J. O. BROWN.
Harvester-Cutter.

No. 211,377. Patented Jan. 14, 1879.

Fig. 1.

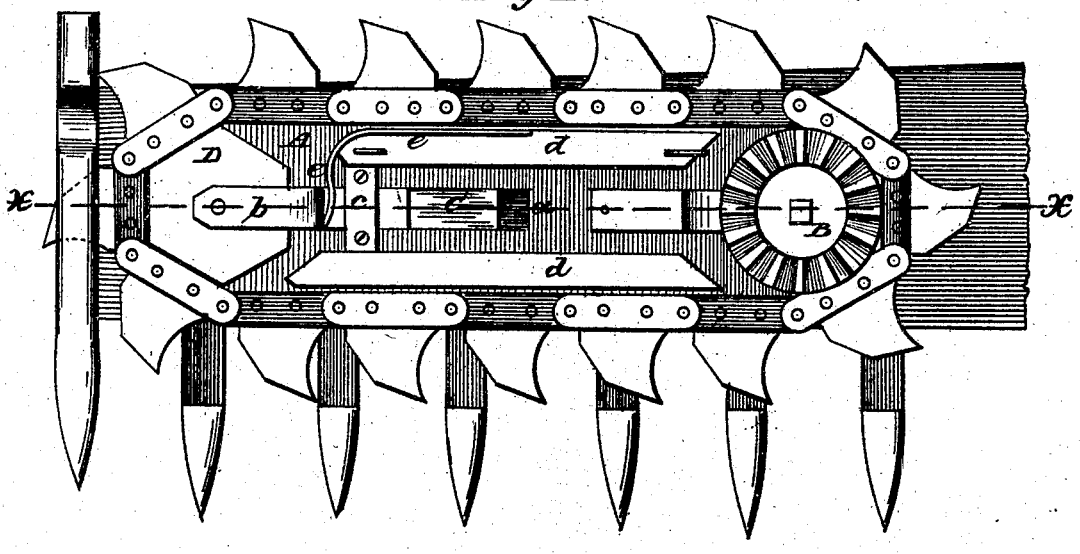
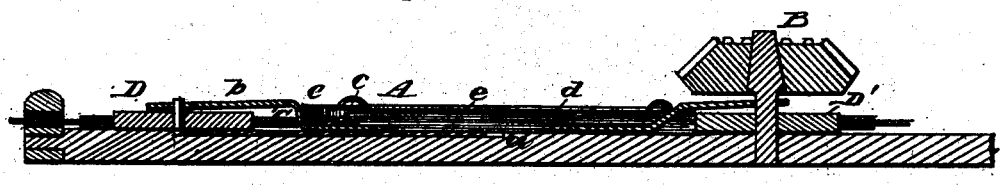


Fig. 2.



Witnesses:
Alfred G. Dieterich
George Binkenburg

Inventor:
James O. Brown
per C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JAMES O. BROWN, OF BENTON, MAINE.

IMPROVEMENT IN HARVESTER-CUTTERS.

Specification forming part of Letters Patent No. **211,377**, dated January 14, 1879; application filed September 5, 1878.

To all whom it may concern:

Be it known that I, JAMES O. BROWN, of Benton, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Cutting-Bars for Harvesters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a plan view, the covering-plates being removed, and Fig. 2 is a longitudinal vertical section on the line *x x* in Fig. 1.

Corresponding parts are denoted by similar letters of reference.

This invention relates to that class of cutting-bars for reapers or harvesting-machines in which the knives or cutters are mounted upon or form part of an endless chain; and it consists in an improved construction and arrangement of parts, substantially as I shall now proceed more fully to describe.

In the drawings, A is the body of the cutter-bar, formed by a shallow elongated box or casing, at one end of which is mounted a vertical shaft, B, for which suitable bearings are provided. At the other end the box A has a longitudinal slot or recess, *a*, in which slides a plate, C, terminating at its outer end in a fork, *b*, in which, upon a suitable shaft or axle, is mounted a chain-pulley, D. Another chain-pulley, D′, is mounted upon the vertical shaft B. The sliding plate C is confined in its recess by cross-pieces *c*.

The sides of the box or casing are formed by strips *d d*, to one of which is secured a flat bent spring, *e*, with its end bearing against the forked end of plate C, which thus, with pulley D, is forced in an outward direction. A suitably-arranged coiled spring may be substituted for the flat spring *e*.

The endless chain upon which the knives or cutters are mounted, and which, as well as the knives or cutters themselves, may be of any suitable construction, is arranged upon the pulleys D D′, as shown. Power is applied from the machine by cog-gear, belt, chain, or in any other suitable well-known manner to the shaft B.

The operation of my invention will be readily understood by any one skilled in the art to which it appertains from the foregoing description and by reference to the drawings hereto annexed.

The pulley D, arranged in the forked end of the sliding plate C, and actuated by the spring *e*, will take up any slack in the chain, and will also prevent that perfect rigidity and stiffness of motion which often, in machines not supplied with my improvement, results in breakage of various parts thereof.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of the casing A, having groove or recess *a*, sliding plate C, having fork *b*, and spring *e* with the endless toothed chain, arranged upon chain-pulleys, one of which is mounted in the forked plate C, substantially as herein described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES O. BROWN.

Witnesses:

JOHN C. HALL,

JOHN P. BILLINGS.