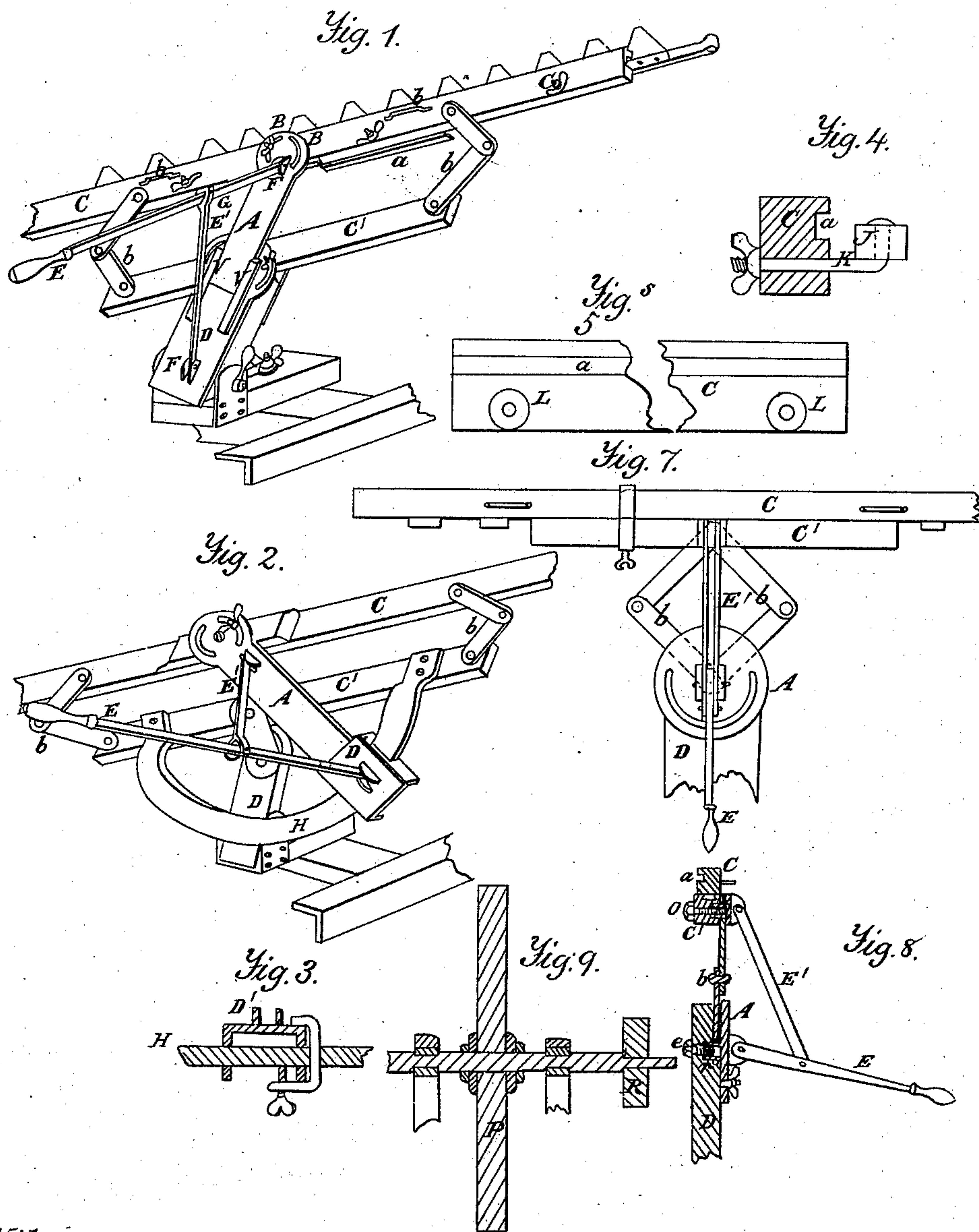


J. A. Thompson,
Sharpening Mowing-Machine Knives.
N^o 79,030. Patented June 16, 1868.



Witnesses.
Jno. D. Patton.
J. B. Wildman.

Inventor.
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United States Patent Office.

JOHN A. THOMPSON, OF AUBURN, NEW YORK.

Letters Patent No. 79,030, dated June 16, 1868.

IMPROVEMENT IN MACHINE FOR GRINDING MOWING-MACHINE KNIVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN A. THOMPSON, of Auburn, in the county of Cayuga, and State of New York, have invented certain new and useful Improvements in Machine for Grinding Harvester-Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My present invention consists in certain improvements in the machine patented to me, March 17, 1868, and relates to certain details in the construction and means for adjusting the same.

Figure 1 is a perspective view, and

Figure 2 a modification of the same.

Figures 3, 4, and 5 are details of the same.

Figure 7 is a top plan view, and

Figure 8 is a transverse section of a modification of my apparatus.

In this, as in my former machine, I clamp the sickle to a bar, C, to hold it while being ground. In the face of this bar C, I form a groove, to receive the bar of the sickle, as shown by *a*, fig. 4, this groove being deep enough to permit the projecting heads of rivets or bolts on the sickle to slide in without touching.

To secure the sickle in position I use clamping-bolts, K, having their ends turned at right angle, and provided with rollers, J, which may also be grooved, to permit the heads of rivets to pass without hitting. On the face of the bar C, I also secure a series of rollers, L, for the back of the sickle to rest on, as represented in fig. 5. This bar C, thus constructed, is connected to another bar, C', by means of a metallic guide-plate, A, which is pivoted to the bar, and is provided with curved slots, B, as represented in fig. 1, the rear end of this plate A working in guides, V, on a similar plate, D, secured to a block, pivoted to a sliding base by a clamp-bolt, as shown in fig. 1. The bars C and C' are further connected by a couple of elbow-levers, *b*, as represented.

To the plate A, a lever, E, is pivoted at F, and to this is pivoted a link, E', the opposite end of the latter being pivoted to the plate D, so that by operating the lever E, the bar C, with the sickle attached, is moved forward or back, as may be desired. Or, if preferred, the plate D may be dispensed with, and the plate A made long enough to reach back and rest upon a curved bar, H, attached to the rear bar C', as shown in fig. 1, to which it may be clamped, as represented in fig. 3.

It is obvious, however, that the same movements and adjustments may be accomplished by a still simpler form of the device, as shown in fig. 7. In this case the bar C, to which the sickle is secured, is clamped directly to the bar C', and arranged to slide longitudinally thereon, there being either a dove-tailed or V-shaped groove in the face of one of the bars, to receive and guide a corresponding part on the other bar, as shown in fig. 8. In this I connect the elbow-levers *b* both at the same point, at the centre of bar C', and pivot their rear end at a common centre on an index-plate, A, secured to the block D, the index-plate A, in this case, having a groove or slot extending half way around, as shown in fig. 7, by which a much greater inclination may be given to the parts than when constructed as in fig. 1. In this case the lever E is pivoted, by means of ears, to the centre of the plate A, and the link E', by similar ears, to a stud, *m*, which latter serves to connect the elbow-levers *b* to the bar C', by being made tubular, and secured by a bolt, O, as shown in fig. 8.

The plate A is provided with a similar stud, upon which the rear ends of the links *b* are pivoted, and which is clamped to the block *b* by a bolt, *e*, in the same manner.

By this arrangement of the parts it will be seen that the machine is very much simplified, and that it is also rendered capable of a very wide range of adjustments.

By operating the lever E, the bars C and C' are shoved forward or thrown back, as may be desired.

For more conveniently using the apparatus, I provide a grindstone, P, with a shaft extending at each end, and having a smaller stone, R, arranged so as to be adjusted on either end of the shaft, for the purpose of grinding the teeth at or near the extreme end of the sickle.

Having thus described my invention, what I claim is—

1. Providing the bar C with the rollers L, and the clamps K provided with the rollers J, substantially as described.
2. In combination with the bars C and C', connected by the jointed links b, I claim the plates A and D, constructed and arranged to operate as set forth.
3. The bar C', connected to the index-plate A by the jointed links b, and the levers E and E', substantially as represented in figs. 7 and 8.
4. In combination with the apparatus, constructed as last above described, I claim arranging the bar C to slide longitudinally thereon, for the purpose of moving the sickle along without changing the position of the frame, as set forth.
5. The auxiliary stone R, when arranged to be adjusted on either end of the shaft, for use in connection with the main stone P, substantially as and for the purpose set forth.

JOHN A. THOMPSON.

Witnesses:

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