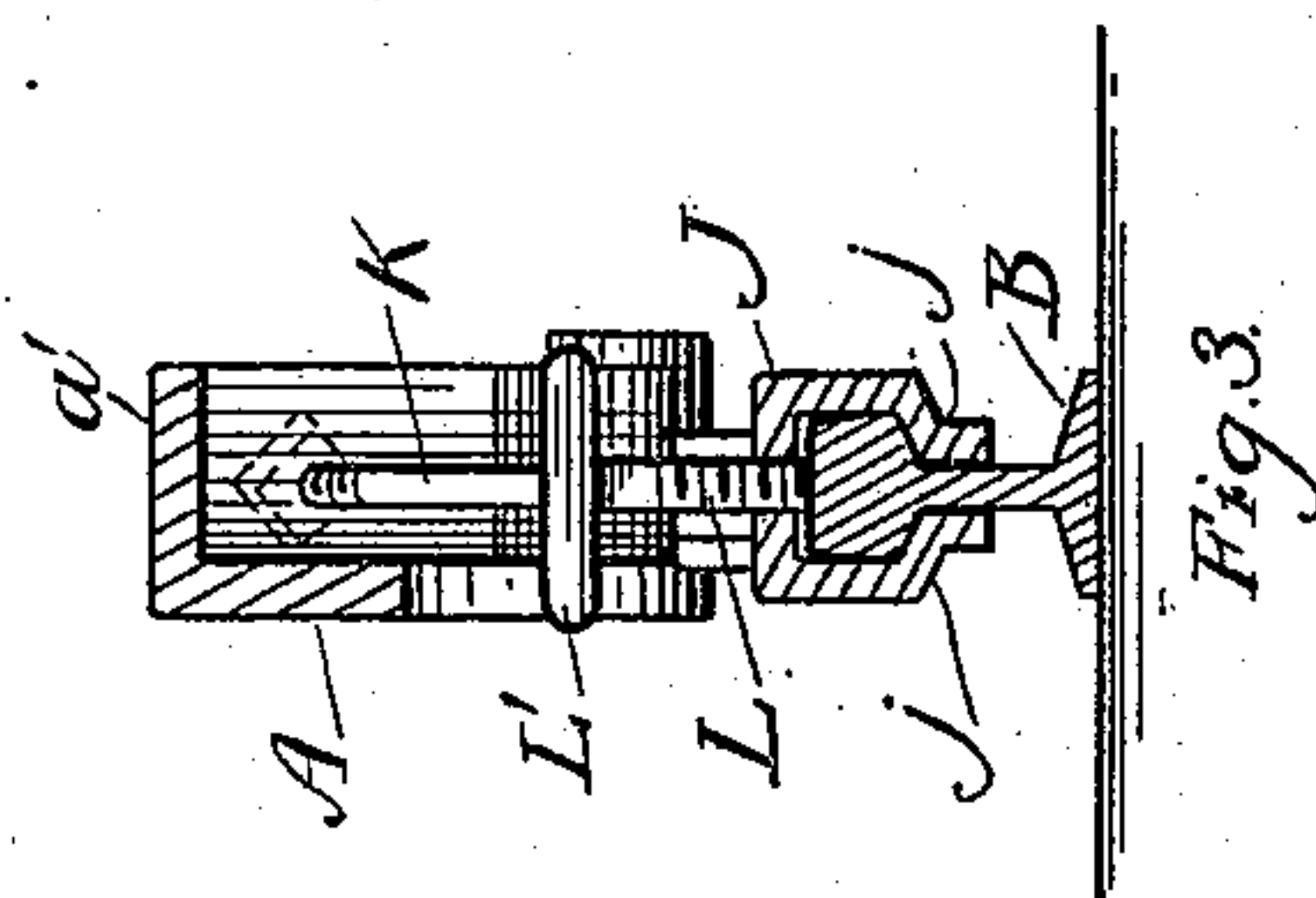


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES MACDONALD, OF CHICAGO, ILLINOIS.

BELT CONVEYER AND TRIPPER.

SPECIFICATION forming part of Letters Patent No. 396,500, dated January 22, 1889.

Application filed April 23, 1888. Serial No. 271,545. (No model.)

To all whom it may concern:

Be it known that I, JAMES MACDONALD, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Belt Conveyers and Trippers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side view of a belt conveyer and tripper embodying my improvements, in conjunction with a series of hoppers for receiving the grain. Fig. 2 is an end view of the tripper, the belt being shown in section upon the line *w w*, Fig. 1, viewed in the direction of the arrow there shown. Fig. 3 is a sectional view in detail, illustrating the clamping mechanism, said view being taken upon the line *x x*, Fig. 1; and Fig. 4 is a detail view in which gears are shown as applied to the pulleys.

Like letters of reference indicate corresponding parts.

Heretofore in belt-conveyers it has been found difficult to secure the tripper in a stationary position while the conveyer is in operation.

The object of my invention is to overcome this difficulty and to provide a clamping device by which the frame may be rigidly secured in a stationary position when required, and also be at all times in normal engagement with the track and free to slide thereon when the machine is moved.

To this end my invention consists in the combination of elements hereinafter more particularly shown, described, and claimed.

Referring to the drawings, A represents the frame of my improved tripper, which is provided with flanged wheels *a*, mounted upon the usual tracks or rails, B B.

C and D, respectively, are cylindrical rolls or pulleys, the former of which is mounted in bearings in the upper end of inclined arms C', extending rearwardly from the frame, while the other is mounted in bearings *d d* upon the main frame, as shown.

E represents the conveyer-belt, which is trained over main drums or pulleys at its respective ends, one of which, F, is shown at the right in Fig. 1, and the intermediate

parts supported by means of rollers *e e'*. The conveyer-belt is trained over the pulley C and beneath the pulley D, so as to impel the grain into the tripping-spout G, which is intended to convey it into any one of a series of hoppers, H, located at the side of the track, according to the position of the tripper. The shaft C², upon which the pulley C is mounted, is squared at one or the other but preferably at both ends, as at *c c*, for the reception of a removable crank, C³. When the belt is in operation, the crank is removed and the machine appears as in Fig. 1.

In case a large tripper is employed, it may be necessary to multiply the power from the crank. This may be accomplished by means of gears C⁴ C⁵, as shown in Fig. 4, the crank-receiving shaft *c* being attached to the latter.

To secure the machine when in operation in a stationary position, I employ the following-described clamping mechanism: J represents a metal shoe adjusted to fit loosely upon the track-rail, and provided with flanges *j j*, adapted to clasp beneath the bulge of the rail, as clearly shown in Fig. 3. Rods K K are loosely attached to lugs *j' j'* upon the respective ends of the shoe, and are thence passed through perforations in the flanges *a' a'* of the frame A, to which they are secured and adjusted by means of nuts *k k*. A set-screw, L, Figs. 1 and 3, preferably having a hand-wheel, L', is tapped into the top of the shoe and arranged to engage with the top of the rail B. Upon tightening the set-screws the clamps J are secured firmly to the rail and serve as anchors, whereby the machine is held in place by the rods K K.

When it is desired to move the machine, as described, it is only necessary to loosen the set-screws L and adjust the crank or cranks upon the shaft C².

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

The combination, with a movable belt conveyer and tripper, of a clamping-shoe arranged between the wheels of the tripper and normally adjusted to loosely clamp the flange of the track-rail, a set-screw for rigidly securing the same to the rail, and obliquely-adjusted rods extending in opposite directions

and attached, respectively, to the opposite
ends of said clamping-shoe and to the frame
of the tripper, whereby said tripper may be
rigidly secured to the track or permitted to
5 move thereon while said shoe is in normal
engagement with said track, substantially as
shown and described.

In testimony whereof I have signed this
specification, in the presence of two subscrib-
ing witnesses, this 24th day of March, 1888. 10
JAMES MACDONALD.

Witnesses:

D. H. FLETCHER,
J. B. HALPENNY.