P. A. SOMMERS.

Band-Cutter for Thrashing-Machines

No. 162,706. Patented April 27, 1875.

Fig. 1.

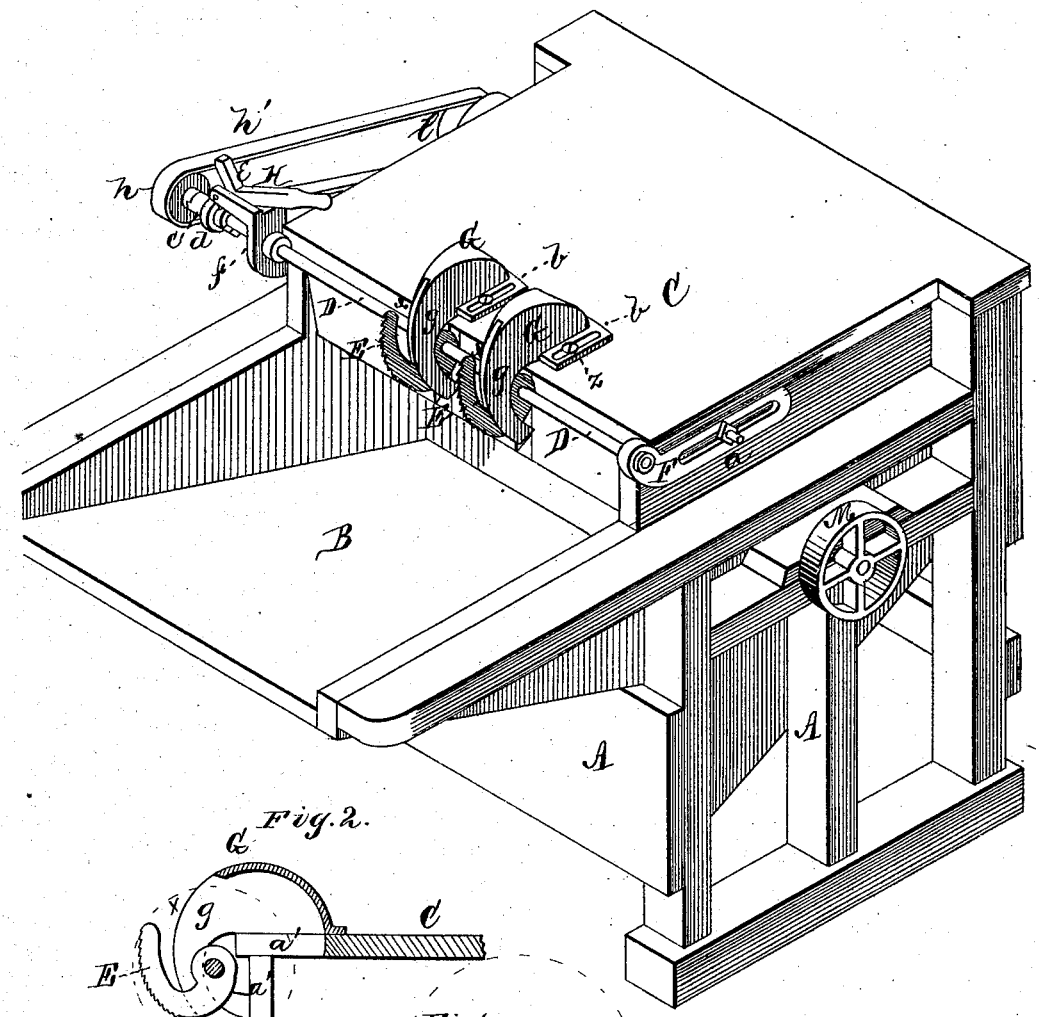


Fig. 2.

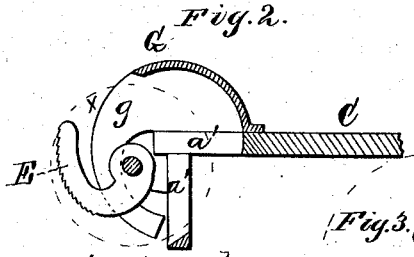


Fig. 3.

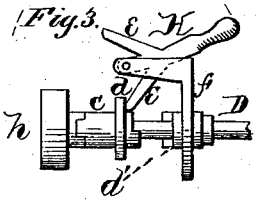
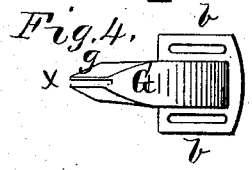


Fig. 4.



WITNESSES

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PETER A. SOMMERS, OF CAZENOVIA, ILLINOIS.

IMPROVEMENT IN BAND-CUTTERS FOR THRASHING-MACHINES.

Specification forming part of Letters Patent No. **162,706**, dated April 27, 1875; application filed April 16, 1875.

To all whom it may concern:

Be it known that I, PETER A. SOMMERS, of Cazenovia, in the county of Woodford and in the State of Illinois, have invented certain new and useful Improvements in Band-Cutting Attachments for Thrashing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

My invention relates to improvement in band-cutting attachments for thrashing-machines, as patented to me August 13, 1874, No. 153,987; and it consists in the construction and arrangement of the parts, as will be more fully hereinafter set forth.

In order to enable others skilled in the art to construct and use my invention, I will proceed to describe it more fully, referring to the accompanying drawing, which forms a part of these specifications, in which—

Figure 1 represents a perspective view of the machine; and Fig. 2, a sectional view of a part of the top of the frame, taken through one of the guards within which the cutters rotate. Fig. 3 represents an end view of one end of the shaft, showing the clutch and lever for throwing the machine in and out of gear. Fig. 4 represents a plan view of one of the guards.

Like letters of reference indicate like parts.

A represents the frame of the machine, which is constructed of suitable size and shape, and provided with the usual inclined feedway B and a suitable top or cap, C. D represents a horizontal shaft, arranged in front of the top C and above the mouth of the feedway, and provided thereon, at suitable intervals, with eccentrically-placed curved and serrated cutters E. The shaft D is supported on slotted castings F, for adjustment forward or backward by means of the screw *a*. Any suitable number of cutters may be arranged upon the shaft to accommodate the size of the machine constructed, and each cutter is protected by a metallic guard, G, constructed substantially in the following manner: At each side of each guard is a slotted ear, *b*, by which means it is connected to the top C by the screws *z*. Forward of this ear the guards are made on a curve, *g*, as shown, and provided with a central slot, *x*, large enough to allow the cutters to freely pass through. The front sides of these guards are beveled each way toward the slot, so that they have no blunt edges or square fronts for the grain to catch on, but allow the grain to pass freely each side, and down through the throat of the machine. It will, of course, be understood that the front board over the throat and top C each have a narrow slot to allow the cutters to freely revolve therein, as shown at *a' a'* in Fig. 2. The object in making these guards adjustable forward or back is to accommodate them, so that they will at all times protect the knives as the shaft is projected forward or back by means of its slotted bearing-arms F. Upon one end of the shaft D is placed a pulley, *h*. Upon this same end of the frame, or formed upon slotted bearing-arm F, is arranged an L-shaped upright, *f*, between the ears of which upright is provided a small lever, H, made Y-shaped, as shown, having two downwardly-inclined prongs, *e e*. The pulley *h'* has a clutch formed on its inner end, and between this pulley and the casting *f* is placed a sliding clutch, *c*, having a circular flange, *d*, formed thereon. Attached rigidly to the casting *f* is a notched collar, *d'*, so that by moving the sliding collar *c* against this notched collar *d'* the shaft D is prevented from being rotated; but by moving this sliding clutch out, so that it will engage the clutch on the pulley *h*, the shaft D is allowed to rotate freely. The lever H is so pivoted in the casting that when either prong thereof is bearing against the clutch the weight of the lever will hold the clutch in place. Power is communicated to the pulley *h* by the belt *h'*, which surrounds the small pulley *l* in the rear of the machine. This pulley takes its motion from an under shaft having a pulley, M, at one end.

With my invention, whenever the shaft D is out of gear, the cutters E E are inclosed within the guards G, so that the operator in feeding loose grain is not likely to be injured thereby.

The operation of my machine is substantially as follows: The bundles of grain are fed in upon the feedway B, and the shaft and its guards being first adjusted forward or rear-

ward, to accommodate the grain fed in, the shaft is placed in gear by means of the lever *h*, so that it will rotate, and the bands of the bundles will be cut by the sweeping circular motion of the cutters E E. After each is cut the operator scatters the grain and feeds it onto the thrashing-cylinder.

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

1. In a band-cutting attachment for thrashing-machines, having rotating knives upon a shaft, the guards G, provided with slots *x x*, tapering curved fronts *g*, and slotted ears *b b*, whereby they may be adjusted forward or rearward, substantially as set forth.

2. The combination of the shaft D, its curved cutters E E, slotted adjustable bearing-arms F, and the slotted adjustable guards G, substantially as set forth.

3. The tilting lever H, provided with the downwardly-inclined prongs *e e*, in combination with the clutch-pulley *h*, the shaft D, notched collar *d'* of the bearing-arm, and the sliding flanged clutch *c d*, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 15th day of April, 1875.

PETER A. SOMMERS.

Witnesses:
C. M. ALEXANDER,
J. M. MASON.