J. P. BUTLER,
Straw-Cutter.

No. 211,219. Patented Jan. 7, 1879.

Fig. 1

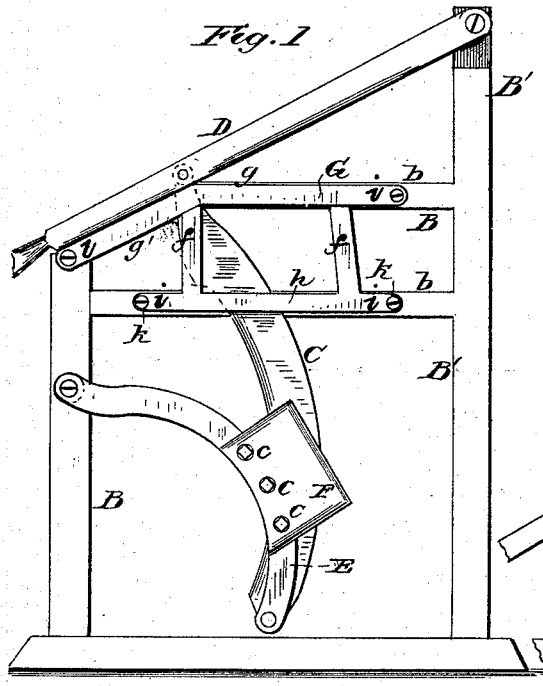


Fig. 2

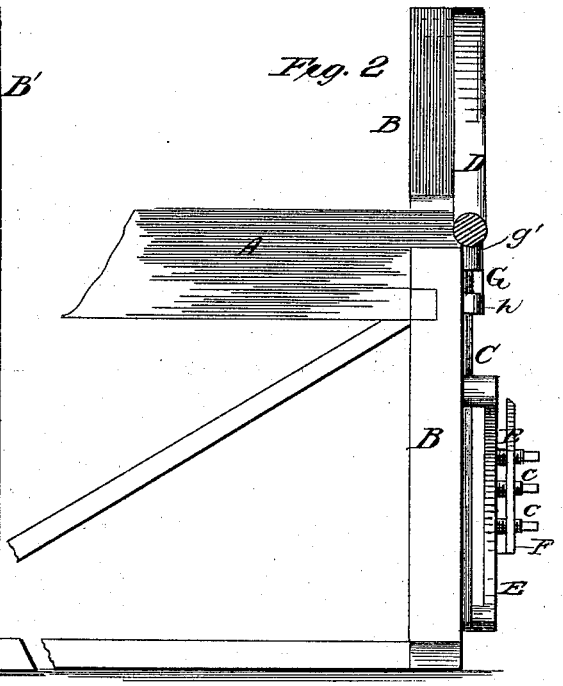
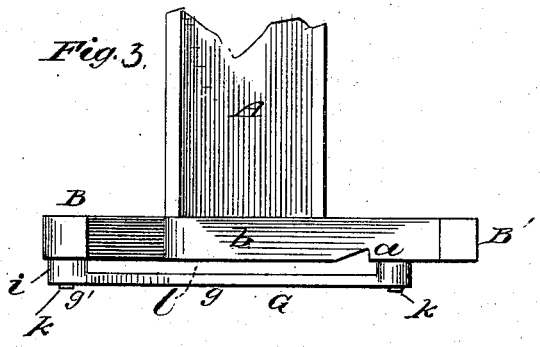


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN P. BUTLER, OF ATHENS, TENNESSEE.

IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. **211,219**, dated January 7, 1879; application filed May 27, 1878.

To all whom it may concern:

Be it known that I, JOHN P. BUTLER, of Athens, in the county of McMinn and State of Tennessee, have invented certain new and useful Improvements in Straw-Cutters; 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, and in which—

Figure 1 is a front view. Fig. 2 is a side elevation; and Fig. 3 is a top view of the front part of the machine, showing more clearly the construction of my improved guide-frame, the front and side parts of which are shown in Figs. 1 and 2, respectively.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to that class of straw or feed cutters which are operated with a reciprocating knife articulated at one end upon a handle or lever, and at the other upon a brace or lever pivoted upon the frame of the machine, and provided with an adjustable gage-plate to regulate the length of the cut straw or feed; and it consists in the construction and combination, with this class of machines, of an improved guide-frame for the reciprocating knife, substantially as hereinafter more fully described.

In the drawing, A is the feed box or table, and B the front supporting-frame, in which the knife and its operating-levers are pivoted. As will be seen by reference to the drawing, the curved knife-blade C is pivoted at its upper end in the lever-handle D, which is pivoted in the upright B′ of frame B, and at its lower end in an arm, E, the other end of which is pivoted in the opposite lower part of frame B, as shown. This combination of the knife C and levers D E, I do not claim, however.

Upon the front side of the arm E is a projecting flange or shoulder, *e*, from which project outwardly three or more bolts, *c*, which are inserted into bolt-holes in the flange *e* in such a manner that they may be turned readily without, however, coming out of the holes into which they are inserted. The projecting parts of bolts *c* are screw-threaded and pass through screw-threaded perforations in the lower rim of the gage-plate F, the ends of the bolts being squared off, so that they may be turned by a wrench or key. In this manner plate F may readily be adjusted by operating bolts *c* upon arm E, so as to project a greater or less distance from this; but other methods may be employed for effecting the same result, if desired.

The two upper cross-pieces, *b b*, of front frame B are provided each with a wedge-shaped cut, *a*, Fig. 3, and have secured upon them, by screws or bolts *k*, a metal frame, G, consisting of two side pieces, *f f*, a top piece, *g*, and the bottom piece *h*. The top piece, *g*, is bent at one side to form an inclined arm, *g′*, and the projecting ends of pieces, *g g′*, and *h* are provided with shoulders *i*, having holes for the insertion of the fastening screws or bolts *k*. By this construction and arrangement a narrow vertical slot, *l*, is formed between the frames B and G, widening on one side at *a;* and in operating the machine the knife-blade moves within this guide-slot, which insures an accurate vertical up-and-down motion of the knife and prevents this from bending or buckling, it being desirable to make the knife-blade as thin as possible to facilitate its sharpening.

The inclined arm *g′* of frame G serves as a rest for the lever-handle D, by which the knife is operated, and the enlarged or wedge-shaped openings *a* in slot *l*, between the cross-pieces *b*, which form one side of the guide-slot, and frame G, which forms the other side, will prevent the knife-blade from binding when the knife is raised for a cut by allowing an escape for small particles of straw that may be carried up by the back of the knife, and which, if the guide-slot *l* were of even width through its entire length, would be liable to become wedged in between the knife-blade and the frames between which it moves. By adjusting the gage-plate F upon arm E, this will, when the lever D is raised for a cut, project any desired distance in front of the mouth of the machine, thus regulating the length of the cut-off fodder, the plate F being thrown up in front of the mouth of the feed-box every

time lever D is raised for a cut, and carried down again and out of the way in the act of cutting.

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

As an improvement in straw-cutters, the guide-frame G, constructed as described, in connection with the cross-pieces *b b*, having wedge-shaped enlargements *a* at one end, substantially as and for the purpose herein shown and specified.

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

JOHN PHILLIP BUTLER.

Witnesses:

WILLIAM LIERRE MCGAUGHEY,

JOHN A. SMITH.