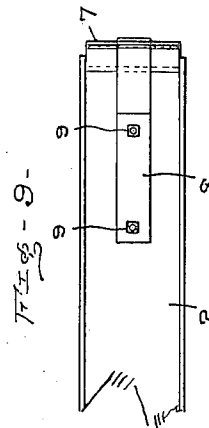
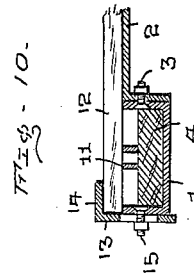
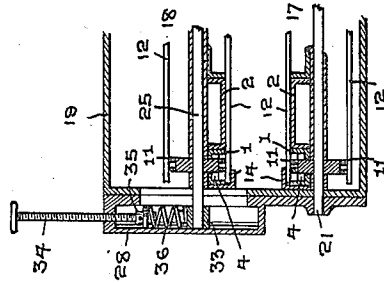
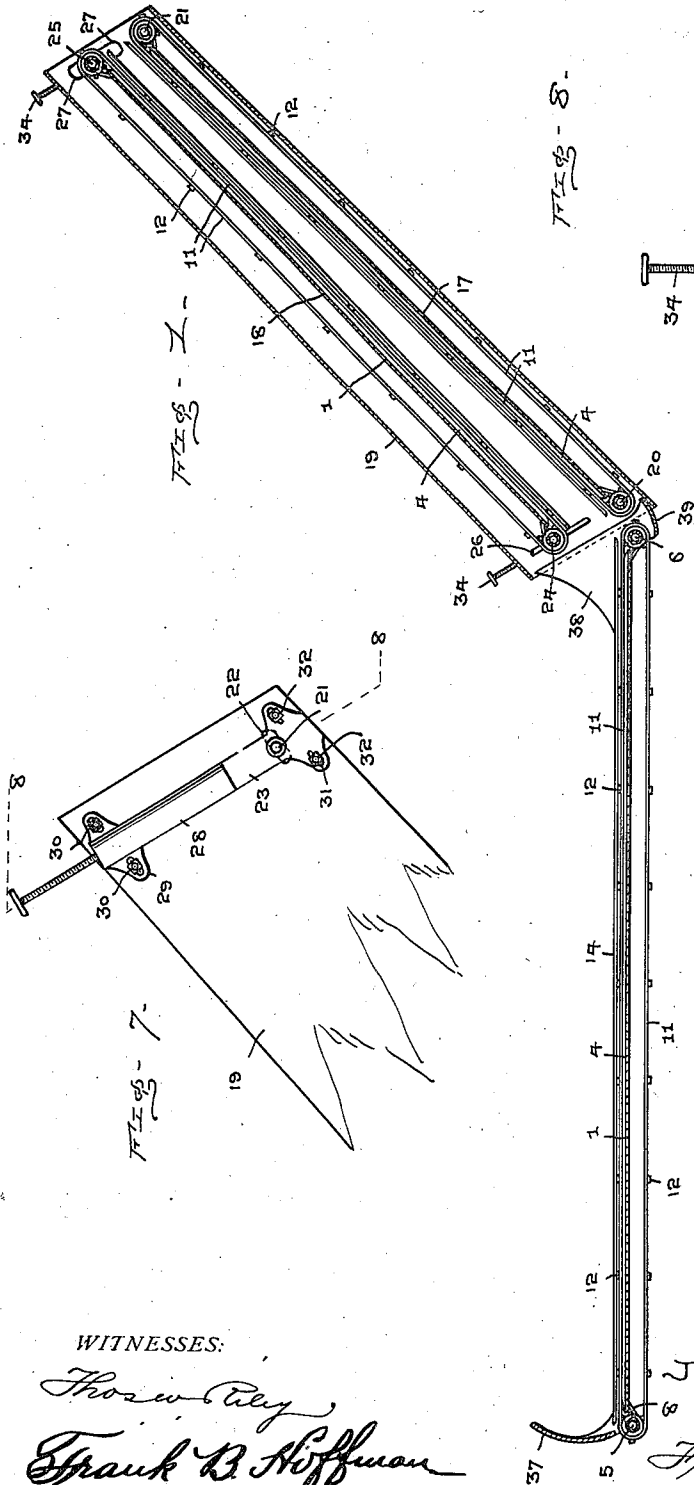


J. L. KINER.
 ENDLESS CONVEYER FOR GRAIN HEADERS AND BINDERS.
 APPLICATION FILED MAY 3, 1918.

1,294,675.

Patented Feb. 18, 1919.
 2 SHEETS—SHEET 1.



WITNESSES:

Thomas W. Wiley
Frank B. Hoffman

INVENTOR.

Joseph L. Kiner

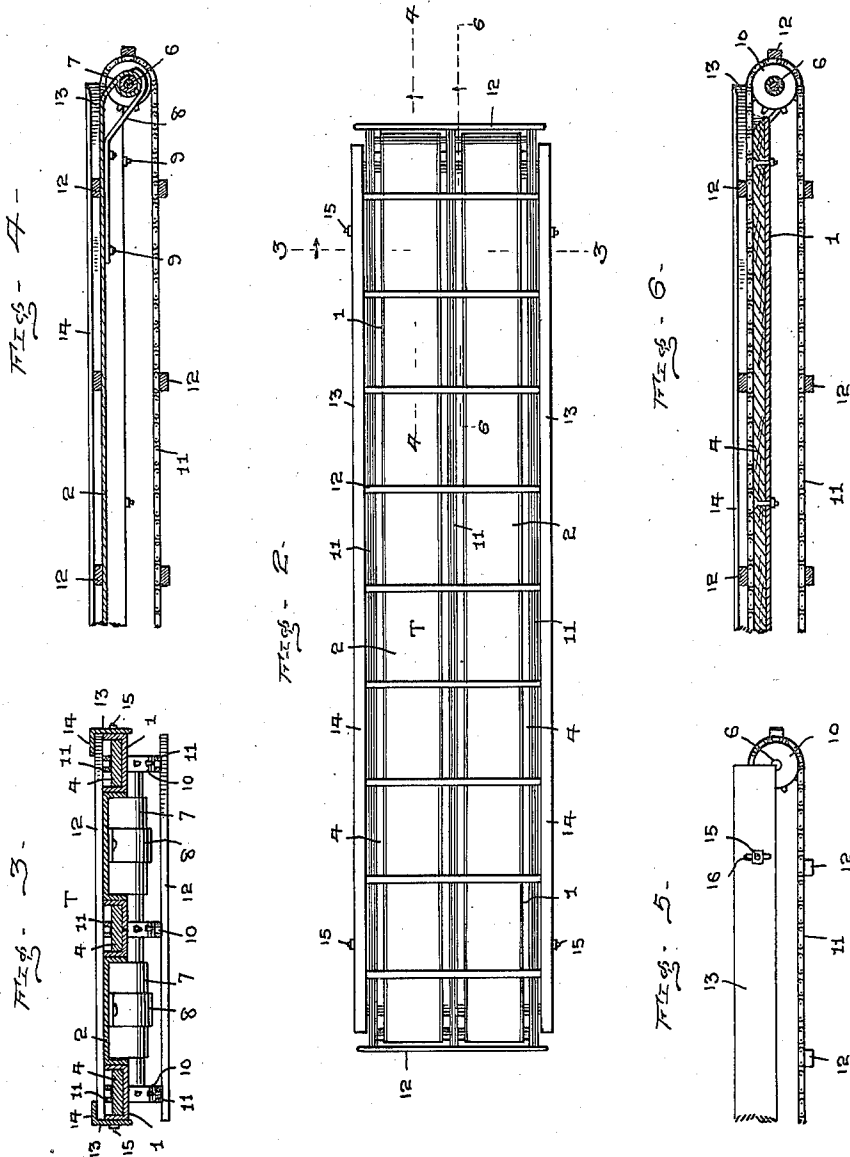
BY

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 ATTORNEYS

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UNITED STATES PATENT OFFICE.

JOSEPH L. KINER, OF GARDEN CITY, KANSAS.

ENDLESS CONVEYER FOR GRAIN HEADERS AND BINDERS.

1,294,675.

Specification of Letters Patent.

Patented Feb. 18, 1919.

Application filed May 3, 1918. Serial No. 232,288.

To all whom it may concern:

Be it known that I, JOSEPH L. KINER, a citizen of the United States, residing at Garden City, in the county of Finney and State of Kansas, have invented certain new and useful Improvements in Endless Conveyers for Grain-Headers and Binders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in endless conveyers for use in connection with grain headers and binders, and the main object of the invention is to provide endless conveyers which will operate smoothly and noiselessly and which will be durable and substantial in design.

A still further object of the invention is to provide a new and novel construction of table for each endless conveyer.

With these and other objects in view as will appear as the description proceeds, the invention comprises the various novel features of construction, combination and arrangement of parts as will be more fully described hereinafter and afterward specifically claimed.

Referring to the drawings,

Figure 1 represents a vertical longitudinal sectional view through my improved construction of endless conveyers.

Fig. 2 represents a top plan view of the horizontal conveyer.

Fig. 3 represents a transverse sectional view taken on a plane indicated by the line 3—3 on Fig. 2.

Fig. 4 represents a fragmentary longitudinal sectional view taken on a plane indicated by the line 4—4 on Fig. 2.

Fig. 5 represents a fragmentary side elevation of one end of the horizontal conveyer.

Fig. 6 represents a sectional view taken on a plane indicated by the line 6—6 on Fig. 2.

Fig. 7 represents a detail side elevation of the upper end of the elevating conveyer casing.

Fig. 8 represents a vertical sectional view taken on a plane indicated by the line 8—8 on Fig. 7.

Fig. 9 represents a bottom plan view of one end of one of the table strip sections, and

Fig. 10 represents a detail sectional view showing the manner of connecting the strip sections of the conveyer table.

In order that the construction and operation of the invention may be readily comprehended by those skilled in the art to which the invention relates, I have illustrated an approved embodiment thereof in the accompanying drawings and will now proceed to fully describe the same, in connection with said drawings, in which T indicates the table of the horizontal endless conveyer and is composed of a number of table strip sections 1 and 2 suitably connected by bolts or rivets 3, as clearly shown in Fig. 10. The strip sections 1 are in the form of U-shaped channel strips, while the table strips 2 are of substantially inverted U-shape and are positioned between the channel strips 1. By increasing or decreasing the number of these strip sections, the conveyer table can be extended or decreased in width as desired, or to suit the purpose for which the particular conveyer is intended. Each channel strip 1 has a strip of wood 4 secured therein to form a bearing for the endless conveyer chains.

Shafts 5 and 6 are arranged at opposite ends of the conveyer table and are each mounted in tubular bearings 7 positioned between the sides of the table strips 2. Each of the tubular bearings 7 are held in position by a bracket arm 8 securely bolted to the under side of the table sections 2 by bolts 9. Sprocket wheels 10 are mounted on each of the shafts 5 and 6 in alinement with the channel strips 1 and endless chains 11 trained around them and through each channel strip 1. These chains are arranged to smoothly and noiselessly slide upon the wood bearing strips 4. Raddles 12 are secured transversely to the chains 11 so that their opposite ends terminate in the same vertical plane with the opposite sides of the table T. It is to be understood from this construction that the wood strips 4 will support the weight of the raddles so as to enable them to slide or pass freely and smoothly over the table strips 2, thus making the conveyer run smoothly and noiselessly.

By particular reference to Figs. 3 and 5, it will be noted that 13 indicate metallic angle side strips adjustably connected to the opposite sides of the table T. Each of these strips is arranged so that its upper side 14 extends inwardly and overlaps the ends of the raddles. These angle side strips can be adjusted vertically to accommodate any thickness of raddle through the medium of the bolts 15 which project through slots 16 in the side strips.

The elevating conveyers 17 and 18 are arranged in a casing 19 positioned adjacent the discharge end of the horizontal conveyer. Each of these conveyers 17 and 18 is substantially identical in construction with the horizontal conveyer. The lower shaft 20 of the conveyer 17 is journaled in the opposite sides of the casing 19, while the upper shaft 21 projects through elongated slots 22 in the opposite sides of the casing and are journaled in adjustable brackets 23 mounted on the outside of the casing for a purpose which will presently appear. The shafts 24 and 25 of the upper conveyer 18 project through slots 26 and 27 in the opposite sides of the casing, the slot 26 being of a width equal to the diameter of the shaft 24 so as to permit the latter to move only up and down, while the slot 27 is of a width greater than the diameter of the shaft 25 to not only permit of the latter shaft moving up and down but also of it being adjusted longitudinally of the casing.

The shafts 24 and 25 are adapted to be adjusted to and from the shafts 20 and 21 of the lower conveyer 17 through the medium of adjusting means arranged on opposite sides of the casing and at each end thereof. Each adjusting means comprises a casing 28 provided with laterally extending slotted ears 29 through which project adjusting bolts 30 carried by the casing. The lower end of the casing is rigidly connected to the adjacent lower bearing 23, and the latter is also provided with laterally extending slotted ears 31 through which project adjusting bolts 32 carried by the casing.

The opposite ends of the shafts 24 and 25 are each mounted in a bearing block 33 vertically movable within the casing 28. 34 is an adjustable hand screw threaded through the upper end of the casing 28 and provided at its lower end with a head 35 rotatably connected with said screw. A suspension spring 36 has its opposite ends attached respectively to the bearing block 33 and the head 35 and serves to yieldingly support the conveyer shaft.

By this construction it will be apparent that the upper elevating conveyer 18 is yieldingly suspended in superimposed relation with the lower elevating conveyer 17, so that as the grain is conveyed from the horizontal

conveyer and subsequently discharged into the opening between the lower and upper elevating conveyers, said upper elevating conveyer can yield upwardly should the grain have a tendency to become choked between it and the lower elevating conveyer. It will also be noted that by providing means for adjusting the bearing 23 and casing 28 longitudinally of the casing 19 that any slack that may occur within the conveyer belts may be readily taken up.

Each of the elevating conveyers 17 and 18 is provided with a table identical in construction with the table T of the horizontal conveyer, therefore the same reference numerals applied to the latter will apply to this last-mentioned construction.

In order to prevent the grain from being scattered and wasted, I have provided one end of the horizontal conveyer with a curved shield 37 which projects upwardly and is supported by the bearing sleeves 7 positioned on the shaft 5. The opposite end of the horizontal conveyer is provided with an apron 38, the sides of which extend upwardly adjacent the opposite sides of the casing 19 of the elevating conveyers, while its bottom portion 39 extends transversely beneath the intervening space between the adjacent ends of the horizontal conveyer and the lower elevating conveyer and serves to catch any grain that may fall therebetween.

While I have described the principle of operation of the invention, together with what I consider to be the best embodiment thereof, I desire to have it understood that such changes in construction and arrangement of parts may be made when desired without departing from the spirit of the invention as are within the scope of the appended claims.

Having thus described my invention, what I claim as new is:—

1. An elevating conveyer comprising an open ended casing, a pair of spaced superposed endless conveyers disposed longitudinally of the casing and journaled through the sides thereof, supporting brackets for the opposite ends of said conveyers, means for adjustably mounting said brackets on the sides of the casing, and means carried by each bracket for adjusting one of said endless conveyers with respect to the other.

2. In an elevating conveyer, a conveyer table consisting of a plurality of channel strips and table strips substantially U-shaped in cross sections, means for detachably connecting said strips together, anti-rattle strips mounted in said channel strips, bearing brackets supported by the opposite ends of said table strips, shafts journaled at opposite ends of the conveyer table in said bearing brackets, sprocket wheels mounted on said shafts, chains trained around said

sprocket and through said channel strips, raddles attached to said chains to move on said conveyer table, and means at the opposite sides of the table for holding said raddles in position during their passage over the table.

name to this specification in the presence of two subscribing witnesses.

JOSEPH L. KINER.

Witnesses:

FRED S. DUNN,
WARREN A. GLEASON.

In testimony whereof I have signed my