J. S. MYERS.

GRAIN ELEVATOR.

APPLICATION FILED FEB. 1, 1919.

1,356,390.

Patented Oct. 19, 1920.

2 SHEETS—SHEET 1.

FIG. 1.

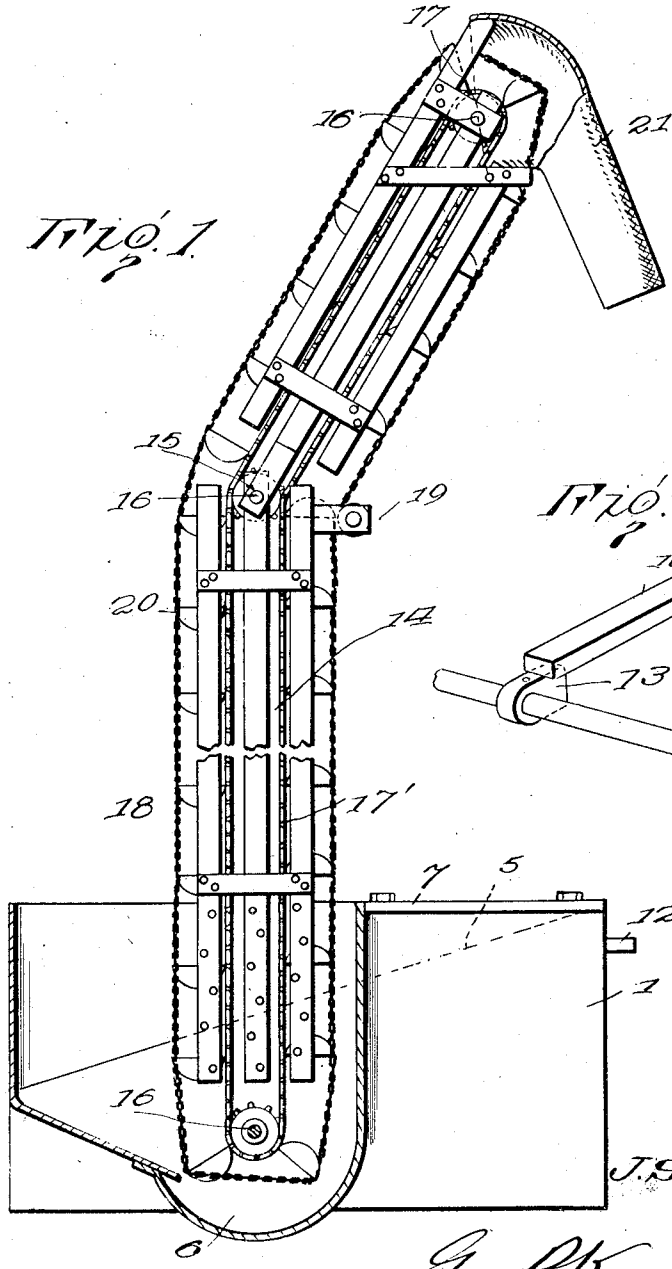


FIG. 4.

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2 SHEETS—SHEET 2.

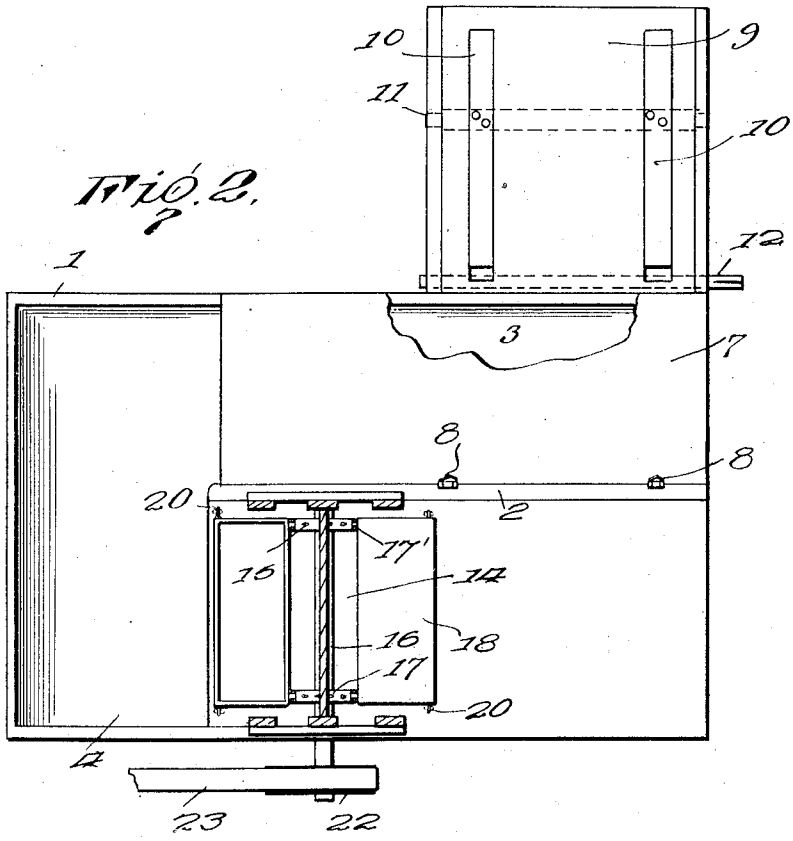


FIG. 2.

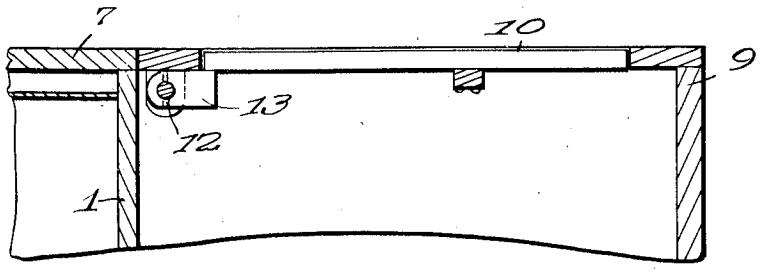


FIG. 3

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UNITED STATES PATENT OFFICE.

JOHN S. MYERS, OF MORTON, ILLINOIS, ASSIGNOR OF ONE-HALF TO JAY B. F. SHOWALTER, OF PEKIN, ILLINOIS.

GRAIN-ELEVATOR.

1,356,390. Specification of Letters Patent. Patented Oct. 19, 1920.

Application filed February 1, 1919. Serial No. 274,454.

To all whom it may concern:

Be it known that I, JOHN S. MYERS, a citizen of the United States, and resident of Morton, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Grain-Elevators, of which the following is a specification.

This invention relates to conveyers and has more especial reference to an improved grain elevator.

The invention has for its dominant object to provide a grain elevator for receiving grain from a wagon or other vehicle, and discharging the same into a bin; the elevator being capable of adjustment in order that it can be used to fill bins varying in height and shape.

Another object of the invention is to provide a novel hopper for receiving the grain from a vehicle and then directing the same into a pocket for engagement by the elevator.

It is another aim of the invention to provide means for facilitating the dumping of the grain from a vehicle into the elevator hopper.

Other objects will be in part obvious and in part pointed out hereinafter.

Other improvements and novel details in the construction and arrangement of the various parts of the elevator will be brought out more in detail in the description to follow, which, for a clear understanding of the invention, should be considered in connection with the accompanying drawing, forming a part hereof, and wherein is disclosed for the purpose of illustration, a convenient and satisfactory embodiment of the invention.

In the drawing:

Figure 1 is a side elevation partly in section of the improved grain elevator;

Fig. 2 is a horizontal section therethrough;

Fig. 3 is a fragmentary detail in section showing the pivoted dumping platform, and

Fig. 4 is a detail in perspective of the means for normally supporting the dumping platforms in horizontal planes.

Similar characters of reference are employed in all of the above described views to indicate corresponding parts.

Having more particular reference to the drawings, 1 designates the base of the elevator which serves in the capacity of a hopper for receiving the grain from a vehicle and delivering the same to the elevating means hereinafter more fully described. A partition 2 is arranged intermediate the sides of the base 1 and extends for a portion throughout its length, thus serving to divide the same into several compartments which are indicated for the purpose of convenience by the numerals 3 and 4. Within the compartment 3 there is arranged an inclined way or chute 5 having an offset portion formed upon its lower extremity, which offset portion communicates with a pocket 6 arranged in the compartment 4. A cover 7 is hinged to the upper marginal edge of the partition wall 2 as at 8 and is adapted to swing over the compartment 3, thus closing the same and affording means for protecting the grain therein.

A platform 9 is arranged adjacent one side of the base 1 and is provided with a pair of parallel openings in which supports or secondary platforms 10 are arranged, these secondary platforms being mounted off center upon a transversely disposed shaft 11 journaled in bearings formed in the sides of the platform 9. A second shaft 12 is journaled in bearings formed within the sides of the platform 9 and is arranged transversely of the same. Upon this shaft trips 13 are fixedly mounted and are so positioned as to engage the adjacent ends of the several secondary platforms 10, thereby supporting the same and normally maintaining them flush with the platform 9. As shown in the Fig. 2, a portion of the shaft 12 is extended beyond the platform 9 and if desired may be squared in order that suitable turning implements may be engaged with the same when it is desired to disengage the trips 13 from the ends of the secondary platforms 10.

Arranged within the pocket 6 and extending upwardly therefrom is an endless conveyer supporting frame 14, the upper portion of which is hinged at 15 in order that the same may be swung into various positions with relation to a bin or other receptacle. Shafts generally indicated by the numeral 16 are journaled in the extremities of the conveyer frame 14 and serve to hingedly connect the two sections thereof together as at 15 (see Fig. 1) and have keyed thereto sprocket wheels 17 over which oppositely disposed bucket carrying sprocket chains 17′ are passed, the buckets of the chains being

preferably of a scoop design, such as indicated by the numeral 18 in order that they will efficiently engage and remove such grain as discharged into the pocket 6 from the chute 5. An idler 19 is journaled in bearings upon the hingedly connected conveyer supporting frame 14 and, obviously, serves to guide the bracing chains 20 which are secured to the outermost edges of the opposite ends of the buckets 18.

To the upper extremity of the conveyer frame 14 a flexible spout 21 is secured and, as will be understood, receives the grain from the elevator and directs the same into a bin or other receiving receptacle.

Upon the outer extremity of the lowermost shaft 16 which is extended beyond the base 1 a pulley 22 is mounted and receives thereabout a driving belt 23 engaged with a suitable source of power not shown.

In operation vehicles carrying grain are moved onto the secondary platforms 10 whereupon the trips 13 are disengaged from the same by rotating the shaft 12. By so doing, the rear end of the grain carrying vehicle will be lowered and as a consequence, the grain therein discharged into the compartment 3, it of course being understood that the cover 7 has been previously moved to an open or raised position. The grain will be delivered by way of the discharge chute 5 to the pocket 6 and upon rotation of the endless bucket chains will be removed therefrom and carried upwardly from whence it is discharged into the flexible discharge spout 21 and then into the bin or other receptacle.

Manifestly, the construction shown is capable of considerable modification, and such modification as is within the scope of my claim, I consider within the spirit of my invention.

I claim:

A grain elevator, comprising a base, forming a hopper, a vertical partition in the base to divide the hopper into independent compartments, a chute in one of the compartments and having an offset portion, the other compartment having a pocket opening into the offset portion, elevator mechanism arranged in the pocket, a cover for the chute, excepting the offset portion thereof, a stand extending laterally from the base, and having its top level with the top of the base, tilting sections arranged in the top of the stand and swingingly supported off center, and a manually operated turning shaft having trips engageable with said sections at their ends farthermost from the axis of movement thereof.

In testimony whereof, I affix my signature hereto.

JOHN S. MYERS.