

E. J. WOLFROM.
CUTTER BAR.
APPLICATION FILED MAR. 29, 1909.

941,400.

Patented Nov. 30, 1909.

Fig. 1.

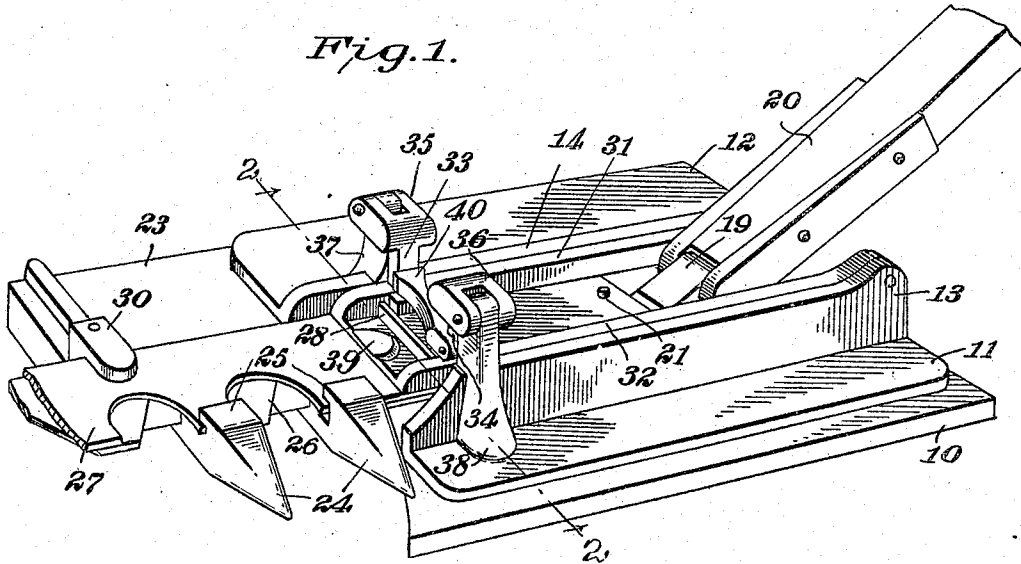


Fig. 4.

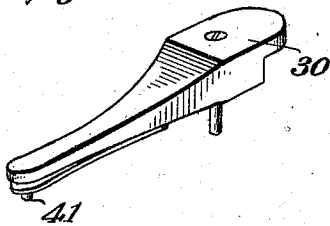


Fig. 2

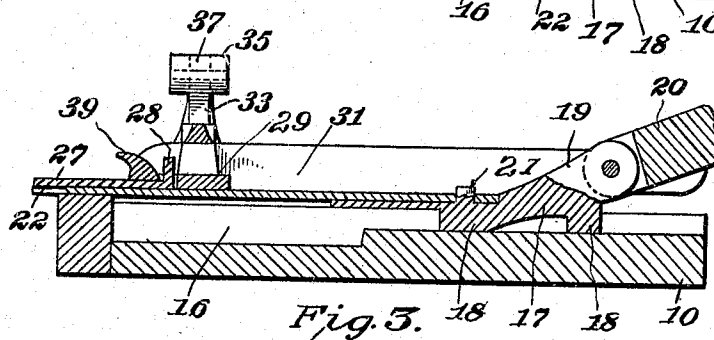
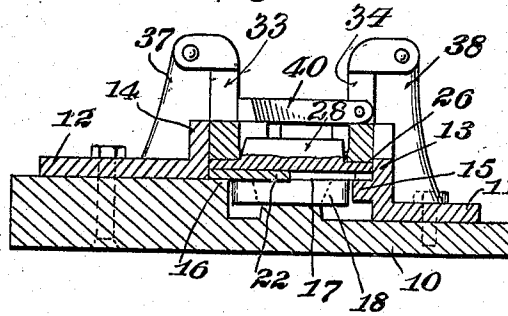


Fig. 5.

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UNITED STATES PATENT OFFICE.

ELI J. WOLFROM, OF SALIDA, COLORADO.

CUTTER-BAR.

941,400.

Specification of Letters Patent.

Patented Nov. 30, 1909.

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To all whom it may concern:

Be it known that I, ELI J. WOLFROM, citizen of the United States, residing at Salida, in the county of Chaffee and State of Colorado, have invented certain new and useful Improvements in Cutter-Bars, of which the following is a specification.

This invention relates to cutting apparatus, and refers particularly to an apparatus of this nature employed in connection with harvesters or the like.

The invention has for an object a novel mounting for a reciprocating cutter blade and improved mechanism whereby the several parts constituting the same may be detached from one another.

The invention further contemplates the provision of a simple arrangement whereby an effective and practical cutter is produced and one which may be economically manufactured.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of a cutter apparatus and attached mechanism for operating the same. Fig. 2 is a transverse section on the line 2—2 of Fig. 1. Fig. 3 is a longitudinal vertical section through the center of the device as disclosed in Fig. 1, and Fig. 4 is a detailed perspective of the catch employed for securing the fixed blade in position.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 10 designates a base upon which the device is adapted to be mounted and which may comprise a stationary member or a platform which is mounted to be conveyed from place to place. Upon the upper face of the base 10 adjacent the opposite longitudinal edges thereof are disposed plates 11 and 12 which are provided at their inner edges with upwardly projected flanges 13 and 14. The flanges 13 and 14 are provided upon the inner faces with guides 15 and 16 upon which a shoe 17 is reciprocally disposed. The shoe 17 comprises a metallic plate which is of substantially rectangular formation and

which is provided upon its under face with supports 18 disposed in spaced relation and adapted to depend between the guides 15 and 16 to prevent the lateral vibration of the shoe 17. The rectangular plate which comprises the body portion of the shoe 17 is provided upon its upper face adjacent the inner end of the same with a lug 19 to which is pivotally secured the forward extremity of a pitman 20, the shoe carries a pair of upwardly extended studs 21, about which the slidable cutter 22 is loosely engaged, the slidable cutter 22 being mounted upon the guides 15 and 16 and adapted for reciprocation thereon through the medium of the shoe 17.

The outer end of the base 10 is provided with an extension plate 23 which carries guard fingers 24, which are extended in parallel laterally from the plate 23 and provided with undercut portions 25, through which the teeth 26 of the slidable cutter 22 are engaged during the reciprocation of the same. The teeth 26 of the slidable cutter 22 are beveled so as to present their sharpened edges in the plane of the upper surface of the slidable cutter 22 for the purpose of co-acting with the fixed cutter 27, which is carried upon the upper face of the cutter 22 and the extension plate 23.

The fixed cutter 27 comprises a metallic blade which is provided intermediately of one of the longitudinal edges of the same with a recess, the edge of the blade about the same being so beveled as to present a cutting edge in the plane of the lower face of the fixed cutter 27 in order to co-act with the teeth 26 of the slidable cutter 22 upon the movement of the same. The cutting edge of the fixed cutter 27 is disposed between the guard fingers 24 while the inner end of the fixed cutter 27 is cut away at the corner adjacent the inner edge, the edge formed about the cutaway portion being beveled so as to form a second cutting edge outwardly of the forward guard finger 24. The manner of securing the fixed cutter 27 in position comprises a bead 28, which is upwardly projected from the inner end of the cutter 27 and is engaged through a transverse slot formed in the outer end of a locking yoke 29. The outer end of the fixed cutter 27 is retained in position by means of a lip 30 which is pivotally mounted on the extension plate 23 and is in the formation

of a lever which is intermediately fulcrumed to the plate 23 and provided with a projecting lip to engage with the upper face of the fixed cutter 27 at the rear edge of the same. The locking yoke 29 which is employed for retaining the fixed cutter 27 in position comprises a metallic member of substantially U formation, the arms 31 and 32 of which are positioned in parallel with and above the guides 15 and 16 when the locking yoke 29 is in a closed position. The arms 31 and 32 are pivotally connected at their forward ends to the inner faces of the flanges 13 and 14 at the extremities of the same and are adapted to admit of the upward swinging of the yoke 29 in order to release the fixed cutter 27. The yoke 29 serves not only to hold the fixed cutter 27 in position but is also employed for the purpose of holding the slidable cutter 22 upon the guides 15 and 16 and to prevent the rising of the rear end of the same out of engagement with the studs 21.

The yoke 29 is retained in position through the medium of locking pawls 33 and 34 which are rigidly secured to the forward extremities of the links 35 and 36, which are disposed in pairs respectively on the upper extremities of the standards 37 and 38 extended upwardly from the plates 11 and 12 adjacent the forward ends of the same. The yoke 29 is provided with a lip 39 by means of which the same is adapted to be raised out of engagement with the bead 28. The locking pawl 34 is provided with a pivotally mounted bar 40, which is forked at one extremity to straddle the lower end of the locking pawl 34 and which is extended across the forward end of the locking yoke 29 and abutted against the inner face of the locking pawl 33 to retain the same from inward motion incident to the rising of the same from engagement with the locking pawls 33 and 34 which engage with the yoke 29 and the bar 40 retains the same in such engagement and prevents the accidental rising of the forward end of the yoke 29 to release the cutters 22 and 27.

In positioning the slidable cutter 22 the same is engaged longitudinally between the flanges 13 and 14 disposing the teeth 26 adjacent the flange 13 when the fixed cutter 27 is engaged upon the upper face thereof and secured in position by swinging the locking yoke 29 downwardly and causing the projection of the transverse slot formed in the outer end thereof, about the bead 28. Prior to the swinging of the locking yoke 29 downwardly the shoe 17 is brought into engagement with the inner end of the slidable cutter 22 to engage the studs 21 through the apertures formed in the cutter 22 to retain the same in fixed relation to the shoe 17. When the locking yoke 29 is in a downward position the locking pawls

33 and 34 are swung inwardly and engaged against the upper face of the same when the bar 40 is impinged between the locking pawls to prevent the inward movement of the same to release the yoke 29. The lip 30 is provided preferably with a spring pressed stud 41 which engages in an aperture formed in the upper face of the extension plate 23 to frictionally retain the lip 30 in a clamped position. The pitman 20 is reciprocated in any convenient manner when the slidable cutter 22 is actuated and caused to cooperate with the fixed cutter 27.

Having thus described the invention, what is claimed as new is:

1. In a device as specified, a body portion, guides formed on said body portion, a shoe reciprocally disposed on said guides, a slidable cutter mounted on said guides and detachably secured to said shoe, a fixed cutter engaged over said slidable cutter and a yoke pivotally mounted in parallel relation to said guides for engagement with said cutters to retain the same in their relative positions.

2. A device as specified comprising a body portion, guides formed on said body portion, a shoe reciprocally mounted on said guides, a slidable cutter detachably secured to said shoe, a fixed cutter carried by said body portion, a yoke pivotally mounted in parallel relation to said guides and adapted for engagement with each of said cutters to retain the same in their relative positions and means carried by said body portion for locking said yoke from detachment from said cutters.

3. A device as specified, comprising a base, plates oppositely disposed on said base, flanges upwardly extending from said plates, guides inwardly and oppositely extended in parallel relation from said flanges, a support carried by said base between said guides, a shoe reciprocally disposed on said guides, supports depended from said shoe for engagement with said supports on said base, a slidable cutter mounted on said guides and engaged with said shoe, a fixed cutter mounted on said slidable cutter, a yoke pivotally mounted between the rear extremities of said flanges and adapted to extend forwardly between the same to engage said fixed cutter to retain the same in rigid position, pawls mounted on said base over said yoke and means carried by said pawls and said flanges for locking said yoke in a fixed position.

4. A device as specified comprising a body portion, guides formed on said body portion, a slidable cutter mounted on said guides, a shoe reciprocally disposed on said guides, studs upwardly extended from said shoe and adapted to be secured to the inner extremity of said slidable cutter, a fixed cutter engaged loosely upon the upper face of said slidable

cutter and means carried by said body portion for retaining said fixed cutter in rigid relation to said body portion.

5 5. A device as specified comprising a body portion, a slidable cutter mounted upon said body portion and adapted for reciprocation thereon, a fixed cutter engaged upon the upper face of said slidable cutter and means
10 retaining the said fixed cutter from reciprocation with said slidable cutter.

6. A device as specified comprising a body portion, a slidable cutter carried by said body portion, a fixed cutter mounted upon
15 said slidable cutter, a yoke pivotally disposed on said body portion and detachably engaged with said fixed cutter, locking
20 pawls carried by said body portion and engaged against the opposite edges of said yoke and a bar carried by one of said pawls for engagement between said pawls to lock
the same in a closed position.

7. A device as specified, comprising a body portion, a slidable cutter mounted upon said
25 body portion, a fixed cutter carried by said body portion, a yoke pivotally mounted on said body portion for detachable engagement with said fixed cutter, standards
30 mounted on said body portion adjacent the outer end thereof, links disposed in pairs upon the upper extremities of said standards, locking pawls rigidly carried on the

outer ends of said links and adapted for engagement upon the outer end of said yoke, the same being disposed between said standards, and a locking bar carried by one of
35 said locking pawls and adapted to engage between said locking pawls to prevent the inward movement of the same to the aforesaid yoke.

8. A device as specified comprising a body portion, a slidable cutter mounted on said body portion, a fixed cutter disposed above
40 said slidable cutter upon said body portion, a yoke carried by said body portion to retain said cutters in their relative positions, means whereby said yoke may be locked in a closed
45 position, and a shoe carried by said body portion, said shoe comprising a plate, a pair of rectangular supports depending from said plate, centrally thereof for engagement with
50 said body portion, studs upwardly projected from said plate for engagement with said slidable cutter, a lug upwardly extended from the inner end of said plate and a pitman
55 secured at its forward extremity to said lug for actuating said plate.

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

ELI J. WOLFROM. [L. S.]

Witnesses:

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WILLIAM L. HANCE.