No. 816,823. PATENTED APR. 3, 1906.

W. C. ROBBY.

CLOVER HULLER.

APPLICATION FILED OCT. 9, 1905.

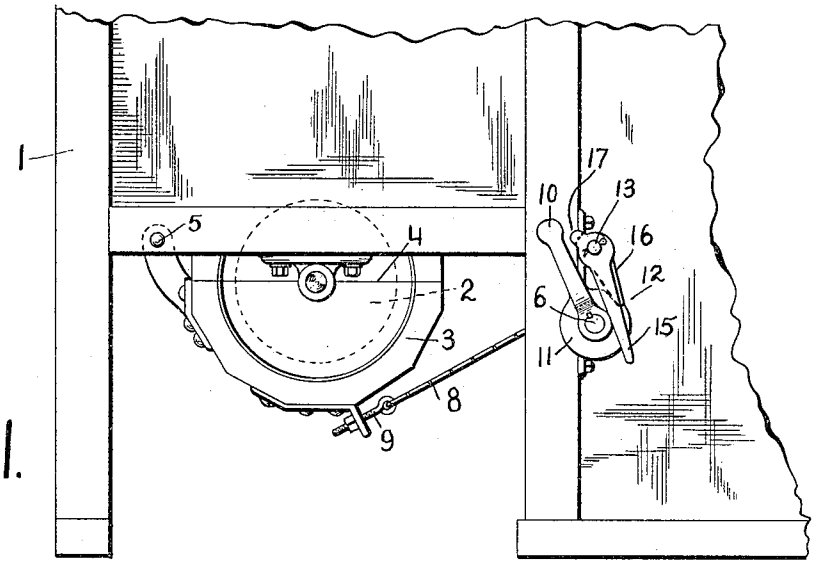
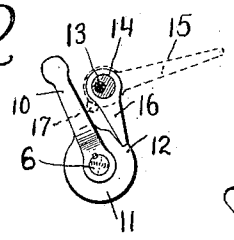


Fig. 1.

Fig. 2



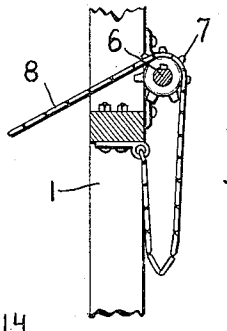


Fig. 4.

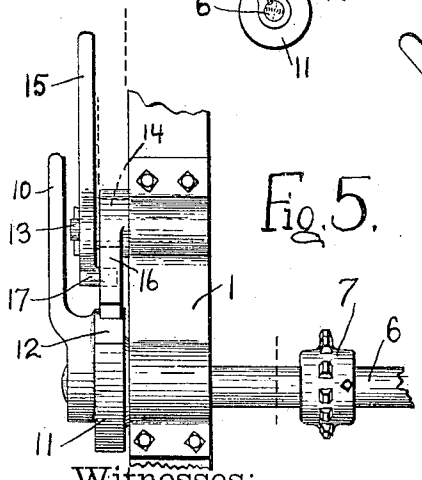


Fig. 5.

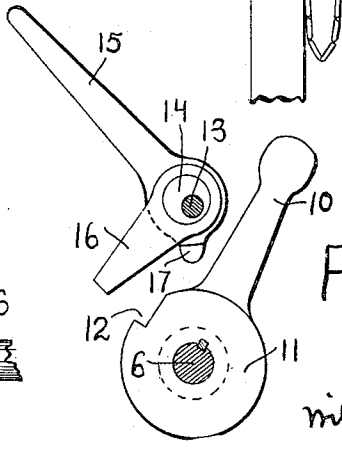


Fig. 3.

Witnesses:

Elmer R. Shipley.

M. S. Belden.

William C. Robby
Inventor

by James W. See.
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM C. ROBBY, OF LAPORTE, INDIANA, ASSIGNOR TO THE M. RUMELY COMPANY, OF LAPORTE, INDIANA.

CLOVER-HULLER.

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To all whom it may concern:

Be it known that I, WILLIAM C. ROBBY, a citizen of the United States, residing at Laporte, Laporte county, Indiana, (post-office address, care M. Rumely Company, Laporte, Indiana,) have invented certain new and useful Improvements in Clover-Hullers, of which the following is a specification.

This invention, pertaining to improvements in clover-hullers, will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of such portions of a common clover-huller as are necessary to an understanding of my invention illustrated as being therein embodied, the parts being illustrated in normal working position; Fig. 2, a similar view of the general latchment, the latching-pawl being under strain and the hub of its actuating-eccentric appearing in vertical section; Fig. 3, a rear elevation of the parts illustrated in Fig. 2, the winding-shaft and the stud of the eccentric appearing in vertical section; Fig. 4, a transverse section of the winding-shaft, showing the sprocket wheel and chain; and Fig. 5, a rear elevation of the latching devices.

In ordinary clover-hullers involving a cylinder and concave, especially when a hulling-couple of the rasp type is employed, serious injury is often brought about by hard foreign bodies being carried between the cylinder and concave. The presence of many such bodies makes itself known by unusual noises while in transit through the portions of the mechanism preceding the cylinder and concave, and it is the purpose of my present invention to provide that the concave may be quickly separated from the cylinder, so as to allow the free outlet of damaging matters.

In the drawings, 1 indicates the general frame structure, &c., of an ordinary clover-huller of cylinder-and-concave type; 2, the usual cylinder journaled therein, the same to be assumed as having the usual rasp-provided periphery; 3, the concave, mounted in the usual relationship to the cylinder and assumed as having the usual rasp-provided lining; 4, a joint of separation between the concave and the remaining portion of the cylinder and casement, the line of this joint being preferably horizontal; 5, a hinge with its axis parallel with the axis of the cylinder, disposed at one side of the concave and serving as means by which one side of the concave is supported; 6, a winding-shaft supported by the framing with its axis parallel with the axis of the cylinder; 7, a sprocket-wheel fast on the shaft; 8, a chain engaging the sprocket-wheel and having an end engaging the concave in such manner that the turning of the shaft may draw upon the chain and lift the concave into normal position and there support its free side; 9, an eyebolt-and-nut arrangement upon one end of the chain engaging an eye secured to the concave, the nut providing means for adjustment; 10, a handle fast upon the shaft to serve in turning it and drawing upon the chain; 11, a disk fast upon the shaft, the illustration showing the handle and disk as being formed in one piece; 12, a notch in the disk; 13, a stud supported by the framing near the disk; 14, an eccentric mounted to turn upon the stud; 15, a handle fast with the eccentric to serve in turning it; 16, a pawl having its heel journaled on the eccentric, its toe being adapted to engage the notch in the disk, and 17 a lug carried by the handle of the eccentric and adapted to engage behind the pawl and disengage it from the notch in the disk.

Assume the pawl to be disengaged from the disk and assume the liberated concave to have swung downwardly upon its hinge, so as to be away from the cylinder. In order to put affairs into working condition, handle 10 is to be operated to wind up the chain and bring the concave fairly home, at which time the pawl is to be permitted to drop into the notch. At this time the swell of the eccentric may be upward, or partially so, the pawl under such conditions being somewhat elevated, though it firmly engages the stopping-face of the notch. The nut of the eyebolt may be so adjusted that the pawl properly engages the notch when the concave is thus fairly home. The drawing up on the chain by means of the handle 10 is a quick operation and not a very powerful one, and while the concave may have been fairly seated in working position it may not have been drawn home with sufficient firmness. The handle of the eccentric is now to be moved downward, the result being that the swell of the eccentric forces the pawl downwardly and turns the shaft and draws upon the chain with considerable power, thus forcing the

concave solidly home. Under these conditions the machine works normally. If fair notice is had that damaging matter is approaching the cylinder and concave, then the handle of the eccentric may be quickly turned upward, its first effect being to take the main strain off the chain and then when lug 17 engages the pawl to disengage the pawl from the notch, thus freeing the winding-shaft and permitting the concave to fall open. To restore the parts, the operation is as previously described, except that the adjusting of the nut upon the eyebolt need not be made, that adjustment being made only as a feature of construction and as a means for compensating for the stretching of the chain or the disordering of the relationship of parts by reason of continued strains or successive actions.

I claim as my invention—

1. The combination, substantially as set forth, of a cylinder, a concave movable to and from the cylinder, a hinge supporting one side of the concave, a shaft, a sprocket-wheel on the shaft, a chain engaging the sprocket-wheel, an adjusting-screw connecting an end of the chain with the concave, a handle for turning the shaft, a notched disk upon the shaft, a latch-pawl adapted to engage the notch, and a handle for disengaging the pawl.

2. The combination, substantially as set forth, of a cylinder, a concave movable to and from the cylinder, a hinge supporting one side of the concave, a shaft, connections from the shaft to the concave whereby the turning of the shaft may draw the concave to normal position, a handle for turning the shaft, a notched disk upon the shaft, a latch-pawl adapted to engage the notch, an eccentric having the heel of the pawl journaled upon it, and a handle for turning the eccentric.

3. The combination, substantially as set forth, of a cylinder, a concave movable to and from the cylinder, a hinge supporting one side of the concave, a shaft, connections from the shaft to the concave whereby the turning of the shaft may draw the concave to normal position, a handle for turning the shaft, a notched disk upon the shaft, a latch-pawl adapted to engage the notch, an eccentric having the heel of the latch-pawl journaled upon it, a handle for turning the eccentric, and a lug moving with the eccentric and adapted to engage and release the latch-pawl.

4. The combination, substantially as set forth, of a cylinder, a concave movable to and from the cylinder, a hinge supporting one side of the concave, a shaft, a sprocket-wheel on the shaft, a chain engaging the sprocket-wheel, an adjusting-screw connecting an end of the chain with the concave, a handle for turning the shaft, a notched disk upon the shaft, an eccentric, a handle for turning the eccentric, a latch-pawl having its heel journaled upon the eccentric and having its toe adapted to engage the notch of the disk, and a lug carried by the handle of the eccentric and adapted to release the latch-pawl from the notch of the disk.

WILLIAM C. ROBBY.

Witnesses:
H. D. BLICK,
C. E. GOODRICH.