

J. A. HILLENBRAND.
 RETARDER FOR SELF BINDING HARVESTERS.
 APPLICATION FILED JUNE 2, 1911

1,019,960.

Patented Mar. 12, 1912.

Fig. 1.

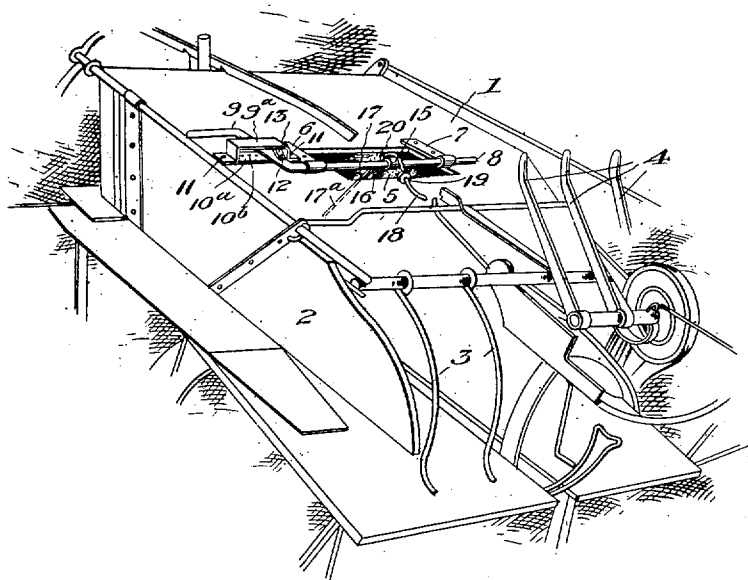


Fig. 2.

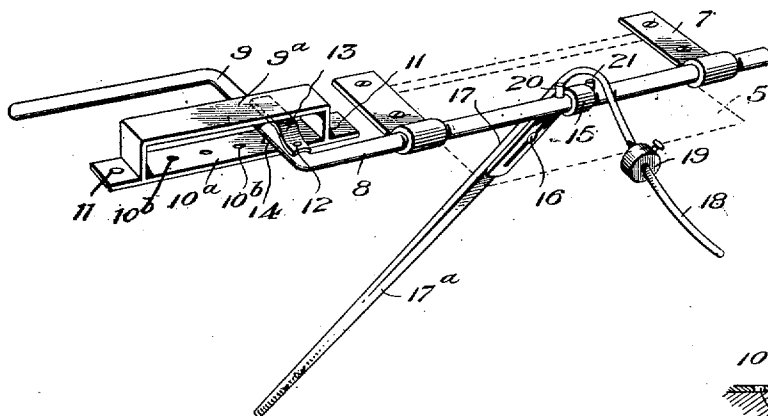
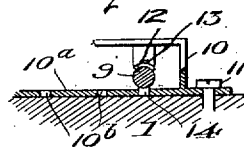


Fig. 3.



Witnesses

Geo. Hamilton
S. V. Lockwood

John A. Hillenbrand Inventor
Frank C. Gore
 his Attorney

UNITED STATES PATENT OFFICE.

JOHN A. HILLENBRAND, OF VANDERBURG COUNTY, INDIANA.

RETARDER FOR SELF-BINDING HARVESTERS.

1,019,960.

Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed June 2, 1911. Serial No. 630,750.

To all whom it may concern.

Be it known that I, JOHN A. HILLENBRAND, a citizen of the United States, residing in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Retarders for Self-Binding Harvesters, of which the following is a specification.

This invention relates to retarders for self-binding harvesters.

In self-binding harvesters, as the grain comes down the chute prior to handling by the binder, the heads being heavier than the butts, the grain is liable to advance quicker at the head than at the butt and, consequently, there results an uneven and disarranged bundle.

The present invention has for its object the provision of a novel retarder adapted for convenient attachment to the top of the chute of a self-binding harvester which will be adapted for adjustment to suit any of the varying conditions of use, and will be so constructed and adapted for coöperation with the grain that it will catch and retard the heads to aline the grain, as it were, if the heads are in advance of the butts, and to hold the accumulated grain in evened condition until the proper amount has been collected, and thereupon, to automatically allow the loose bundle to pass for subsequent binding in the usual manner.

The invention is set forth fully hereinafter and the novel features are recited in the appended claims.

In the accompanying drawings:—Figure 1 is a perspective view of the invention applied to a binder; Fig. 2, an enlarged perspective detail of the invention, dotted lines representing the opening in the top of the binder chute; and Fig. 3, a detail section showing the manner of securing the adjustable shaft.

Referring to Fig. 1, the numeral 1 designates the chute of an ordinary or well-known self-binder which has the usual butt-boards 2 which, however, have nothing to do with my invention. The ordinary retarders or fingers are shown at 3 and the kicker or ejector at 4. Any ordinary binding mechanism may be employed.

In applying my invention to the chute 1, I cut an elongated opening 5 crosswise in the top of the chute 1, said opening being in practice about five inches high by, say, six-

teen inches long, and its length extending crosswise of the chute.

At opposite ends of this opening and suitably secured to the top of the chute 1, are the bearings 6 and 7 in which is journaled to turn and to slide longitudinally the rod or shaft 8 constituting a part of the present invention. The rod 8 is provided with a bent portion or crank part 9 which passes through a frame 10 adapted for attachment by fastenings 11 to the chute 1 and having a bottom strip or piece 10^a provided with a series of openings 10^b disposed lengthwise thereof.

Secured to the bent part of the shaft 8 at 12 is a leaf spring 13 adapted to bear upon the cross part 9^a of the frame 10. The connection is an adjustable one so that the spring 13 can be shifted lengthwise of the frame 10. Carried by the crank 9 is a pin 14 which is adapted to enter any one of the apertures 10^b and thereby to hold the shaft 8 in any position to which it may be moved longitudinally thereof, the spring 13 holding the crank part 9 downwardly and thus retaining the pin 14 in the given aperture.

Loosely mounted on the shaft 8 is a hinge member 15, and adjustably connected thereto at 16 so that it may be raised or lowered in relation to said hinge member, is a retarder 17 which has an arm 18 provided with an adjustable weight 19. The arm 18 with its weight 19, is disposed above the chute 1, but the retarder 17 passes down through the slot 5 and is normally disposed in inclined position with its lower end 17^a directed toward the upper end of the chute in such disposition that it will be adapted to be engaged by the heads of the grain if they are in advance of the butts thereof, so that when the grain strikes this retarder, it will be detained until the butts line up transversely with the heads and the accumulated bundle will, owing to its weight, then swing the retarder 17 downwardly and pass thereunder onto the deck for binding and subsequent ejection in the usual manner. The adjustable connection 16 enables the retarder to be raised or lowered to accommodate it to different depths of chutes and according to conditions met with in use. The weight 19 may be adjusted along the arm 18 and thus determine the weight or pressure of the accumulated grain which will be resisted before the retarder 17 will swing and permit

the grain to pass down onto the deck. By adjusting the shaft 8 lengthwise thereof, the retarder may be positioned crosswise of the chute, as may be found necessary to carry out the purpose of the invention. I preferably provide pins 20 and 21 on the shaft 8 to limit the movement of the retarder lengthwise of said shaft.

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

1. The combination with the chute of a self-binder, of a longitudinally movable shaft, a depending swinging retarder and adjuster carried by the shaft, said shaft being provided with an angled portion, a spring exerting pressure on the shaft to hold the angled portion on the chute, and means, including the spring for locking the shaft in

different positions of longitudinal adjustments. 20

2. The combination with the chute of a self-binder, of a longitudinally movable shaft, a depending swinging retarder and adjuster carried by the shaft, said shaft having an angled portion, a frame provided with a series of engaging devices, a member carried by the angled portion adapted for engagement with any of said engaging devices, and a spring exerting pressure on said angled portion and holding the same in engagement with said members. 25 30

In testimony whereof, I hereunto affix my signature in presence of two witnesses.

JOHN A. HILLENBRAND

Witnesses:

F. C. GORE,

JETTINA RICKETTS.