(No Model.)

J. L. RIELEY.

HARVESTER CUTTER BAR.

No. 453,705. Patented June 9, 1891.

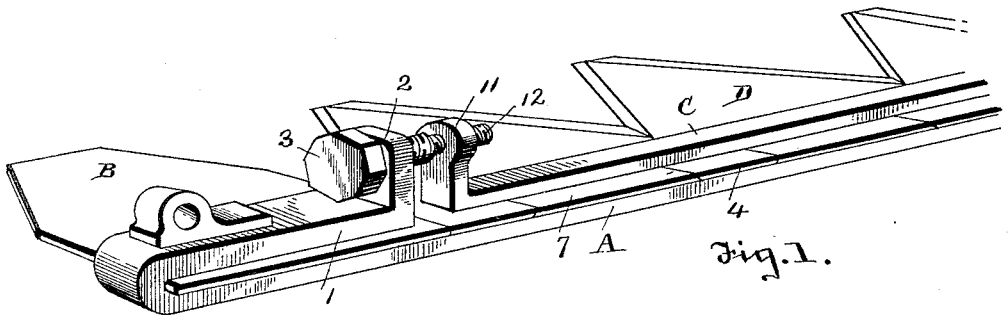

Fig. 1.

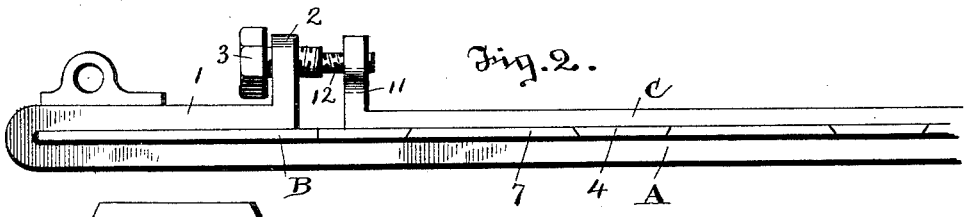

Fig. 2.

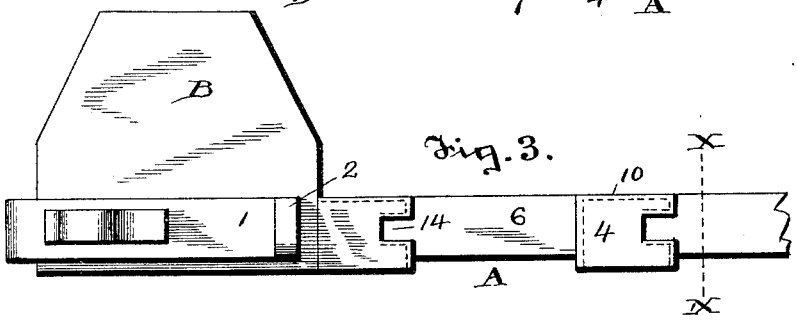

Fig. 3.

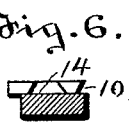

Fig. 6.

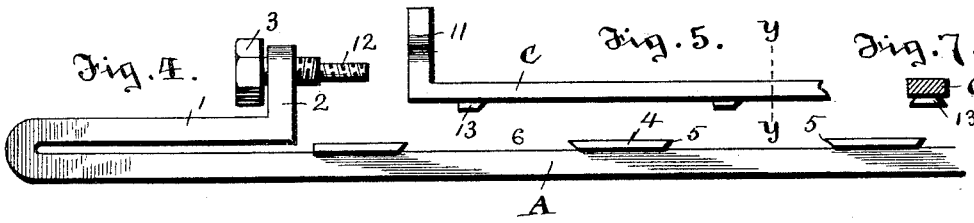

Fig. 4.

Fig. 5.

Fig. 7.

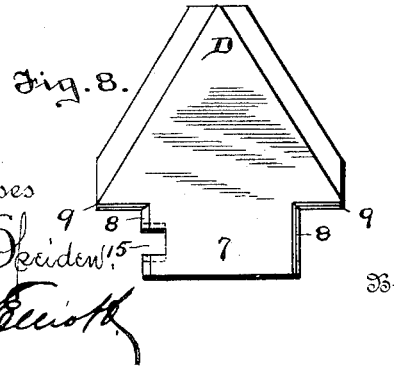

Fig. 8.

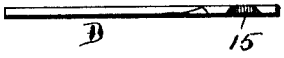

Fig. 9.

Witnesses

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JERRY L. RIELEY, OF TROUTVILLE, VIRGINIA.

HARVESTER CUTTER-BAR.

SPECIFICATION forming part of Letters Patent No. 453,705, dated June 9, 1891.

Application filed December 15, 1890. Serial No. 374,777. (No model.)

To all whom it may concern:

Be it known that I, JERRY L. RIELEY, a citizen of the United States of America, residing at Troutville, in the county of Botetourt and State of Virginia, have invented certain new and useful Improvements in Harvester Cutter-Bars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improvement in harvester cutter-bars of that class in which the knives are held in place by means of a longitudinally-movable locking-bar having lugs or projections engaging recesses in the knives, and has for its objects, first, to provide means for reciprocating the locking-bar, so as to lock or release all the knives at one operation; secondly, to provide a knife-bar having means for holding the knives securely in place against vertical and lateral play independently of the locking-bar; thirdly, to provide means for preventing any vertical or lateral play of the locking-bar, and, finally, to provide a cheap, efficient, and durable cutter-bar.

The invention will first be described in connection with the accompanying drawings, and then pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the complete cutter-bar, showing the parts in locked engagement. Fig. 2 is a side elevation of the same. Fig. 3 is a top plan view of the cutter-bar, the locking-bar being removed. Fig. 4 is a side elevation of the cutter-bar. Fig. 5 is a similar view of the locking-bar. Fig. 6 is a transverse sectional view taken on the line $x\,x$ of Fig. 3. Fig. 7 is a similar view taken on the line $y\,y$ of Fig. 5. Fig. 8 is a plan view of one of the knives, and Fig. 9 is an edge view of the same.

Referring to the drawings, A designates the cutter-bar, one end of which is bent upon itself to form an arm 1, between which and the said bar is secured the guide-plate B. The arm is provided with a standard 2, having a threaded opening near its upper end designed to be engaged by the enlarged portion of a differentially-threaded bolt 3, the reduced portion of which engages a superimposed locking-bar C, whereby to cause the said bar to reciprocate as the bolt is rotated in opposite directions, for a purpose that will be described farther on. The upper surface of the cutter-bar is provided with a series of transverse bosses 4, the side edges of which are underbeveled, as shown at 5, thus forming a series of transverse dovetail recesses 6, in which fit the shanks 7 of the knives D. The sides 8 of the shanks and also the shoulders 9 of the knives are beveled, the beveled portion of the shanks engaging the underbeveled portions of the bosses and the beveled shoulders of the knives engaging the underbeveled front edges 10 of the bosses. By thus beveling the shanks of the knives and providing dovetail recesses in the cutter-bar, in which they fit, a rigid adjustment of the knives against lateral play is secured, and by means of the underbeveled front edges of the bosses all danger of vertical play of the knives will be overcome.

The locking-bar C is provided at one end with a standard 11, which is engaged by the reduced threaded end 12 of the bolt 3, and the under side of the said bar is provided with a series of dovetail locking-lugs 13, designed to engage similarly-shaped recesses 14, formed in the side edges of the bosses 4, and also with dovetail recesses 15, formed in one side of the shanks, whereby the knives are not only locked in place, but the locking-bar is prevented from having any vertical play, inasmuch as one portion of each of the lugs 13 is in engagement with the recesses 14 and the other portion with the recesses 15.

In securing the knives in place on the cutter-bar the bolt 3 is turned so as to draw the lugs 13 back into the recesses 14 to allow the shanks of the knives to be inserted within the recesses 6, which shanks are of a width to fit snugly therein. The bolt is then turned in the opposite direction, thus projecting the locking-bar forward and bringing the lugs into engagement with the recesses 15, thus locking the knives in place. By reason of the differentially-threaded bolt the locking-bar can be reciprocated with ease either to lock the knives in place or to permit of the removal of one or more of them when desired.

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

1. The combination, with a cutter-bar pro-

vided on its upper side with recessed bosses, and recessed knives fitting between said bosses, of a superimposed locking-bar having lugs upon its under side adapted to engage the recesses in the bosses and in the knives.

2. The combination, with a cutter-bar provided on its upper side with recessed bosses, and recessed knives fitting between said bosses, of a superimposed longitudinally-movable locking-bar having lugs upon its under side adapted to be received wholly within the bosses, and means for moving the locking-bar so that its lugs will at the same time be in engagement with the recesses in the bosses and in the knives.

3. The combination, with a cutter-bar provided on its upper side with recessed bosses, and recessed knives fitting between said bosses, of a superimposed longitudinally-movable locking-bar having lugs upon its under side adapted to engage the recesses in the bosses and in the knives, and a differentially-threaded bolt connecting the cutter-bar and the locking-bar.

4. The combination, with the cutter-bar having a series of transverse recesses and longitudinal recesses connecting therewith, of a series of knives inserted in the transverse recesses and recessed to register with the longitudinal recesses, a superimposed locking-bar having lugs engaging the longitudinal recesses, and means for projecting the locking-bar to bring the said lugs also into engagement with the recesses in the knives.

5. The combination, with a cutter-bar carrying transverse bosses having underbeveled side and front edges, of knives having beveled shanks engaging the side edges, and beveled shoulders engaging the front edges of the said bosses, and a superimposed locking-bar interlocking with the knives and with the cutter-bar.

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

JERRY L. RIELEY.

Witnesses:

WM. HUNTER MYERS,

R. M. ELLIOTT.