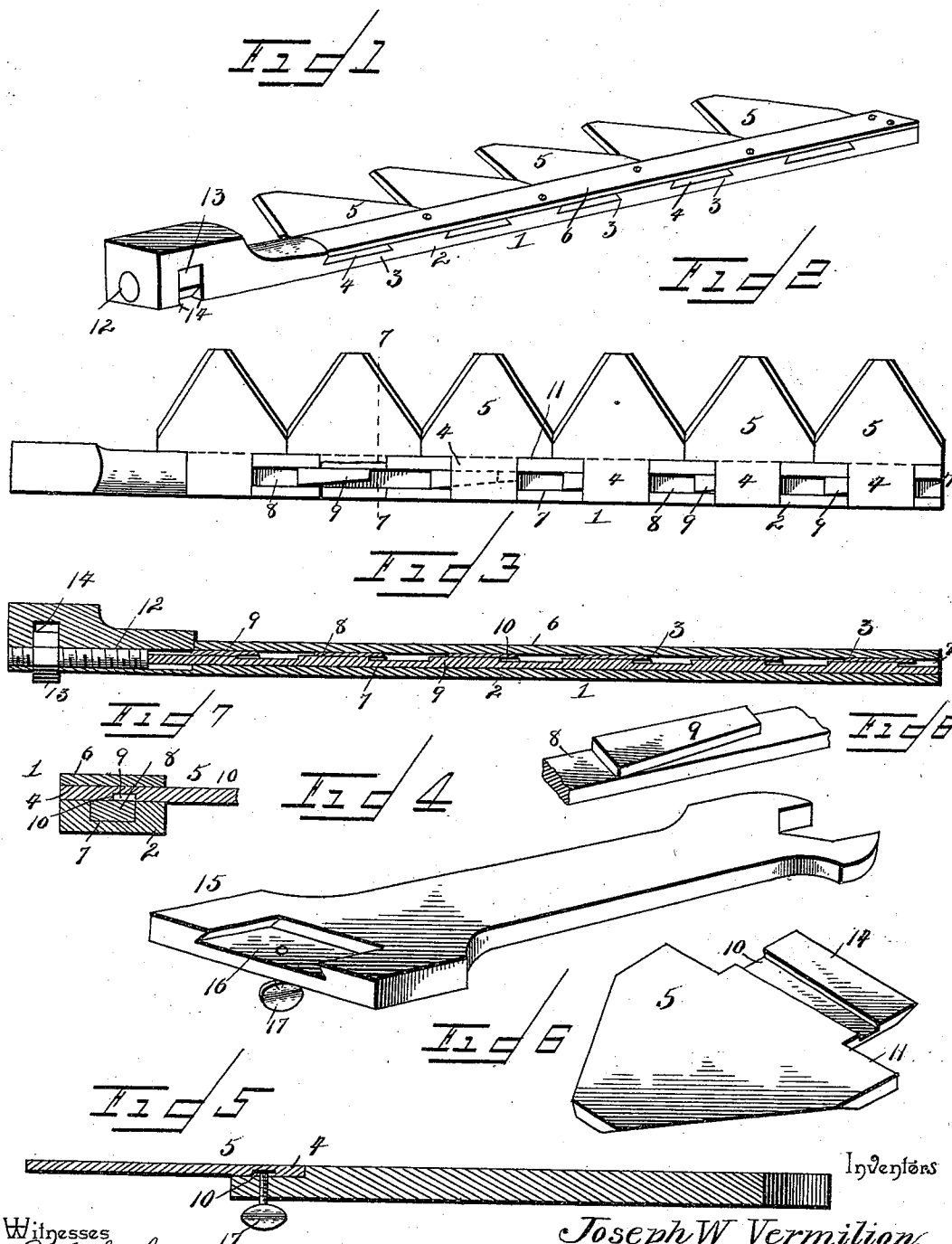


(No Model.)

J. W., F. A., S. L. & P. P. VERMILION.
CUTTER BAR FOR MOWING MACHINES.

No. 512,770.

Patented Jan. 16, 1894.



Witnesses

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By their Attorneys.

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UNITED STATES PATENT OFFICE.

JOSEPH W. VERMILION, FRANK A. VERMILION, STEPHEN L. VERMILION, AND
PERRY P. VERMILION, OF NEWARK, OHIO, ASSIGNORS OF ONE-FIFTH TO
SMITH W. VERMILION, OF SAME PLACE.

CUTTER-BAR FOR MOWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 512,770, dated January 16, 1894.

Application filed October 31, 1893. Serial No. 489,661. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH W. VERMILION, FRANK A. VERMILION, STEPHEN L. VERMILION, and PERRY P. VERMILION, citizens of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented a new and useful Cutter-Bar for Mowing-Machines, of which the following is a specification.

Our invention relates to improvements in means for securing the knives or cutters in place upon a cutter-bar, and the object in view is to provide readily operable means of simple construction, adapted to lock the knives against vibration and prevent lost motion caused by wear, shrinkage, &c.

Further objects and advantages of our 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 embodying our invention. Fig. 2 is a plan view, partly broken away, with the removable strip or plate removed. Fig. 3 is a longitudinal section. Fig. 4 is a perspective view of the wrench and holder for adjusting the locking-bar and holding the knives while grinding. Fig. 5 is a sectional view, partly broken away, of the same. Fig. 6 is a detail view, in perspective, of one of the knives. Fig. 7 is a transverse section on the line 7—7 of Fig. 2. Fig. 8 is a detail view of a portion of the locking-bar.

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

1 designates the cutter-bar, proper, comprising the lower or body-portion, 2, provided with transverse dovetailed seats, 3, to receive the correspondingly shaped stems, 4, of the knives, 5, and the removable upper member or strip, 6, which is secured to the body-portion, 2. The lower member or body-portion of the bar is provided with a longitudinal channel, 7, in which is fitted the slidable locking-bar, 8, having a series of spaced locking ribs or keys, 9, formed integral therewith. The said ribs or keys are about equal in

length to the widths of the stems of the knives and are disposed longitudinally of the locking-bar to engage kerfs, 10, extending entirely across the under surfaces of said stems. The kerfs are tapered horizontally, from one end to the other, and the ribs or keys are shaped to agree therewith, whereby when the locking-bar is moved longitudinally and the ribs or keys move into the kerfs, the knives are drawn back to cause their shoulders, 11, to bind firmly against the front side of the bar, to prevent vibration in use. Inasmuch as the ribs or keys extend almost across the stems of the knives the strain, in operation, is divided or distributed equally, and is sustained directly by the locking bar, upon which the under surface of each knife rests.

The means which we employ for adjusting the locking-bar consist of a threaded rod, 12, engaged by an adjusting nut, 13, which is held from longitudinal movement by the contiguous shoulders, 14, of the bar. In Fig. 4 we have illustrated the wrench, which we preferably employ for the operation of the adjusting nut; the same being provided at one end with a holder, 15, consisting of a seat, 16, of dovetail shape to receive the shank or stem of a knife, and a thumb-screw, 17, to engage the transverse kerf in the under surface of said shank or stem, whereby the knife may be conveniently held for the purpose of grinding, &c., after removal from the cutter-bar.

From the above description it will be understood that the locking-bar is arranged in a channel or guide which is below the plane of the knives, and the locking ribs or keys, which are longitudinally tapered to take up lost motion, &c., are of less projection above the plane of the upper surface of the locking-bar than the thickness of the knives, and extend entirely across, beneath the shank or stem of each knife.

Having thus described our invention, we claim—

The combination of a cutter-bar provided with transverse dovetailed seats and a subja- cent longitudinally-disposed channel or guide, a locking-bar slidably fitted in said channel or guide and provided with spaced longitudi-

nally-tapered ribs or keys which project above the plane of said seats, knives having stems or shanks which are dovetailed in section to fit in the seats and are provided in their under surfaces with tapered kerfs which extend
5 entirely across the stems or shanks to receive the ribs or keys carried by the locking-bar, and means for operating the locking-bar, substantially as specified.

10 In testimony that we claim the foregoing as

our own we have hereto affixed our signatures in the presence of two witnesses.

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