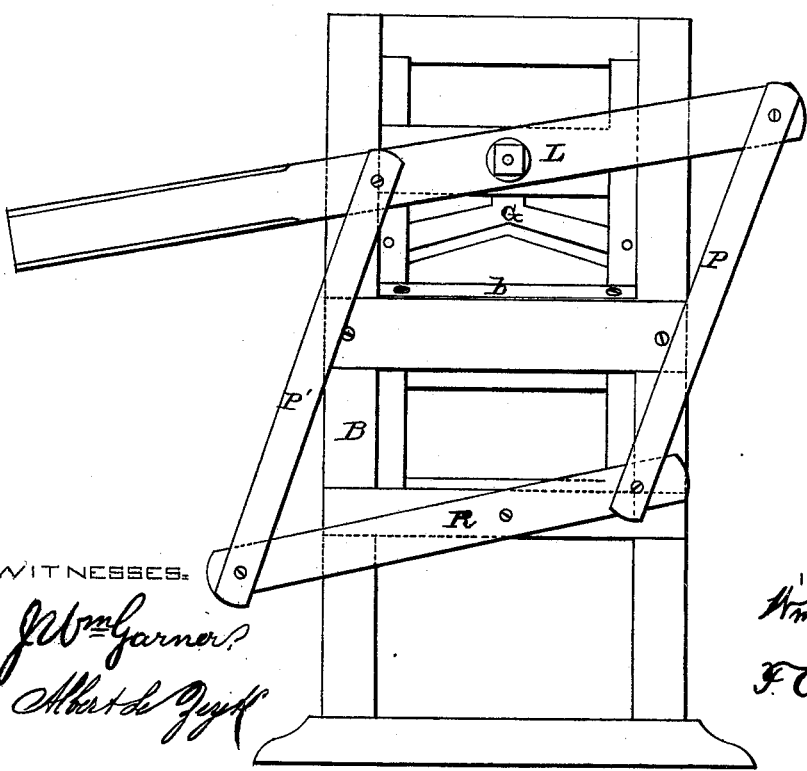
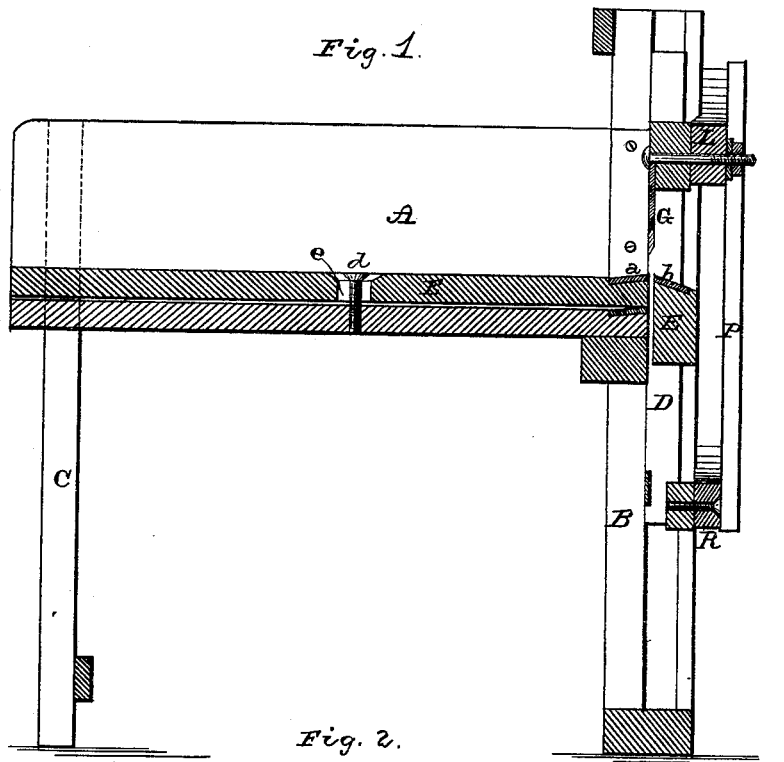


W. S. GIBSON.
 STRAW-CUTTERS.

No. 188,791.

Patented March 27, 1877.



WITNESSES:
J. W. Garner
Albert G. Gault

INVENTOR,
Wm. S. Gibson
 per
F. A. Lehmann, Atty.

UNITED STATES PATENT OFFICE.

WILLIAM S. GIBSON, OF CROPPER'S DEPOT, KENTUCKY.

IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. **188,791**, dated March 27, 1877; application filed February 10, 1877.

To all whom it may concern:

Be it known that I, WILLIAM S. GIBSON, of Cropper's Depot, in the county of Shelby and State of Kentucky, have invented certain new and useful Improvements in Straw-Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a feed-cutter with a peculiarly-arranged lever-power, as will be hereinafter more fully set forth.

The annexed drawing, which forms a part of this specification, fully illustrates my invention.

A represents the feed-box, supported at its front end by a suitable upright frame, B, and at the rear end by legs C, as shown.

In the side pieces of the upright frame B are vertical grooves, in which a gate or sash, D, moves up and down. In this gate or sash is fastened the cutting-knife G, made in the form of an inverted V, and having its cutting-edges extending from the center angle downward and outward to its ends. This cutting-knife, during the movement of the gate or sash, passes down between two plates, *a* and *b*, one in front and the other in rear of the knife.

The front plate *b* is secured on a cross-bar in the frame B, and the rear plate *a* is fastened on the front end of a false bottom, E, placed in the feed-box A. Both these plates are set inclined, so as to slope from cutting-knife G outward and downward; in other words, the edges of said plates nearest the movable knife are raised and sharpened, so that the feed will be cut very easily without clogging, and the movable knife will act like shears.

The movable knife, being in the form of an inverted V, allows of the mouth of the box being made much wider than in ordinary feed-cutters, and a much larger amount of feed can be cut at each stroke of the operating-lever.

The false bottom E is fastened to the regular bottom of the feed-box by a screw, *d*, passing through a slot, *e*, in said false bot-

tom, so that the plate *a* can be adjusted as close to the movable knife G as may be required.

In the center, near the top of the gate or sash D, is pivoted the operating-lever L, the smaller end of which is, by a pivoted bar, P, connected with the short end of a lever, R, and this lever is pivoted to a cross-bar in the lower part of the front frame B.

The long end of the lever R is, by another pivoted bar, P', connected to the long end of the operating-lever L at a point sufficiently close to the pivot of said operating-lever that the two connecting-bars P P' will always be parallel with each other, or, in other words, that the distance between their upper ends shall be the same as that between their lower ends.

By means of this compound leverage a far greater power may be, and is, exerted on the moving knife, and the arrangement of the levers aids the downward stroke of the knife.

When the operator bears down on the lever the shorter or fulcrum end thereof rises, and, by means of the connecting-bar P, raises the short end of the lower lever R, so that the long end of said lower lever, by means of the connecting-bar P', will aid in pulling down the operating-lever and the gate with the moving knife.

This compound leverage may be used for other purposes as well as for feed-cutters.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a feed-cutter, the combination of a vertically-moving sash, D, carrying the knife G, plates *a b*, one of which is attached to the bottom E, so as to be adjusted back and forth, and the levers L P P' R, for operating the knife G, substantially as shown.

2. The false bottom E, provided with the sloping plate *a*, and adjustably secured to the bottom of the feed-box A, for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of February, 1877.

WILLIAM S. GIBSON.

Witnesses:

R. M. SMITH,
JOHN T. LOVE.