

W. F. KETCHUM.
Harvester Cutter.

No. 14,961.

Patented May 27, 1856.

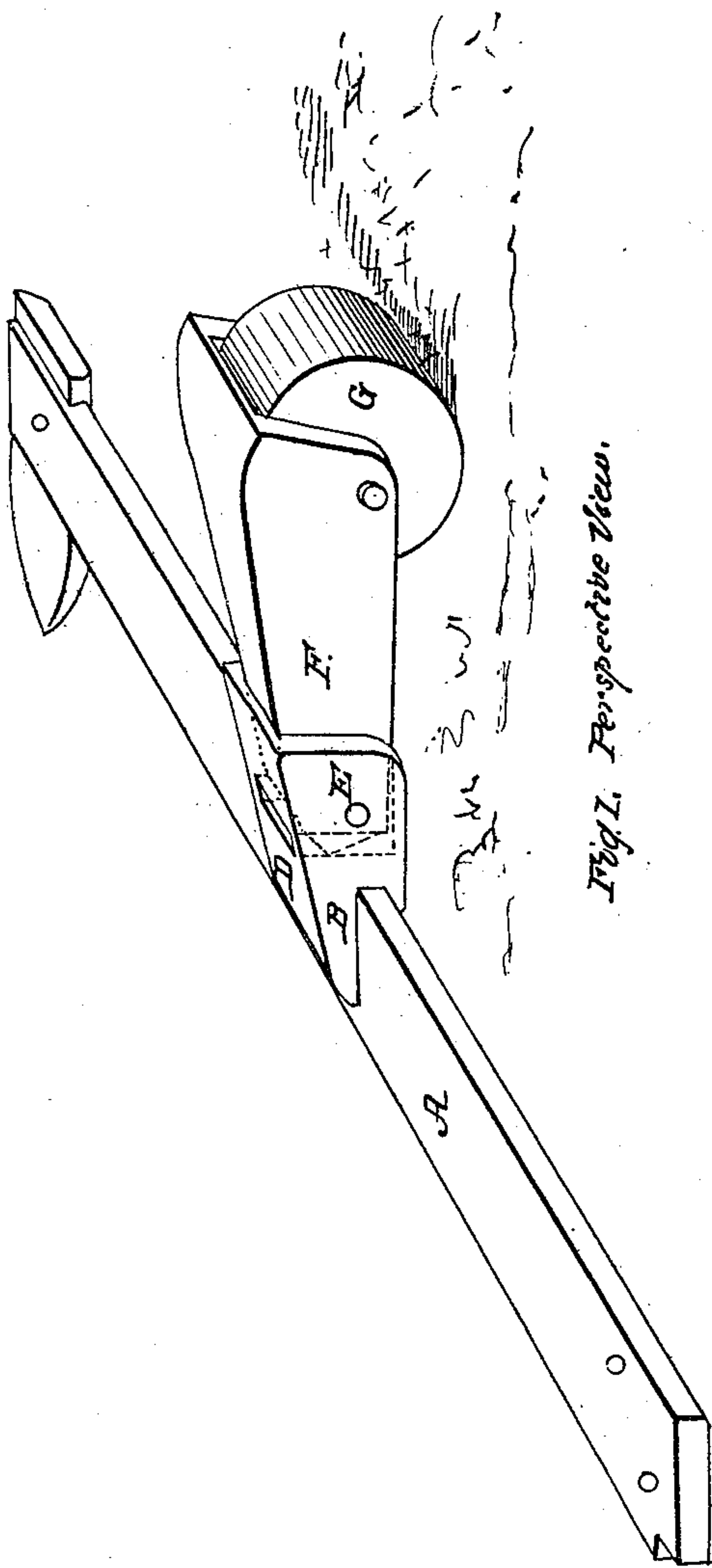


Fig. 1. Perspective View.

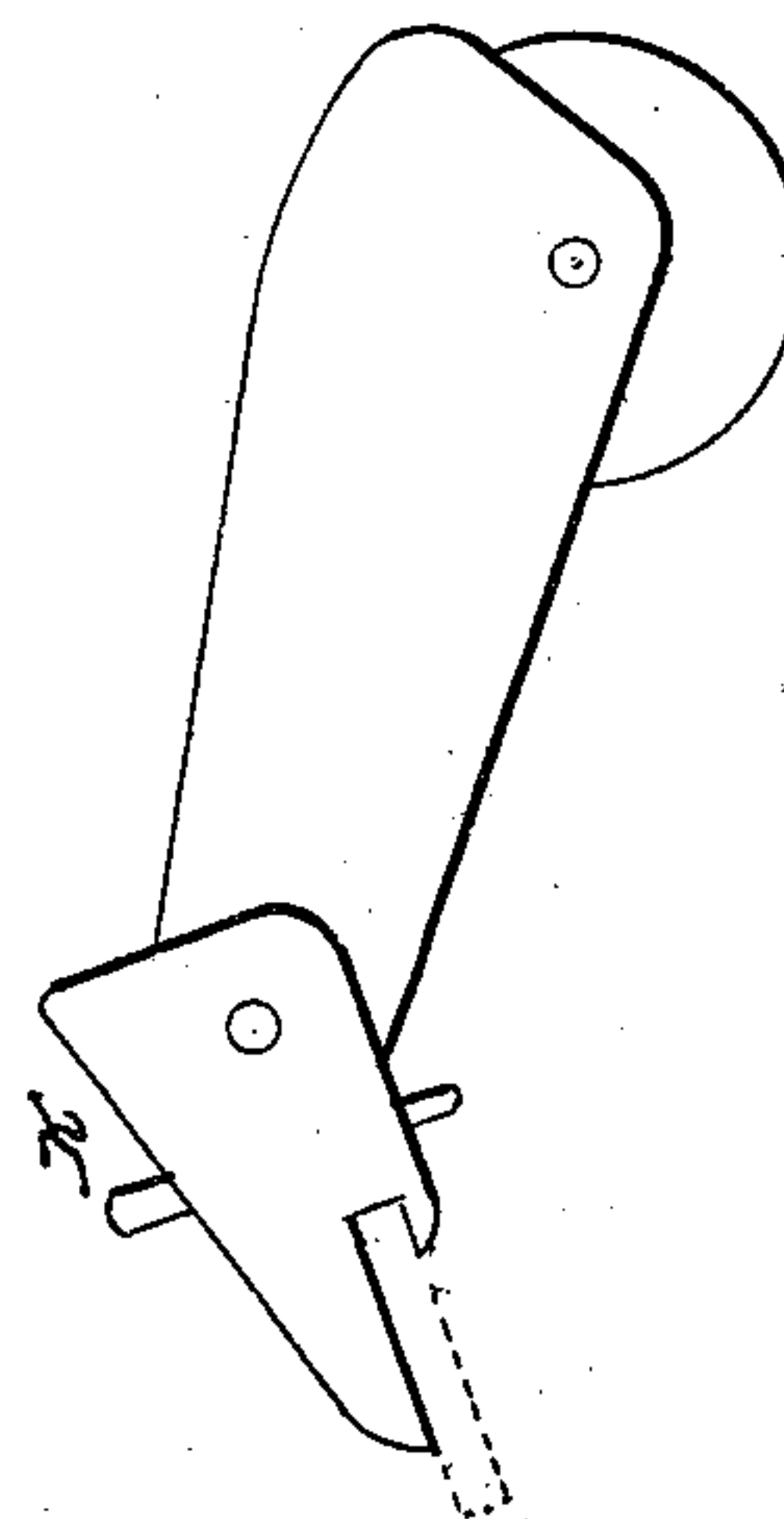


Fig. 2. Side View.

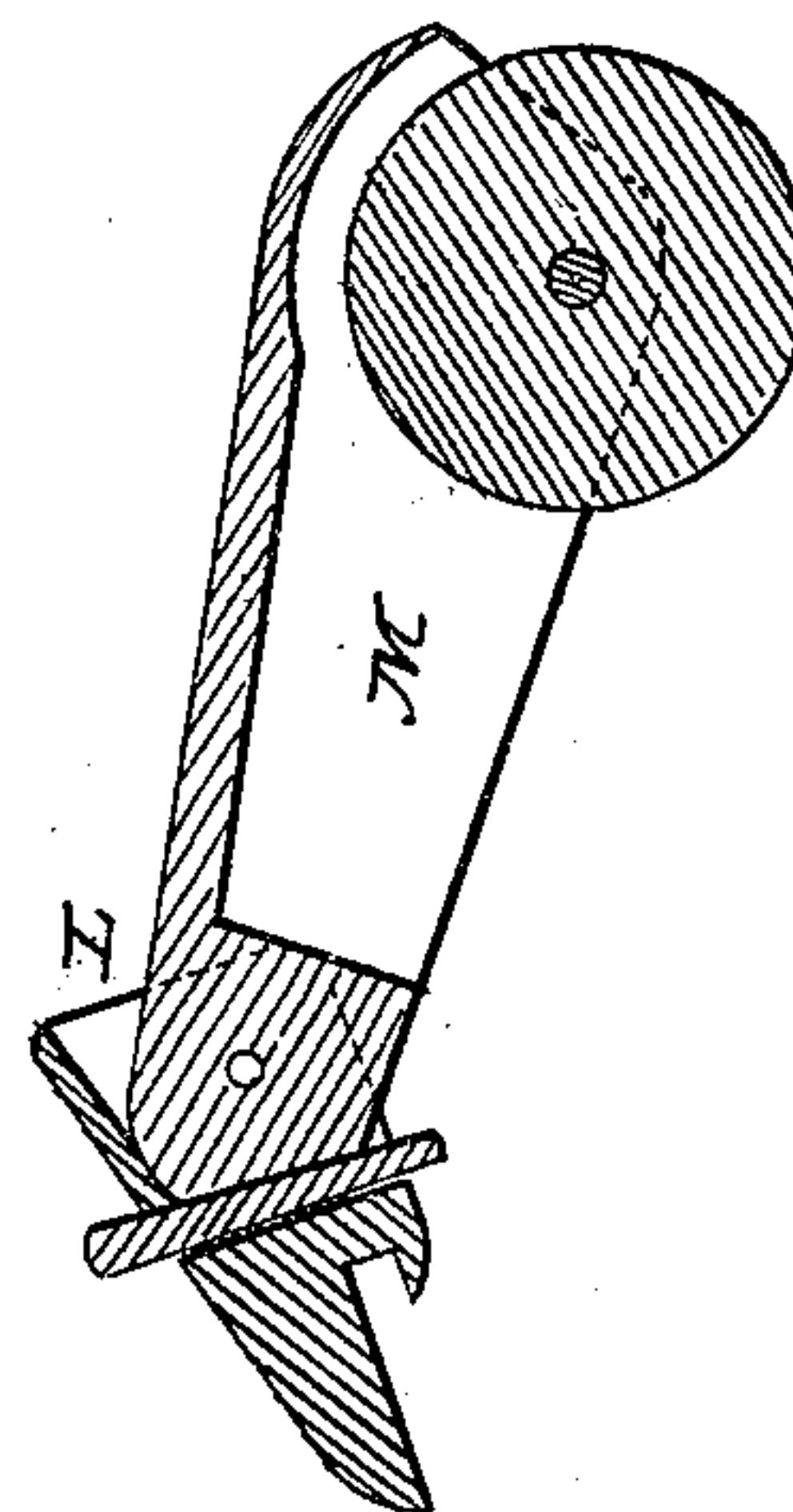


Fig. 3. Section.

UNITED STATES PATENT OFFICE.

WILLIAM F. KETCHUM, OF BUFFALO, NEW YORK.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. 14,961, dated May 27, 1856.

To all whom it may concern:

Be it known that I, WILLIAM F. KETCHUM, of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Mowing-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in providing a means of raising the cutter-bar of mowing-machines from the ground, so that the weight of the cutter-bar shall rest upon a wheel, and the machine may be easily moved from place to place when not in operation, and when the same is in operation and it becomes necessary to back the same the act of backing will throw the weight of the cutter-bar upon the said wheel, and thereby very much facilitate the act of backing, both of which results are obtained by my invention and are of great importance.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I make a jointed bar or lever of cast-iron, or any other metal, and fasten one end thereof to the back part of the cutter-bar anywhere between the shoes usually placed upon each end of the cutter-bar by means of a screw-bolt passing through the forward part of the lever and through the cutter-bar. The whole length of the two pieces of the jointed lever is about twelve inches, the forward piece being about four inches and the back piece about eight inches, to which a small wheel about six inches in diameter is attached. The back part of each piece of the jointed lever is made hollow, with the bottom open and the top covered, as seen in Fig. 3, letters L and M. The fore end of the back piece is fitted into the hollow of the first piece, and held by a bolt, E, upon which it moves up and down when required. There is a gain upon the top of the fore part of the back piece, against which the back end of the first piece strikes or rests when the cutter-bar rests upon the ground, so that when the front edge of the cutter-bar is thrown up in the act of backing the joint of the lever will be stiff and throw the weight of the cutter-bar upon the wheel. There is a hole or slot (marked D) in the top of that part of the lever which is attached to the cutter-bar, in which a bolt or key

is inserted when the cutter-bar is raised up ten or twelve inches, which serves to hold the cutter-bar in that position and cause it to rest upon the wheel G. The hollow made in the rear end and on the under side of the back piece of the lever serves as a recess in which to place the wheel G, and the covered part serves to shield the wheel from the cut grass. This wheel must be small, otherwise the covering would be so high up as to materially clog the machine by the grass lodging upon the top of it. The key or wedge above spoken of is exhibited in the drawings by the letter K in Fig. 2.

In cutting grass the cutter-bar usually rests upon the ground, and when it is necessary to move the machine from place to place the cutter-bar should be raised so as to clear ordinary obstructions, lessen the draft of the machine, and prevent injury to the guards and the knives, and frequently it is necessary to back the machine while mowing, and as the horses throw up the pole the front edge of the knives and cutter-bar will be raised, the greater part of the weight of the cutter-bar will be thrown upon the small wheel G, and the machine can be backed much easier.

I am aware that wheels have been placed at each of the extreme ends of the cutter-bars of mowing-machines; but my invention is calculated to remedy most of the evils consequent upon such a location. With a wheel at either end of the cutter-bar there would be danger of the bar sagging from the great vibration and for want of support.

By my invention and the location of the jointed lever, with a wheel near the center of the cutter-bar, the cutter-bar is more evenly balanced and more firmly supported, and the knives will not be liable to be cramped by the bending of the bar. I also, by making the back piece broad at the top and leaving a recess underneath for the wheel, secure a complete protection for the wheel to prevent its being entangled and clogged with the cut grass, which slides over it.

Whenever it is necessary to back a mowing-machine with a small wheel attached behind and near the middle of the cutter-bar, instead of having one at either end, the cutter-bar will be thrown more directly and evenly upon the wheel than it would be if a wheel were attached at the outer end, in which case the part to-

ward the heel, not being supported, would sag and be bent down; or if the wheel is placed at the inner end or heel of the cutter-bar, there being no support for the outer end, it would spring down and cramp the knives and increase the difficulty of backing instead of diminishing it; and the same evils are remedied by my arrangement when the cutter-bar is raised to move the machine from place to place. When wheels are placed either behind the shoe at the outer end of the cutter-bar or behind the shoe at the inner end the shoe in either case forms a partial protection to the wheel; but I construct the back part of my jointed lever in such a manner as to have the same afford protection to the wheel and permit the cut grass to slide off from it.

I am aware that Horace S. Emery, of Albany, has heretofore used an adjustable arm,

with a wheel thereon at the outer end of the cutter-bar behind the shoe, for the purpose of elevating and depressing the cutter-bar at pleasure to adapt it to working or traveling, and that a similar arm and wheel for a similar purpose have been placed at the inner end of the cutter-bar behind the shoe. These I do not claim; but

What I claim as my invention, and desire to secure by Letters Patent, is—

Attaching anywhere between the shoes to the back part of the cutter-bar of a mowing-machine an adjustable and jointed lever, either with or without a wheel, for the uses and purposes herein described.

WM. F. KETCHUM.

Witnesses:

GEO. H. HUGHSON,
W. S. SHAW.