May 9, 1933. A. H. CANNING 1,908,507

STOOKING MACHINE

Filed Aug. 14, 1929

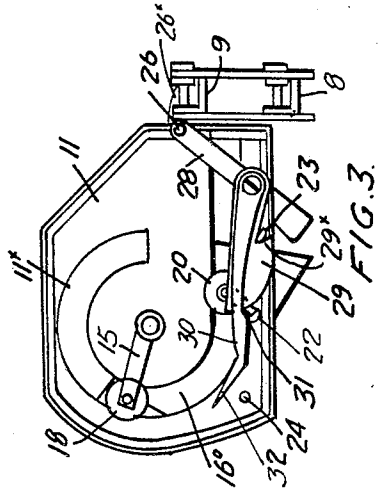

FIG. 3.

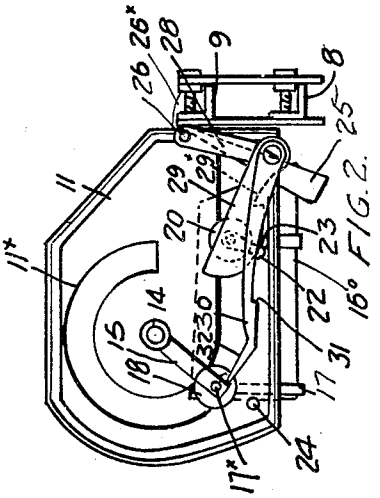

FIG. 2.

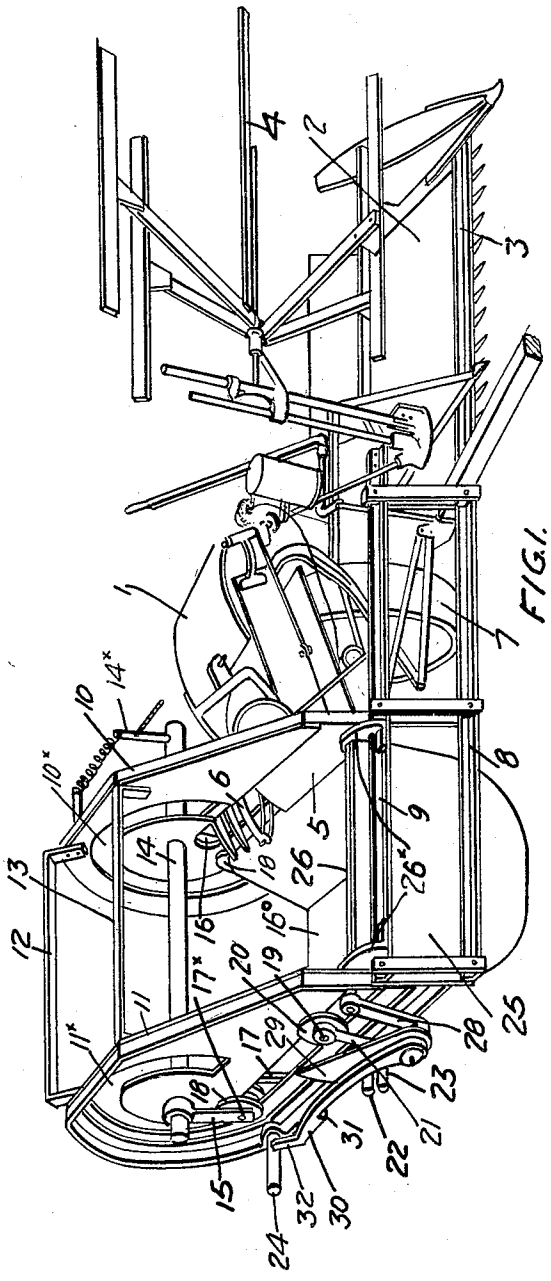

FIG. 1.

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Patented May 9, 1933

1,908,507

UNITED STATES PATENT OFFICE

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STOOKING MACHINE

Application filed August 14, 1929. Serial No. 385,852.

My invention relates to improvements in stooking machines, and the object of the invention is to devise a simple device by which sheaves may be set up into stooks with the butts spread apart so that they will remain in a stable position upon the ground without any danger of their being upset by the wind or from any other cause, and it consists essentially of the arrangement and construction of parts as hereinafter more particularly explained.

Fig. 1 is a perspective view of my stooking device attached to a binder.

Fig. 2 is a side elevation of my device, the parts being shown in the normal position.

Fig. 3 is a similar view to Fig. 2 showing the sheaf receiver partially up-ended in position ready to discharge the stook.

In the drawing like characters of reference indicate corresponding parts in each figure.

1 indicates a binder of any ordinary type provided with a grain deck 2, cutter bar 3, reel 4, discharge deck 5, knotter mechanism 6, and ground wheel 7. 8 and 9 are bars carried by any suitable portion of the binder frame and extending laterally of the binder. 10 and 11 are cam plates supported by bars 8 and 9 provided with cam slots 10^x and 11^x. The cam plates 10 and 11 are connected together by cross-bars 12 and 13 so as to rigidly space them apart. The bars 8 and 9, plates 10 and 11 and bars 12 and 13 together form the main frame of my device carried by the main frame binder.

14 is a shaft which is journalled in the plates 10 and 11. One end of the shaft 14 is provided with an arm 14^x which is connected by any suitable means to an operating lever located adjacent the driver's seat so that the shaft 14 may be rocked when it is desired to set up the shock. 15 and 16 are arms secured to the shaft 14 at the outside of the cam plates 10 and 11. 16° is a sheaf receiver mounted at one end upon a U-bar 17 provided with out-turned ends 17^x on which are journalled grooved rollers 18 operating within the cam slots 10^x and 11^x. The outer ends of the out-turned portions 17^x extend into the arms 15 and 16 carried by the shaft 14.

19 are stud arms extending outward from the forward end of the sheaf receiver 16° on which are mounted grooved rollers 20 also operating within the cam slots 10^x and 11^x to support the front portion of the sheaf receiver. To the outer arm 19 is secured a depending member 21 having an out-turned engaging portion 22 for a purpose which will hereinafter appear.

23 is a stationary engaging portion extending outward from the cam plate 11 adjacent to the normal position of the engaging portion 22. 24 is a stud extending from the cam plate 11 adjacent the rear end thereof. 25 is a butt supporting apron which is secured to a rocking shaft 26 journalled in bearings in the cam plates 10 and 11 and upon bearing arms 26^x carried by the upper bar 9 forming the supporting structure of the device. The outer end of the shaft 26 is provided with an arm 28 upon which is pivoted a pair of locking members 29 and 30.

The member 29 is provided with a notch 29^x adapted to engage the engaging portion 22 during the operation of the machine. The locking member 30 is provided with a notch 31 with which the engaging portion 22 also coacts during the operation of the machine. The outer or free end of the member 30 is provided with a finger 32 extending upwardly at an incline and adapted to rest upon the stud 24 when the locking member 30 is freed.

As the sheaves are formed and discharged from the binder they drop into the sheaf receiver 16° with their butt ends resting against the butt supporting apron 25. The operator of the machine then rocks the shaft 14 in a forward direction by his operating lever, thereby swinging the arms 15 and 16 rearward and drawing the sheaf receiver in a corresponding direction. As the rollers 18 travel up the curved portions of the slots 10^x and 11^x the rear end of the sheaf receiver as it travels rearwardly is tilted upward and carried over to an inverted position.

As the sheaf receiver is tilted upward the butt supporting apron is drawn forward by means of the engaging member 22 engaging the notch 31 and thus pulling the member 30 in a corresponding direction so as to swing

the arm rearward and rock the shaft 26 in a corresponding direction so that the lower edge of the apron follows the sheaf receiver as the stook is carried to an inclined position until the inclined finger 32 is carried into contact with the stud 24.

The inclined finger as it engages the stud is forced upward carrying the notch 31 out of engagement with the engaging member 22. As this takes place the engaging member 22 continues to travel rearward so that the locking member 29 is free to drop so that its notch is carried into engagement with the engaging member 23 locking the butt supporting apron in its rearwardly inclined position, continuing to support the butts as the sheaf receiver continues its movement to an inverted position.

The butt ends of the sheaves by this movement slide down the face of the apron, the frictional contact therewith tending to hold the sheaves on the forward side of the shock back so as to spread them apart from the sheaves on the opposite side of the shock and therefore as the shock drops into contact with the ground the butt end of the shock is spread so as to provide a broad base for supporting the shock in an upward position.

The sheaf receiver 16° travels to a completely inverted position so that as the binder and stooking mechanism travels forward the receiver passes over the top of the stook. The operator then releases the receiver 16° which returns by gravity to its normal position. As it so travels the engaging member 22 contacts with the underside of the finger 32 thereby raising the member 30 to permit such engaging member to pass thereunder into engagement with the inclined end of the locking member 29 which is thereby lifted to carry its notch 29^x out of engagement with the locking member 23 so as to release the apron 25 and allow it to swing back to its normal position.

From this description it will be seen that I have devised a very simple device adapted to receive the sheaves from a binder and form them into a stook and set such stook up in a vertical position in the field with the base of the stook spread so that it will have a maximum support against wind pressure.

What I claim as my invention is:—

1. In a stooker, the combination with the sheaf discharging mechanism of main frame, a binder, of a sheaf receiver carried by the main frame and adapted to receive the sheaves as they are discharged, means for swinging the receiver upward in a plane parallel with the rear of the binder to assume an inverted position and for then returning the receiver to its normal position, a butt supporting apron supported by the main frame to swing in front of the receiver, means for engaging the receiver and apron so that the lower edge of the apron follows the receiver as it swings rearward, means for locking the apron in its discharging position as the receiver continues to travel to an inverted position, means for releasing the apron as the receiver returns to its normal position, and means for swinging the apron to follow the sheaf receiver during the initial portion of its travel towards an inverted position.

2. In a stooker, the combination with the sheaf discharging mechanism of a binder, of a pair of spaced apart cam plates provided with cam slots, means for supporting the cam plates parallel with and adjacent to the discharge mechanism of the binder, a shaft journalled in the plates concentrically with the slots, a sheaf receiver, rollers mounted upon the sides of the sheaf receiver and adapted to travel within the cam slots, an arm connecting the shaft with the receiver so as to carry the receiver to an inverted position as the shaft is rocked forward, a butt supporting apron, a rocking shaft mounted in the cam plates to which the upper edge of the apron is secured, an arm depending from the rocking shaft, and coacting mechanism carried by the sheaf receiver and arm whereby the apron is locked in its forward position during the rearward travel of the receiver and released by the return travel of the receiver to assume its normal position.

3. In a stooker, the combination with the sheaf discharging mechanism of a binder, of a pair of spaced apart cam plates provided with cam slots, means for supporting the cam plates parallel with and adjacent to the discharge mechanism of the binder, a shaft journalled in the plates concentrically with the slots, a sheaf receiver, rollers mounted upon the sides of the sheaf receiver and adapted to travel within the cam slots, an arm connecting the shaft with the receiver so as to carry the receiver to an inverted position as the shaft is rocked forward, a butt supporting apron, a rocking shaft mounted in the cam plates to which the upper edge of the apron is secured, an arm depending from the rocking shaft, a stationary locking member extending from the outer cam plate, a locking member carried by the sheaf receiver normally adjacent to the aforesaid locking member, a stud extending outward from the cam plate adjacent its rear end, a pair of notched members pivotally mounted upon the arm with one of which the engaging member carried by the sheaf receiver coacts as the sheaf receiver is carried to an inverted position, an inclined finger extending upward from the free end of said notch member adapted to engage the stud as it is carried rearward to free said notch member from the engaging member and to permit the other notch member to drop into engagement with the stationary engaging member to lock the apron in its forward position such notch members being adapted to be freed by the re-

turn travel of the sheaf receiver and its engaging member contacting first with the underside of the inclined finger and then with the underside of the notch locking member to release it from the stationary engaging member.

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