E. L. YANCEY.

Improvement in Harvester-Cutters.

No. 130,266. Patented Aug. 6, 1872.

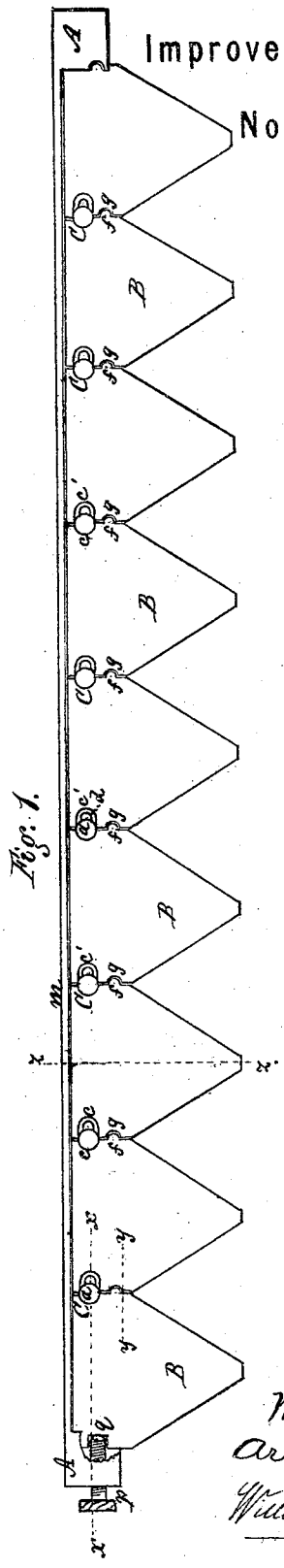

Fig. 1.

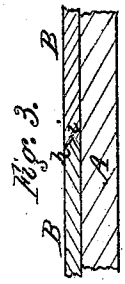

Fig. 3.

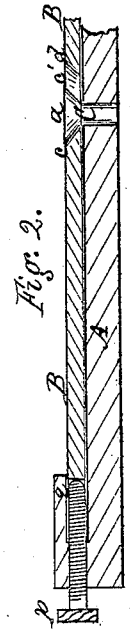

Fig. 2.

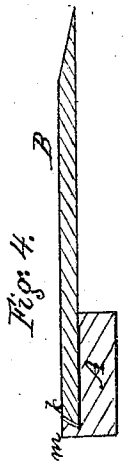

Fig. 4.

Witnesses.
Archie Baine.
William C. Baine

Inventor:
Edwin L. Yancey,
per R. F. Osgood, atty.

UNITED STATES PATENT OFFICE.

EDWIN L. YANCEY, OF BATAVIA, NEW YORK, ASSIGNOR TO ANDREW S. HART, OF SAME PLACE.

IMPROVEMENT IN HARVESTER-CUTTERS.

Specification forming part of Letters Patent No. **130,266**, dated August 6, 1872.

Specification describing a certain Improvement in Harvester-Knives, invented by EDWIN L. YANCEY, of Batavia, in the county of Genesee and State of New York.

Nature of Invention.

My improvement belongs to that class in which the knives are made removable from the cutter-bar for the purpose of sharpening. The invention consists in the peculiar method of locking the knives in place, as hereinafter described.

General Description.

In the drawing, Figure 1 is a plan of my improvement; Figs. 2, 3, and 4, sections, respectively, in lines *x x*, *y y*, and *z z*.

A A represent the cutter-bar, and B B the knives. The bar has a series of rivets or pins, C C, with flaring or dovetailed heads *a a*, similar in shape to screw-heads, which stand above the bar with their tops level or flush with the upper surface of the knives when fitted in place. The knives are made separate from each other, and the edges that meet are made square in order to give a good bearing. In the opposite edges of each knife are made sockets or cavities *c* and *c'*, the former being made a half circle to fit one side of the pins C when pressed up to place, and the latter of the same shape, but elongated, so as to slip back and thus allow the necessary lateral movement in inserting or removing the knives. The margins of these sockets are made wedge shaped, as shown at *d*, Fig. 3, to fit and hold under the flaring heads of the rivets, and thus prevent the knives from lifting from place. Thus it will be seen the junction of the knives is at the center of each rivet. Outside the rivets the square edges of the knives are also locked together by means of half-round projections *f f* of one part, which strike into corresponding sockets *g g* of the other. The edges of these square portions are also locked by a sharp V-edge, *h*, of one part, which rests in a corresponding channel, *i*, of the other, as clearly shown in Fig. 3. Furthermore, the rear edges of the knives are made wedging or dovetailed, as shown at *k*, Fig. 4, and fit within a corresponding dovetailed rib, *m*, which runs the whole length of the cutter-bar at the rear. This rib stands up just flush with the upper surface of the knives.

The knives are applied in place, one after another, by slipping the elongated slot *c'* back on its rivets sufficiently to carry the opposite edge of the knife up square in position against the rib *m*, when the knife is slipped bodily in the opposite direction to lock or engage with the opposite rivet. When all are in position a set-screw, *p*, at the end of the bar is turned up to press the last one in place, and strikes into a square slot, *q*, to hold it.

I am aware that removable knives for harvesters have been used in which pins and bayonet-slots, or similar connections, are used, corresponding, in a certain degree, with the rivets and slots in my case, but not so effective, nor leaving so little open space in the surface of the knives to obviate filling and clogging. In this respect, and in simplicity of construction and ease of connection, I believe mine to be superior; but, in addition to this feature, I employ a system of locking or securing the knives, which relieves the rivets from strain, and is effective in holding the knives against loose action or disengagement in all directions; and this, so far as I am aware, is entirely new. First, the lugs *f* and sockets *g* prevent any tendency of the sliding out or in of the knives, and thus keep them in place on the rivets. They lock all the knives together so that no one can slip endwise. Second, the edge ribs and grooves *h i* lock them all together in the same manner against vertical action, so that no one can be thrown upward out of place, and they thus obviate the great leverage that would come singly upon the rivets; and, third, the rear dovetailed connection *k m* secures the back edge of all the knives, and thus, in the same manner, avoids the leverage that would fall upon the rivets by the downward strain upon the points of the knives. These several locking devices all co-operate to prevent strain upon the rivets, which, from their small size, would be subject to great leverage; and they also serve to secure all the knives together in opposing directions, so that there can be no possibility of looseness or displacement.

I would add that the use of the rivets and their slots, as described, prevents opening in the surface of the knives, which is a great ad-

vantage; and they also form the locks at the edges of the knives, which leaves the whole surface of the latter free and unbroken. Most, if not all, of the connections of harvester-knives of this kind are in the center of the knives, which thus turn, as it were, on a pivot.

Claim.

I claim as an improvement in removable harvester-knives—

The lugs *f* and sockets *g*, the V-shaped edges *h* and grooves *i*, and dovetailed connection *k m*, when combined with the rivets C and sockets *c c'*, as and for the purpose herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EDWIN L. YANCEY.

Witnesses:
W. R. BULLOCK,
H. D. VAN DE BOGART.