(No Model.)

J. A. BLAIR & W. C. BUSH.

CUTTING APPARATUS FOR HARVESTERS.

No. 385,164. Patented June 26, 1888.

Fig. 1.

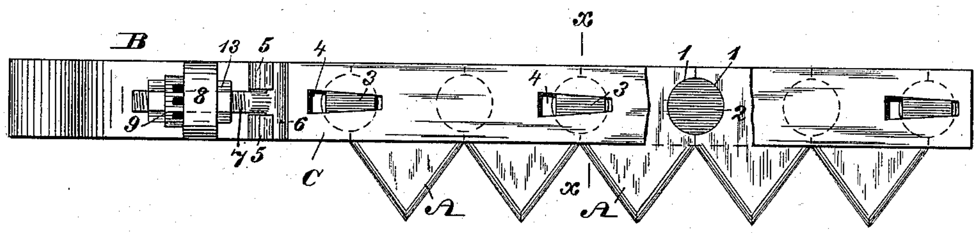


Fig. 2.

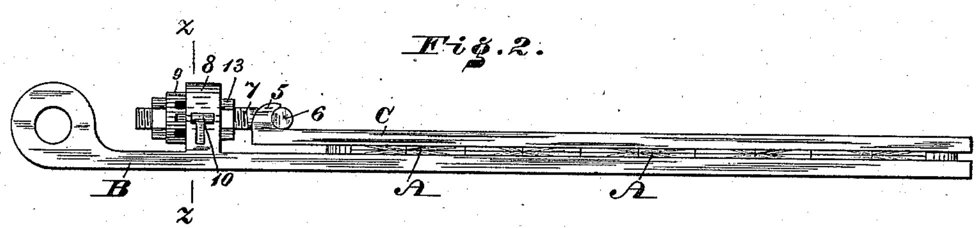


Fig. 4.

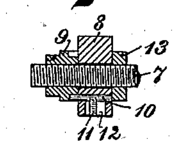


Fig. 3.

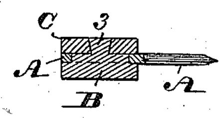


Fig. 5.

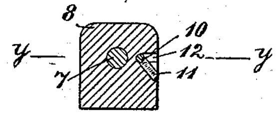


Fig. 6.

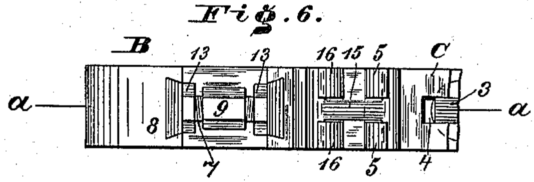
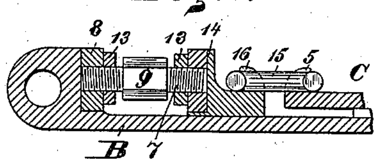


Fig. 7.



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CUTTING APPARATUS FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 385,164, dated June 26, 1888.

Application filed January 19, 1888. Serial No. 261,254. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. BLAIR and WILLIAM C. BUSH, citizens of the United States, the former residing in the city and county of Philadelphia, State of Pennsylvania, and the latter in Wilmington, in the county of New Castle and State of Delaware, have invented a new and useful Improvement in Cutting Apparatus for Harvesters, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention consists in the mechanism herein set forth and claimed, whereby the cutters or knives are securely held in position.

Figure 1 represents a top or plan view, partly cut away, of a cutting apparatus for harvesters embodying our invention. Fig. 2 represents a side elevation thereof. Fig. 3 represents a vertical sectional view on line *x x*, Fig. 1. Fig. 4 represents a horizontal longitudinal view on line *y y*, Fig. 5. Fig. 5 represents a vertical section on line *z z*, Fig. 2. Fig. 6 represents a top view of a portion of a modification of our invention. Fig. 7 represents a section thereof on line *a a*.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents a series of harvester-cutters, and B represents the cutter-bar on which said cutters are removably supported, it being noticed that each cutter is recessed on the sides, as at 1 1, Fig. 1, so as to engage with lugs 2 on the upper side of the bar A, whereby lateral displacement of the cutters is prevented. Rising from some or all of the lugs 2 are tongues 3, which are of dovetailed form in both horizontal and vertical directions—that is to say, that said tongues are tapering in the direction of their length and having inclined sizes, the widest part being at the top.

C represents a locking-bar, which is formed with slots 4, which are tapering in the direction of their length and having inclined sides, so as to conform to the contour of the tongues 3, the slots, however, being of greater length than the tongues.

At one end of the bar C are hook-shaped lugs 5, to which is fitted the cross-head 6 of a screw, 7, the latter passing freely through a boss, 8, rising from the bar B and carrying a nut, 9, which is on the side of the boss opposite to the bar C, said nut being toothed on its inner side. In the boss 8 is a sliding pawl, 10, which is adapted to engage with either of the teeth of the nut 9, the handle 11 of said pawl being adapted to enter either limb of a T-shaped slot or recess, 12, in the side of the boss. On the screw 7, near the head thereof, is a clamping-nut, 13, which is adapted to be in contact with the boss 8.

It will be seen that when the cutters or knives are located on the cutter-bar and the locking-bar is placed over said cutters, so that the slots 4 receive the tongues 3, the screw 7 is passed through the boss 8 and has its head engaged with the lugs 5. The nut 9 is then fitted on the screw 7 and rotated, whereby as it rides against the boss 8 it draws the screw, and with it the bar C, toward the boss, thus causing the interlocking of said bar with the tongue 3, the bar being thereby prevented from rising, and thus holding the cutters firmly in position. The pawl 10 is now moved into engagement with the adjacent tooth of the nut 9 and then rotated so that its handle 11 enters the vertical limb of the slot 12, thus preventing disengagement of the pawl and locking the nut, whereby return motion of the draft-screw is prevented. The clamping or jam nut 13 is then tightened against the boss 8, and also serves to prevent motion of the pawl 10 in its locked position.

It is evident that by unscrewing the nut 13 and releasing and properly rotating the nut 9 the screw 7 may be removed from the boss and disconnected from the bar C and the latter moved in a direction from the boss, whereby the tongues are relieved of the holding action of the walls of the slots 4 of the bar, and the latter may be withdrawn, and the cutters or knives be free to be displaced from the cutter-bar.

In Figs. 6 and 7 the screw 7 has right-and-left threads, one end entering the boss 8 and the other end entering the block 14, which is adapted to slide on the cutter-bar, and is connected with the locking-bar C by means of a double-headed or H-shaped piece, 15, one head engaging with lugs 5 on said bar and the other head engaging with lugs 16 on the sliding block 14, it being evident that the bar C may be

locked or unlocked in its relation to the tongues 3 by operating the screw 7. Motion of said screw 7 is prevented by the jam-nuts 13 thereon.

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

1. A cutter-bar having lugs to receive the cutters, and tongues on said lugs tapered toward the outer end of the bar, and a boss at its inner or heel end, a locking-bar with slots tapered to correspond with the tongues and having hook-shaped lugs at one end, a draft-screw passed through said boss and having a cross-head to engage said lugs, and a nut working on said screw against said boss, said parts being combined substantially as described.

2. In a cutting apparatus for harvesters, the combination of the cutter-bar, the knives, and the locking mechanism therefor, of a draft-screw for the locking-bar, a boss on the cutter-bar, forming a bearing for said screw, a nut threaded on the screw to bear against the boss and having teeth on its rim, and a rocking and sliding dog adapted to engage a tooth on said nut to prevent said nut from unscrewing, said dog being secured in a T-shaped slot in the side of the bearing for the screw, and having a handle wherewith the dog is operated, substantially as described.

3. In a cutting apparatus for harvesters, the combination of the cutting-bar having a boss thereon, the knives or cutters, a locking-bar, a draft-screw passing through said boss and having a cross-head securing it to the locking-bar, a nut working on said draft-screw against said boss and having a toothed rim, and a dog secured to said boss adapted to engage the teeth of said rim, substantially as described.

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