H. CHRISTENSEN.

ATTACHMENT FOR CONVERTING BINDERS INTO HEADERS.

APPLICATION FILED NOV. 8, 1917.

1,261,702. Patented Apr. 2, 1918.

Fig. 1.

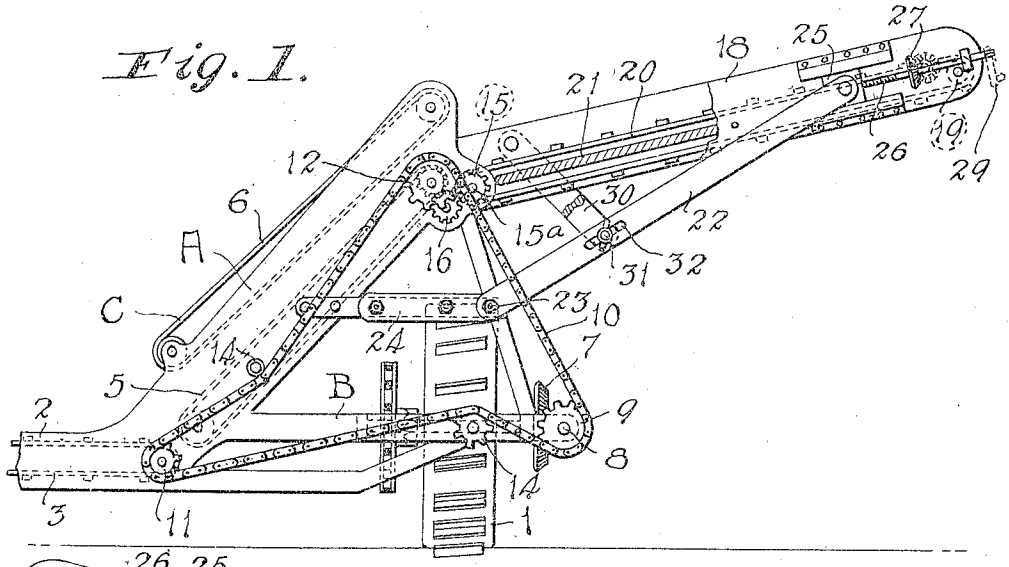


Fig. 2.

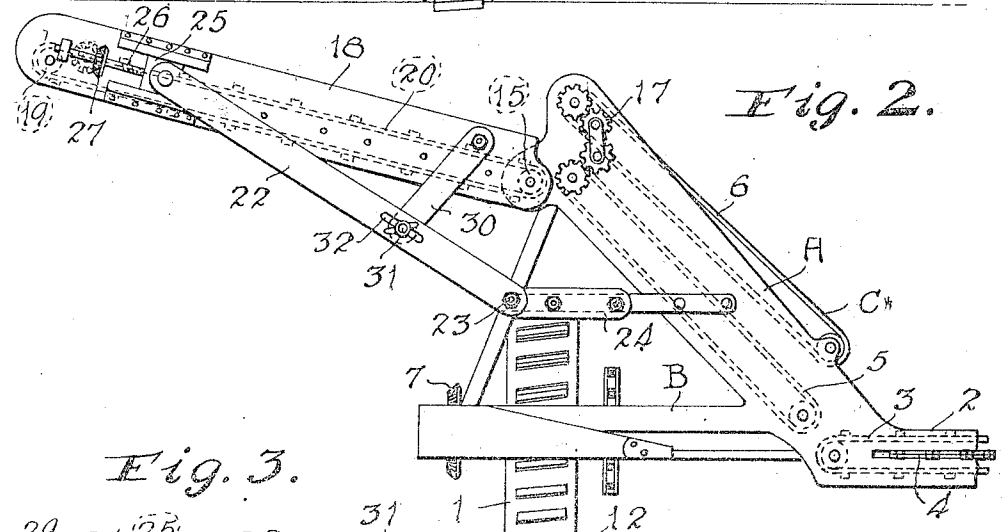
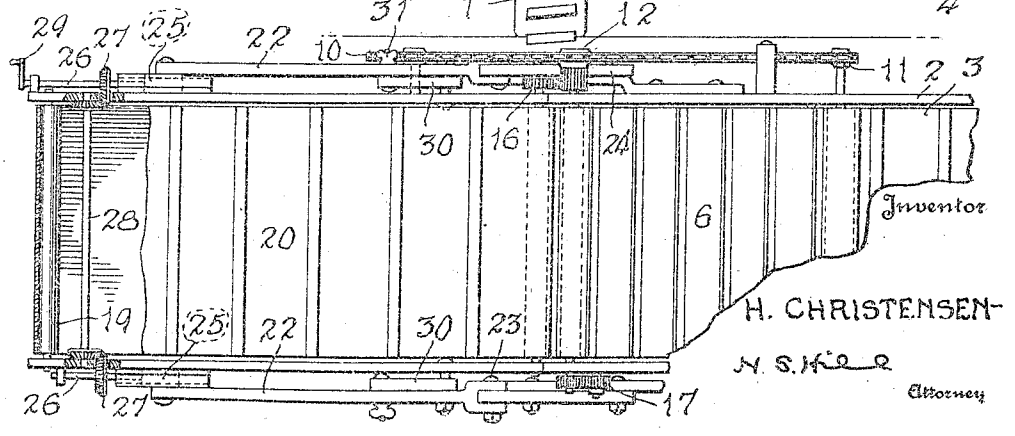


Fig. 3.



Inventor

H. CHRISTENSEN

N. S. Kerr

Attorney

UNITED STATES PATENT OFFICE.

HILBERT CHRISTENSEN, OF COAL HARBOR, NORTH DAKOTA.

ATTACHMENT FOR CONVERTING BINDERS INTO HEADERS.

1,261,702. Specification of Letters Patent. Patented Apr. 2, 1918.

Application filed November 8, 1917. Serial No. 200,936.

To all whom it may concern:

Be it known that I, HILBERT CHRISTENSEN, a subject of the King of Denmark, residing at Coal Harbor, in the county of McLean, State of North Dakota, have invented a new and useful Attachment for Converting Binders into Headers; 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.

The present invention relates to a header attachment for binding machines, and has for its object to provide a device of this character which embodies novel features of construction whereby it can be readily applied to a conventional binding machine for the purpose of converting the same into a header, thereby avoiding the necessity of purchasing and storing two separate machines.

Further objects of the invention are to provide a header attachment for binding machines which is comparatively simple and inexpensive in its construction, which can be easily and quickly applied to any conventional binding machine and driven from the usual binding machine mechanism, which will enable the binding machine to be used in a most effective manner as a header, and which can be adjusted to discharge the headed grain with the least possible loss.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a rear elevation of a portion of a binder having the header attachment applied thereto, all of the bundling and binding mechanism being removed from the binder, and parts being broken away and shown in section to illustrate more clearly the details of construction.

Fig. 2 is a front elevation of the same.

Fig. 3 is a top plan view thereof.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

For the purpose of illustration the invention is shown as applied to a conventional binding machine A, only those portions thereof which are essential to showing the manner of applying and using the attachment being shown. The binder includes the usual A-frame B which is arranged over the master wheel 1 and which has the elevator C on one side thereof. The usual binding mechanism which would ordinarily be mounted upon the other side of the A-frame and arranged to receive the grain from the top of the elevator would be removed preparatory to applying the header attachment, and this binding mechanism has accordingly not been shown. The usual platform 2 extends horizontally from the base of the conveyer C, said platform being provided with the platform conveyer 3 and having a cutter 4 at the forward edge thereof. The elevator C is provided with the usual lower belt 5 and upper belt 6, said belts being arranged to receive the grain from the inner end of the platform conveyer 3 and carry it upwardly.

The master wheel 1 is connected by the usual gearing 7 to a drive shaft 8 which has a sprocket wheel 9 at one end thereof, said sprocket wheel engaging an endless drive chain 10 which passes around a sprocket 11 at the inner end of the platform conveyer 3 and around a sprocket wheel 12 at the upper end of the lower elevator belt 5. Idlers 14 may engage the drive chain 10 at different points in the length thereof for the purpose of properly directing it in its movements and taking up slack therein. A roller 15 at the upper end of the A-frame B is driven from the shaft of the upper sprocket wheel 12 by means of a suitable chain of gearing 16. By reference to Fig. 2 it will also be observed that motion is transmitted from the shaft of the upper sprocket wheel 12 to the upper belt 6 of the elevator C by means of a chain of gearing 17.

The header attachment includes a conveyer frame which is formed with side bars 18 having a roller 19 journaled between the outer ends thereof and adapted to have the

inner ends thereof pivotally mounted upon the shaft 15ª of the roller 15. An endless conveyer belt 20 extends around the two rollers 19 and 15, and a division wall or partition 21 may connect the side bars 18 and be arranged between the upper and lower reaches of the endless belt 20. When this attachment is applied the headed grain carried upwardly by the elevator C will, instead of being delivered to the binding mechanism, be deposited upon the conveyer belt 20 and discharged thereby into the body of a wagon or like member traveling at one side of the header.

Braces 22 may be provided for supporting the frame of the header attachment, and these braces may have the lower ends thereof pivotally connected at 23 to clamps 24 which are detachably applied to the cross bars of the A-frame. The upper ends of the braces 22 may be pivotally connected to slides 25 upon the side bars 18. These slides are shown as engaged by threaded shafts 26 which are connected by gearing 27 to a transverse shaft 28 so as to operate in unison, one of the threaded shafts 26 having a polygonal outer end to which a detachable crank handle 29 can be applied for the purpose of rotating the same. With this construction it will be obvious that by applying the crank handle 29 to the threaded shaft 26 the slides 25 can be moved in and out and the outer end of the attachment raised or lowered, thereby enabling it to be adjusted so as to discharge without loss or waste into any wagon body or like receptacle at the side of the machine. Shorter supplemental braces 30 may extend between the inner ends of the side bars 18 and the main braces 22, the lower ends of the supplemental braces being adjustably connected to the main braces by clamping bolts 31 which are received within slots 32. These clamping bolts would be loosened preparatory to adjusting the position of the conveyer frame, and then subsequently tightened to hold the conveyer frame rigidly in its adjusted position.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A header attachment for a binding machine having the usual A-frame, platform and elevator at one side of the A-frame, a roller and shaft at the upper end of the elevator, the shaft being geared to the elevator mechanism, said attachment including a conveyer frame which extends laterally from the opposite side of the A-frame and has a roller at the outer end thereof, the inner end of the conveyer frame being pivotally supported upon the shaft of the before mentioned roller at the upper end of the elevator, an endless conveyer belt extending around the two rollers, clamps applied to the cross bars of the A-frame, slides mounted upon the sides of the conveyer frame, braces pivotally connecting the clamps and slides, means for moving the slides to adjust the inclination of the conveyer frame, and supplemental braces adjustably connecting the main braces to the conveyer frame.

2. A header attachment for a binding machine having the usual A-frame, platform and elevator at one side of the A-frame, a roller and shaft at the upper end of the A-frame, the shaft being geared to the elevator mechanism, said attachment including a conveyer frame extending laterally from the A-frame on the opposite side thereof from the platform and having a roller at the outer end thereof, the inner end of the conveyer frame being pivotally mounted upon the before mentioned shaft of the roller, an endless conveyer belt extending around the two rollers, slides mounted upon the sides of the conveyer frame, braces pivotally connecting the slides to the A-frame, adjusting shafts engaging the respective slides, and an operative connection between the two adjusting shafts for causing them to move in unison.

3. A header attachment for a binding machine having the usual A-frame, platform and elevator at one side of the A-frame, a roller and shaft at the upper end of the A-frame, the shaft being geared to the elevator mechanism, said attachment including a conveyer frame extending laterally from the A-frame on the opposite side thereof from the platform and having a roller at the outer end thereof, the inner end of the conveyer frame being pivotally supported upon the before mentioned shaft of the roller at the upper end of the A-frame, an endless conveyer belt extending around the two rollers, slides mounted upon the sides of the conveyer frame, longitudinally extending adjusting shafts mounted upon the sides of the conveyer frame and operatively connected to the respective slides, and a transverse shaft journaled between the sides of the conveyer frame and geared at its ends to the longitudinal shafts to insure a simultaneous movement thereof.

4. A header attachment for a binding machine having the usual A-frame, platform and elevator at one side of the A-frame, a roller and shaft at the upper end of the A-frame, the shaft being geared to the elevator mechanism, said attachment including a conveyer frame extending laterally from the A-frame on the opposite side thereof to the platform and having a roller at the outer end thereof, the inner end of the conveyer frame being pivotally supported upon the before mentioned shaft of the roller at the upper end of the A-frame, an endless con-

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veyer belt extending around the two rollers, slides mounted upon the sides of the conveyer frame, main braces pivotally connecting the A-frame and slides, adjusting shafts mounted upon the sides of the main frame and having an operative connection with the respective slides, an operative connection between the adjusting shafts for causing them to operate in unison, and supplemental braces adjustably connecting the main braces and conveyer frame.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HILBERT CHRISTENSEN.

Witnesses:

ALBIN J. CARLSEN,

R. H. FULLER.