

No. 722,997.

PATENTED MAR. 17, 1903.

J. MABUS & F. L. HAY.
ELEVATOR FOR CORN OR GRAIN DUMPS.

APPLICATION FILED JULY 14, 1902.

2 SHEETS—SHEET 1.

NO MODEL.

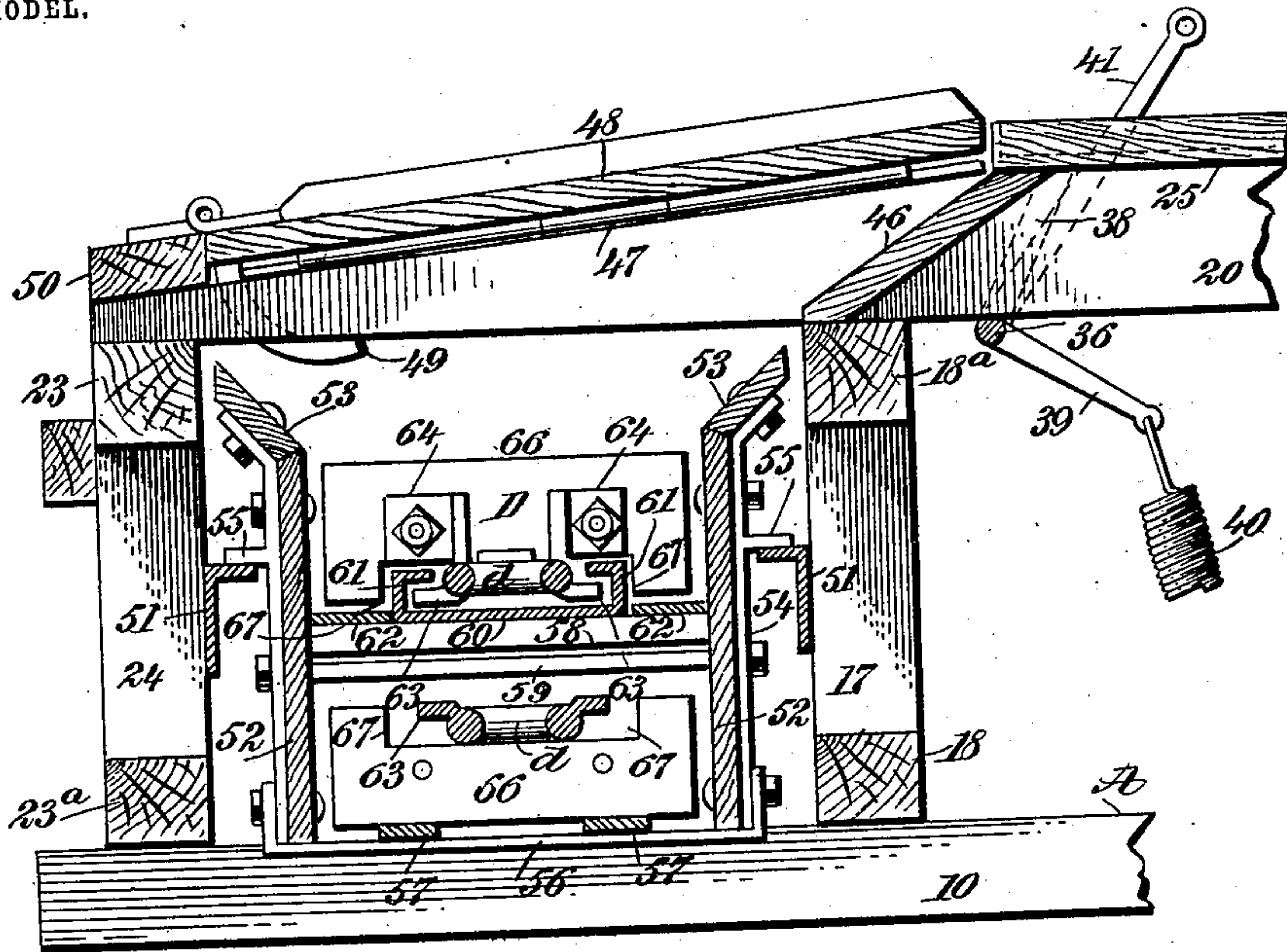


FIG. 1.

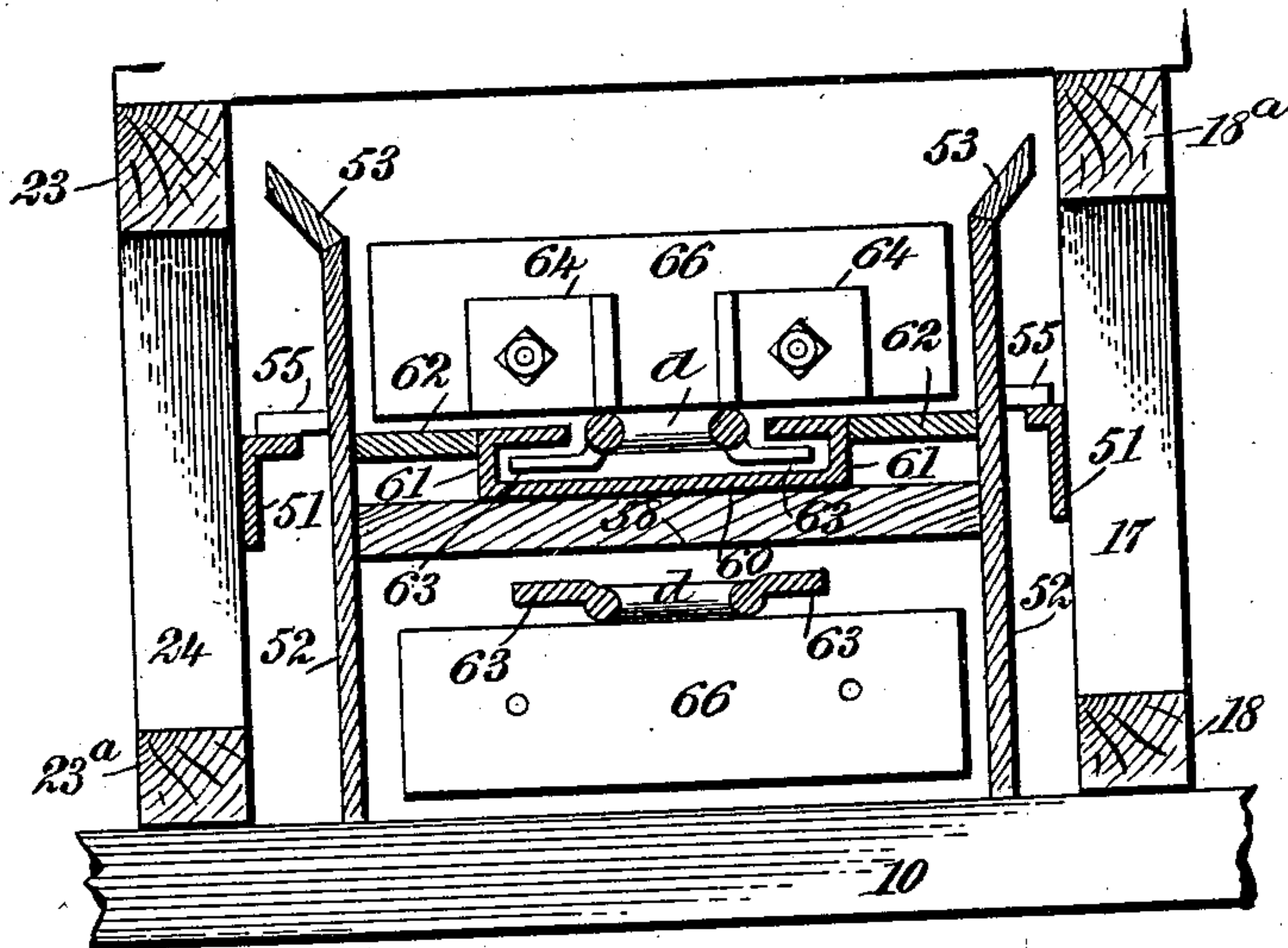


FIG. 2.

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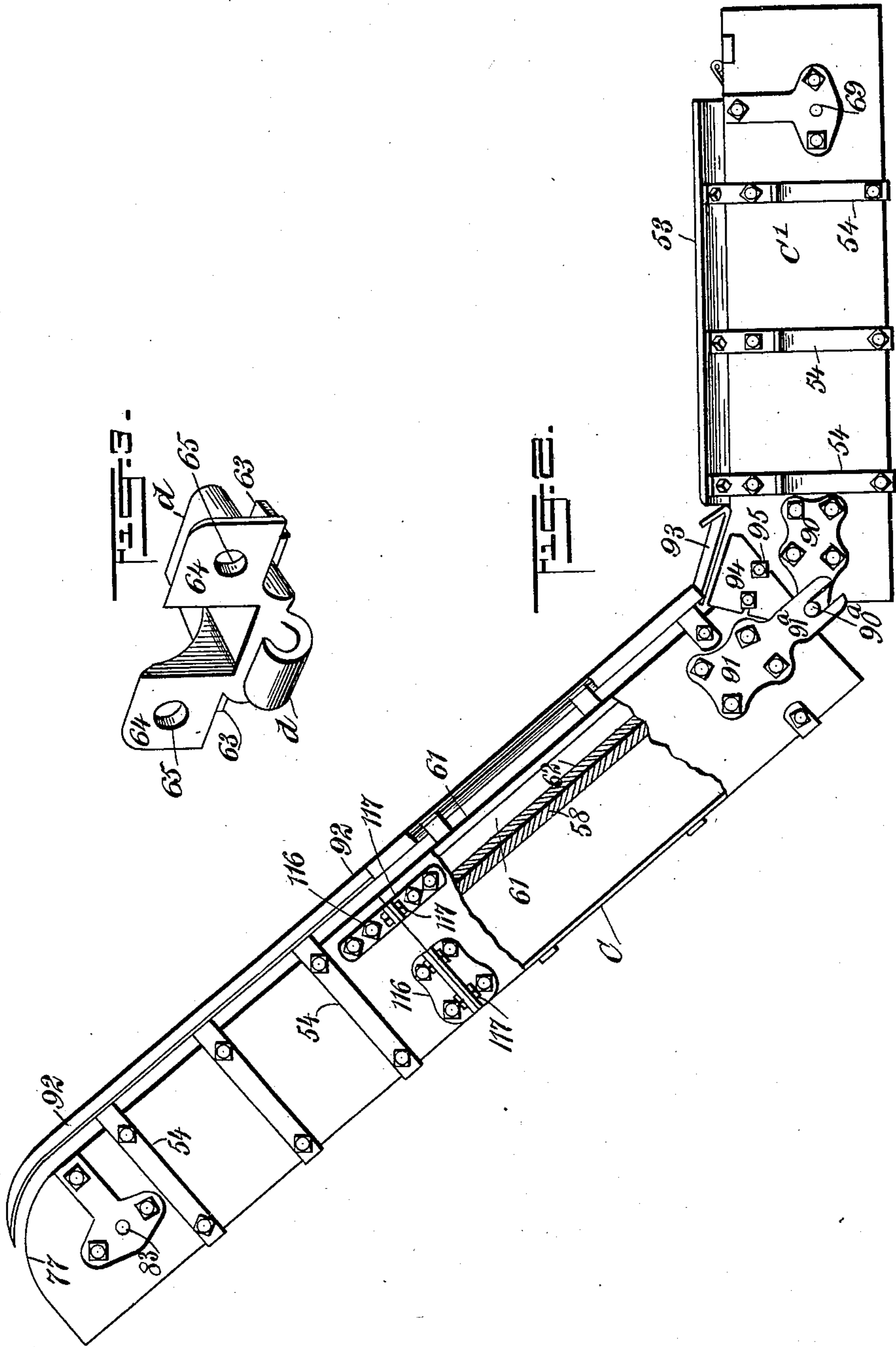
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JOHN MABUS AND FRANK L. HAY, OF LILLY, ILLINOIS.

ELEVATOR FOR CORN OR GRAIN DUMPS.

SPECIFICATION forming part of Letters Patent No. 722,997, dated March 17, 1903.

Application filed July 14, 1902. Serial No. 115,447. (No model.)

To all whom it may concern:

Be it known that we, JOHN MABUS and FRANK L. HAY, citizens of the United States, and residents of Lilly, in the county of Tazewell and State of Illinois, have invented a new and Improved Elevator and Conveyer for Corn or Grain Dumps, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide an elevator and conveyer for corn and grain dumps which will be simple, durable, and economic and to provide a multiple of shafts connected with the driving mechanism of the elevator and conveyer, enabling power to be conveniently applied no matter what position the machinery may occupy.

A further purpose of the invention is to so construct the conveyer and elevator that they may be adjustably connected and so that the conveyer and the elevator belts will have guided movement and will be provided with means for safely receiving, holding, and conducting quantities of material.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical transverse section taken through the conveyer. Fig. 2 is a side elevation of the connected conveyer and elevator, parts being broken away. Fig. 3 is a detail perspective view of a link of the chain belt of the conveyer and elevator; and Fig. 4 is a cross-sectional view of a modified form of the elevator and its chain or belt, showing the same on a level or flush with the elevator-floor.

With reference to the construction of the conveyer C' tracks 51 are secured upon the inner faces of the rear uprights 17 and 24, as is best shown in Figs. 1 and 4, and these tracks are adapted to support the said conveyer. This conveyer C' consists of side pieces 52, having outwardly-flared longitudinal upper portions 53, and at intervals along the outer faces of the side pieces vertical metal strips 54 are secured, provided with offsets 55, which rest upon the tracks 51, as is also

shown in Figs. 1 and 4. These metal strips 54 are connected at their bottom portions by metal cross-bars 56, which extend across the bottom of the sides of the said conveyer and serve to support longitudinal straps 57, also preferably of metal. These cross-bars 56 and straps 57 constitute the bottom portion of the conveyer, which is practically open at such point. A horizontal partition 58 is located about midway in the said conveyer, extending from end to end thereof, as shown in Figs. 1, 2, and 4, and said conveyer is of sufficient length when placed upon the tracks 51 to extend beyond both sides of the main portion of the machine. The conveyer is open at both of its ends.

A central track 60, preferably of metal, is secured upon the upper face of the partition 58, as is also shown in Figs. 1 and 4. This track 60 is provided at its side edges with upwardly and inwardly extending flanges 61, said flanges being angular in cross-section. Narrower tracks 62, also of metal, are located upon the partition 58 at each side of the central track, and the conveyer is braced by rods 59, which extend transversely through the same, as is shown in Fig. 1.

The conveyer chain or belt D travels at both sides of the partition 58, and the links *d* of the chain travel over the central track 60. These links are provided at their sides with horizontal lugs 63, and these lugs enter the spaces between the overhanging portions of the flanges 61 and the bottom portion of the central track 60, as is shown in Figs. 1 and 4. Under this arrangement the links of the conveyer-belt are held in proper position in the conveyer.

Sundry of the links *d*, as is particularly shown in Fig. 3, are provided with vertical lugs 64 at each side, the lugs having apertures 65 therein. One face of the lugs 64 is made smooth in order that plates 66 may be bolted or otherwise secured to said lugs, which plates are provided with recesses 67 in their under edges, as is shown in Fig. 1, to clear the flanges 61 on the central track 60, as the plates 66 extend over the side tracks 62 and practically from one side of the conveyer to the other, as is also best shown in Fig. 1. These plates 66 are adapted to engage with material and carry the same for-

ward or upward, as occasion may demand, and the working faces of these plates 66 may be straight or curved, as desired. The belt D is passed over a suitable pulley located at what may be termed the "right-hand" end of the conveyer, and this pulley is mounted on a suitable shaft 69, which extends beyond both sides of the conveyer.

The elevator C is identical in construction with the construction of the conveyer C', which has been described, except that the upper end 77 of the elevator is closed, and an opening is preferably made in the bottom upper portion of the elevator for the discharge of material, and at the upper end of the elevator a suitable drive-shaft 83 is journaled. The elevator-frame is adjustably or pivotally connected with the conveyer-frame, which pivotal connection may be effected in different ways. For example, as is illustrated in Fig. 2, plates 90, having pins 90^a, may be secured to the sides of the conveyer C', and plates 91 are secured to the side portions of the elevator, which plates 91 have bifurcated lower ends 91^a to receive the said pins 90^a.

In Fig. 2 we have illustrated the elevator C as provided with a cover 92, attached to the outer side bars 54, and a lower section 93 of the said cover extends over the upper portion of the conveyer C', where the conveyer connects with the elevator. If desired, the elevator and conveyer may be held rigidly at any desired angle one to the other by employing angular or triangular plates 94, adjustably attached to both the conveyer and the elevator by means of bolts 95, passed through suitable slots in the plates, as is shown in Fig. 2. The endless chain belt D, after passing through the conveyer C', is carried up through the elevator C over the shaft 83 at the upper portion of said elevator, and where the chain belt passes from the conveyer to the elevator a suitable guard is preferably attached to the conveyer just below the rear end of the partition 58, extending into the elevator just below the corresponding partition 58 therein.

In Fig. 4 we show a modified form of the elevator and belt, in which the side tracks 62 are brought up flush with the top of the central track 60, whereby the said belt is made to travel flush with the said side tracks, as will be readily understood from said figure. This makes a much neater and a more compact and economical device. It is economical, because less grain will be lost in working back to the bottom of the elevator to be again raised. We wish to make it clearly understood that we attach a great deal of importance to the chain device held in some guiding arrangement for the purposes already set out hereinbefore, and our claims will be drawn accordingly. Although Fig. 4 shows the elevator having the flush belt, we also use it in the conveyer in a continuous manner from one to the other.

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

1. In agricultural machines, a conveyer provided with a partition, a track secured upon said partition, having upwardly and inwardly directed angular flanges, and a conveyer-belt the upper stretch of which is adapted to travel over the said track, the said belt having horizontal lugs which extend within the flanged portions of the track, as described.

2. In agricultural machines, a conveyer comprising a body and a horizontal partition intermediate of the upper and lower portions of the body, a track secured to said partition, which track is provided with side flanges at an angle to its body, and inwardly-directed members at an angle to the flanges, a chain belt adapted to travel over the body portion of the track, horizontal projections from the sides of the links of the said belt, which projections enter the spaces between the body of the track and the inwardly-directed members of its side flanges, lugs extending from the outer horizontal faces of the links at an angle thereto, and conveyer-plates secured to the said lugs, for the purpose described.

3. In agricultural machines, a conveyer comprising a body and a horizontal partition intermediate of the upper and lower portions of the body, a track secured to the said partition, which track is provided with side flanges at an angle to its body and inwardly-directed members at an angle to the flanges, a chain belt adapted to travel over the body portion of the track, horizontal projections from the sides of the links of the said belt, which projections enter the spaces between the body of the track and the inwardly-directed members of its side flanges, lugs extending from the outer horizontal faces of the links at an angle thereto, which lugs extend over the inwardly-directed members of the flanges and down at the outer sides of the flanges, and conveyer-plates detachably attached to the said lugs, for the purpose described.

4. In agricultural machines, a chain conveyer-belt the links of which are provided with outwardly-extending horizontal lugs at their side portions, vertical lugs extending from the outer horizontal faces of sundry of the links, and conveyer-plates secured to the vertical lugs, extending beyond the outer edges of the said vertical lugs, for the purpose described.

5. In agricultural machines, a chain conveyer-belt the links whereof are provided with outwardly-extending horizontal lugs at their side portions and vertical lugs extending at right angles from the outer horizontal faces of the links and beyond their side surfaces, and conveyer-plates carried by the vertical lugs transversely of the links, which conveyer-plates project beyond the outer side surfaces of the vertical lugs, the said conveyer-plates being provided with recesses in their under edges at their central portions,

which recesses are of a length the equivalent of the distance between the outer side edges of the lugs carrying them, substantially as described.

5 6. In agricultural machines, a conveyer and an elevator connected therewith, each provided with a partition, a track secured upon each partition having upwardly and inwardly directed flanges, and an endless chain belt
10 extending through both the conveyer and the elevator, which belt is provided with horizontal lugs extending within the flanged portion of the track as described.

15 7. In agricultural machines, a conveyer, an elevator connected therewith, an endless conveyer-belt extending through both the conveyer and the elevator, guides for the belt located in the path of the conveyer and the elevator, and transverse plates secured at in-

tervals to the endless belt, adapted to extend 20 up above the upper stretch of the said belt and over the guides for the belt, as specified.

8. In agricultural machines, a conveyer and an elevator having adjustable pivotal connection with each other, one being at an angle to 25 the other, adjustable locking-plates at the pivotal connection of the conveyer and elevator, and means substantially as described for securing the locking-plates in adjusted positions as set forth. 30

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN MABUS.
FRANK L. HAY.

Witnesses:

BALTZAR EVERSOLE,
B. F. LAMB.