

(No Model.)

C. G. TERWILLEGER.  
CUTTER BAR FOR HARVESTERS.

No. 566,355.

Patented Aug. 25, 1896.

Fig. 1.

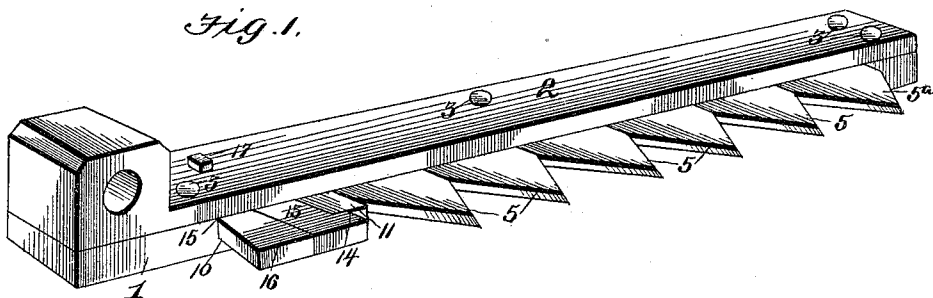


Fig. 2.

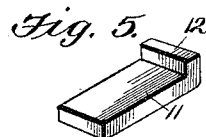
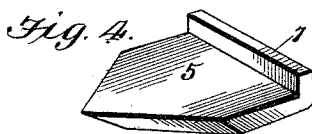
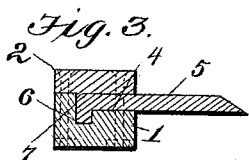
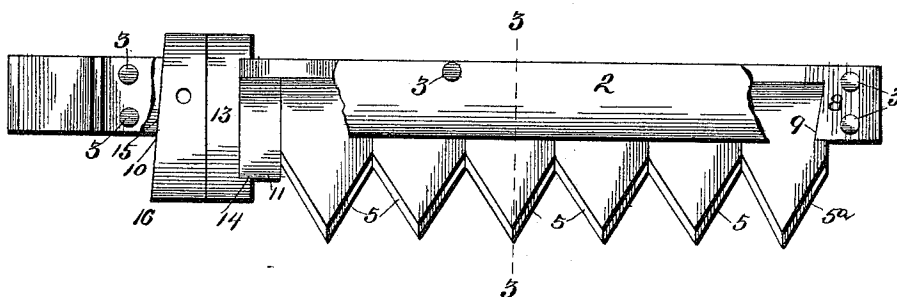


Fig. 6.

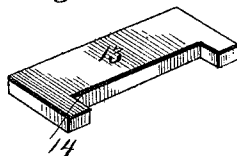
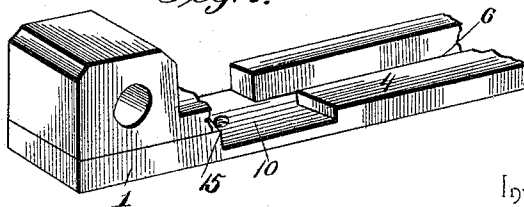


Fig. 7.



Inventor

Witnesses

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# UNITED STATES PATENT OFFICE.

CORNELIUS G. TERWILLEGER, OF VOLINIA, MICHIGAN.

## CUTTER-BAR FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 566,355, dated August 25, 1896.

Application filed June 30, 1894. Serial No. 516,233. (No model.)

*To all whom it may concern:*

Be it known that I, CORNELIUS G. TERWILLEGER, a citizen of the United States, residing at Volinia, in the county of Cass and State of Michigan, have invented a new and useful Cutter-Bar for Harvesters, of which the following is a specification.

My invention relates to a sickle or cutter-bar for harvesters, reapers, mowing-machines, and similar devices, and the objects in view are to provide a simple, inexpensive, and efficient construction in which the knives or cutters are detachable from the bar for the purpose of sharpening, to provide for replacement in case of breakage or other injury, and particularly to provide means for securing the knives or cutters firmly in place when in operative position.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of a cutter-bar constructed in accordance with my invention. Fig. 2 is a plan view of the same, partly broken away, to show the disposition of the key and coacting parts. Fig. 3 is a transverse section on the line 3-3 of Fig. 2. Fig. 4 is a detail view in perspective of one of the knives or cutters, the same being reversed to show the depending web. Fig. 5 is a similar view of the spacing-block. Fig. 6 is a similar view of a pressure or follower block which is interposed between the key and the spacing-block. Fig. 7 is a detail view of a portion of the inner end of the cutter-bar with the covering-plate omitted to show the seat for the key and connected parts and by means of which the knives or cutters are inserted.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the body portion of a cutter-bar, to the upper side of which is attached a covering strip or plate 2, held in place by means of bolts 3.

The seat 4 for the knives or cutters 5 is formed by cutting away a portion of the upper side of the body portion of the cutter-bar, said seat terminating short of the rear side

of the bar, and communicating with this seat at its rear portion is a groove or channel 6 to receive the depending webs 7 of the inner rear ends of the knives or cutters. The shoulder 8 at the outer terminal of the seat for the knives or cutters is beveled to engage a correspondingly-beveled recess 9 in the outer edge of the terminal knife or cutter 5<sup>a</sup>. The seat for the knives or cutters terminates at its inner end in an enlarged cavity 10, which extends entirely through the cutter-bar from its front to its rear side, and is of greater depth than the seat, the width of said cavity being equal to that of the width of each of the knives or cutters to provide for the insertion of the knives or cutters at this point and the subsequent engagement of the webs of the knives or cutters with the groove or channel communicating with the seat 4.

Arranged within the seat of the knives or cutters at the inner end of the series is a spacing-block 11, provided with a depending web 12 to fit in the groove or channel 6, said spacing-block being of a thickness equal to that of the knives or cutters. Bearing against this spacing-block, which is designed merely to communicate pressure to the adjacent terminal knife or cutter, is a pressure or follower block 13, which is notched or cut away, as shown at 14, to receive the inner edge of the spacing-block, and thus holds the pressure or follower block from forward and rearward displacement. Inserted between the shoulder 15 at the inner end of the enlarged cavity 10 and the contiguous side edge of the pressure or follower block is a tapered locking-key 16, which when driven to place forces the knives or cutters into close contact throughout the series, and thus prevents looseness or displacement during operation. The key is held from displacement by a locking-bolt 17, inserted in an opening in the plate 2. While the key 16 is held from displacement by the locking-bolt 17, it is to be observed at this point that the follower-block 13 is positively prevented from being displaced in either a forward or rearward direction by reason of the notch 14 thereof completely embracing one side edge of the spacing-block 11, and also the rear side of the cutter-bar 1, as clearly illustrated in Fig. 2 of the drawings. The engagement of the notch 14 with the spacing-

block 11 prevents the follower 13 from being displaced in a rearward direction, while the engagement of the notch 14 with the rear side of the cutter-bar prevents displacement of the follower in a forward direction, thereby positively insuring the permanent positioning of the follower-block, so that the same will at all times communicate pressure to the spacing-block 11.

It will be understood from the foregoing description that the cap-plate covers the seat for the knives or cutters, and thus prevents upward vibration, and as this cap-plate is removable the seat may be readily exposed for the purpose of cleaning, repairing, &c. It is obvious that accidental displacement of the knives or cutters cannot occur for the reason that each knife or cutter must be brought independently to the inner end of the seat and removed from the enlarged cavity, the depth of which corresponds with the depth of the groove or channel 4 at the rear side of the seat.

The spacing-block 11 is designed to communicate the pressure of the follower 13 to the end knife of the series, and said block is employed instead of causing the follower to bear against the end knife for the reason that blocks of different sizes may be inserted when required to bring the side thereof within reach of pressure by the follower-block. After continued use for a considerable time looseness is liable to occur, and therefore it is necessary to drive the wedge or locking-key 16 to the rear to take up the lost motion, but instead of accomplishing the adjustment in this way it may be preferable to substitute a spacing-block of greater width, thus avoiding the necessity of changing the means for securing the wedge or locking-key from displacement. Furthermore, the outer or front end of the spacing-block being square forms a suitable surface for the engagement of the shoulder 14 of the follower, and therefore the follower holds the spacing-block in place and the spacing-block prevents the follower-block from shifting toward the rear.

In the manufacture of cutting apparatus for harvesters and mowing-machines the bars for receiving the cutting-blades can be practically made of a uniform length, whereas the slightest variation in the width of the individual cutters will in the aggregate be appreciable and preclude the proper fastening and tightening of the said cutters after being placed in proper position relative to the cutter-bar. The transverse opening 10 is of uniform width and corresponds to the width of

the individual cutters, and the key 16 and follower 13 are constructed of such relative proportions as to fit snugly between the edges of the opening 10. Thus it will be seen that should the cutters unitedly fail to reach the opening 10 they could not be tightened by the use of the key 16 and the follower 13. Hence the necessity for providing an intermediate part, such as the spacing-block 11, for transmitting the pressure of the key 16 to the proximate terminal cutter, and this spacing-block can be filed or ground so as to vary its width to suit the space occurring between the follower 13 and the contiguous edge of the adjacent terminal cutter. The spacing-block 11 being somewhat longer than the straight edge of the terminal cutter provides an extended bearing for the follower 13 and admits of the recessed edge of the said follower receiving the adjacent edge portion of the spacing-block 11, whereby the said follower is prevented from accidental displacement.

It will be understood that in practice various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having described my invention, what I claim is—

In a cutting apparatus for harvesters, the bar provided with a longitudinally-grooved knife-seat and a transverse opening at one end of said seat and intersecting the groove thereof, a series of knives fitted in said seat, a replaceable spacing-block 11 arranged at one end of the grooved seat against the terminal knife at that end, and provided at its inner end with a depending web or flange engaging the groove of said seat, a follower-block 13 arranged in said transverse opening and provided in one side with a notch 14 completely embracing one side edge of the replaceable block 11 and the rear side of the bar, thereby locking itself in place so as to obviate being displaced in a forward or rearward direction, and a key-wedge secured within said transverse opening at one side of the follower-block, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CORNELIUS G. TERWILLEGER.

Witnesses:

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J. H. MCINTOSH.