D. I. NORRIS AND L. A. JOHNSTON.

SHEAF ELEVATOR.

APPLICATION FILED MAR. 29, 1920.

1,402,787. Patented Jan. 10, 1922.

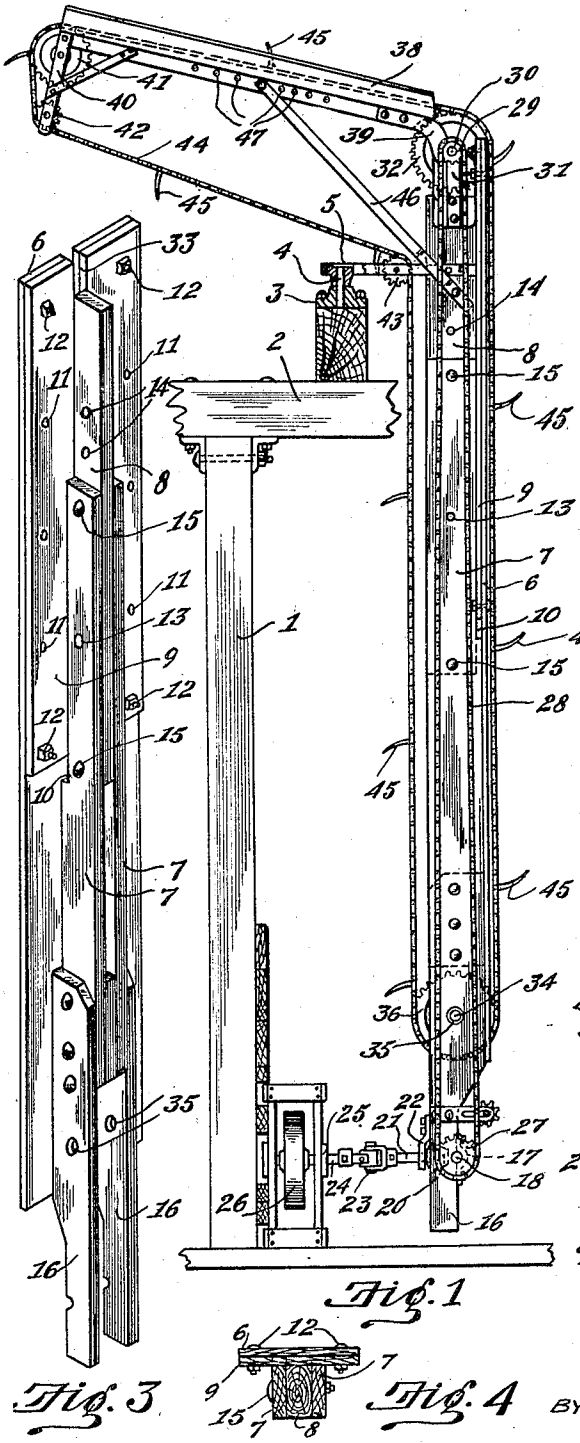


Fig. 1

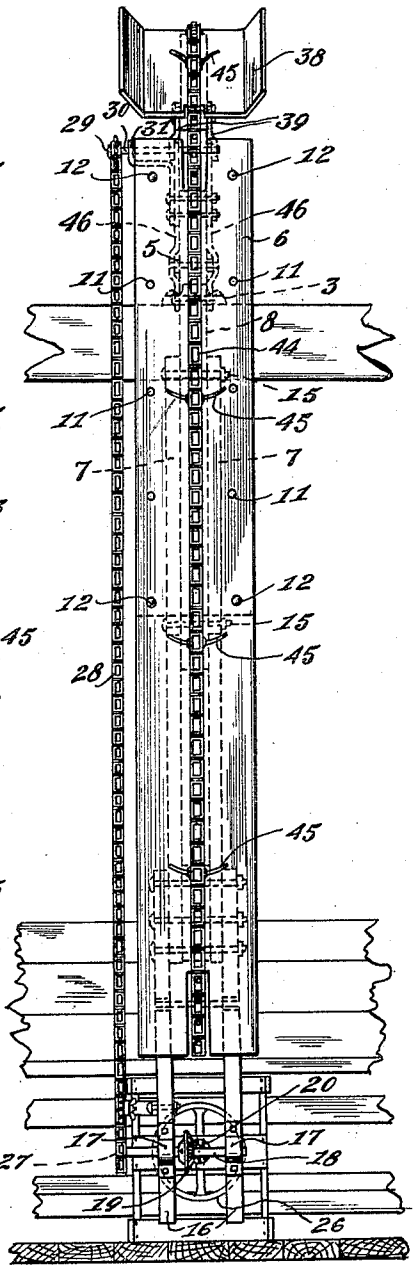


Fig. 2

Fig. 3

Fig. 4

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SHEAF ELEVATOR.

1,402,787. Specification of Letters Patent. Patented Jan. 10, 1922.

Application filed March 29, 1920. Serial No. 369,779.

To all whom it may concern:

Be it known that we, DAVID I. NORRIS and LEVI A. JOHNSTON, citizens of the United States, residing at Middlebranch, Stark County, Ohio, and North Canton, Stark County, Ohio, respectively, have invented new and useful Improvements in Sheaf Elevators, of which the following is a specification.

This invention relates to sheaf elevators for elevating sheaves of grain or the like and has for its objects the provision of an elevator by which sheaves may be conveyed from a wagon or other source of supply into a barn or warehouse or stack and delivered at such points as may be desired to accomplish an even distribution of the material; and to provide an elevator which is adjustable in height to meet varying conditions and to permit of the elevator being used within barns of different heights.

With these objects in view the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of construction may be made within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

The invention thus set forth in general terms is illustrated in the accompanying drawings forming part hereof, in which—

Figure 1 is a side elevation of an elevator embodying the invention.

Fig. 2 is a front elevation of the same.

Fig. 3 is a perspective view of the adjustable frame, and

Fig. 4 is a transverse sectional view through the adjustable frame.

A practical embodiment of the invention is disclosed in the accompanying drawings, forming a part of this specification in which similar numerals of reference indicate corresponding parts throughout the several views.

The elevator is illustrated as mounted within a barn, a portion of which is indicated by the numeral 1. Upon a beam or the like indicated at 2, a bearing 3 is mounted having a pivotal pin 4 which is carried by the arm 5, which supports the upper end of the frame of the elevator.

This frame is adjustable vertically and comprises the board 6 having the channel portion 7 thereon within which is slidably mounted the strip 8 carried by the board 9, the upper portion of the channel members 7 being recessed as shown at 10 in order to allow the board 9 to be located between said channel members and the board 6.

Spaced apertures 11 are provided in the boards 6 and 9 through which bolts 12 are located to hold the parts in the desired adjustment and similar apertures 13 and 14 are provided in the channel portions 7 and strip 8 respectively through which bolts 15 are located.

The lower end of the board 6 is provided with a pair of spaced depending arms 16 upon which are mounted the bearings 17 within which bearings is journaled a shaft 18 having a beveled gear 19 mounted thereon. The gear 19 meshes with a beveled pinion 20 mounted upon the shaft 21 which is journaled in suitable bearings 22 carried by the arms 16. A universal joint 23 is provided between the shaft 21 and the shaft 24 which is journaled in a suitable bearing 25 and has mounted thereon a driving pulley 26 arranged to be connected by a belt with any suitable source of power.

A sprocket 27 is mounted upon the shaft 18 and connected by means of an endless chain 28 with a sprocket 29 mounted upon the shaft 30 which shaft is journaled in suitable bearings 31 carried upon the upper end of the strip 8, a sprocket 32 being mounted upon the shaft 30, the boards 6 and 9 being notched at 33 to receive said sprocket.

A shaft 34 is journaled in suitable bearings 35 provided in the arms 16 and has mounted thereon a sprocket 36. A trough 38 is located at the upper end of the elevator and rearwardly disposed therefrom, brackets 39 being carried by the forward end of said trough and pivotally mounted upon the shaft 30.

An arm 40 depends from the rear end of the trough 38 and has mounted therein the sprockets 41 and 42, and a sprocket 43 is mounted upon the arm 5. An endless carrier chain 44 provided at intervals with carrier fingers 45 is located over the sprockets 36, 32, 41, 42 and 43, said chain passing upwardly upon the outer or forward side of the board 6 and rearwardly through the trough 38. An arm 46 is connected to the strip 8

and to any desired aperture 47 in the trough 38 thus providing for holding the trough at the desired angle with reference to the vertical frame of the elevator.

In the operation of the device the sheaves are thrown upon the carrier fingers 45 and carried upwardly to the top of the elevator and rearwardly through the trough 38, being discharged at the rear end of the trough. The elevator may be swung upon the pivot 4 and universal joint 23 in order to evenly distribute the sheaves as they are discharged from the trough. When it is desired to adjust the height of the elevator in order to install the same in barns of different heights, the bolts 12 and 15 are removed and the adjustable portion of the vertical frame comprising the strip 8 and board 9 is moved vertically with reference to the channels 7 and board 6 and the bolts 12 and 15 are again inserted in suitable apertures through the members as above described.

From the foregoing it will be evident that a sheaf elevator is provided by means of which sheaves of wheat and the like may be easily elevated and evenly distributed, the conveyor being adapted to be easily and readily adjusted in order that it may be installed in barns or warehouses of different heights.

Although the drawings and above specifications disclose the best mode in which we have contemplated embodying our invention, we desire to be not limited to the details of such disclosure, for, in the further practical application of our invention, many changes in form and construction may be made, as circumstances require or experience suggests, without departing from the spirit of the invention, within the scope of the appended claim.

We claim:—

A sheaf elevator of the character described, comprising a vertical frame including two members, one of said members comprising a board and a channel portion carried thereby, the upper end of said channel portion having a recess, the other member of said upright frame comprising a board located within said recess and a strip connected to said board and located within the channel, means for connecting said members together in any desired adjustment, a sprocket mounted in the lower end of the first member, a second sprocket mounted in the upper end of the second member, a conveyor chain located around said sprockets and means for driving said chain.

In testimony that we claim the above, we have hereunto subscribed our names.

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