S. COLBURN.

Harvester Cutter.

No. 13,160. Patented July 3, 1855.

FIG. 3.

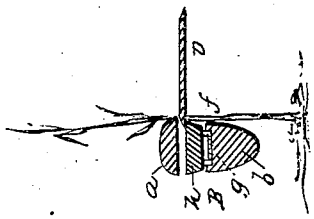


FIG. 1

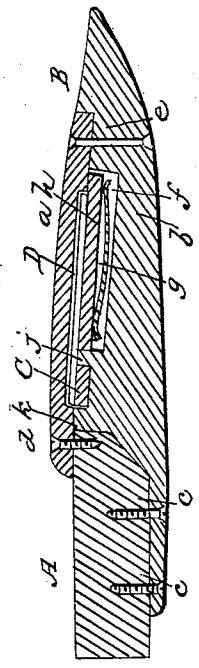
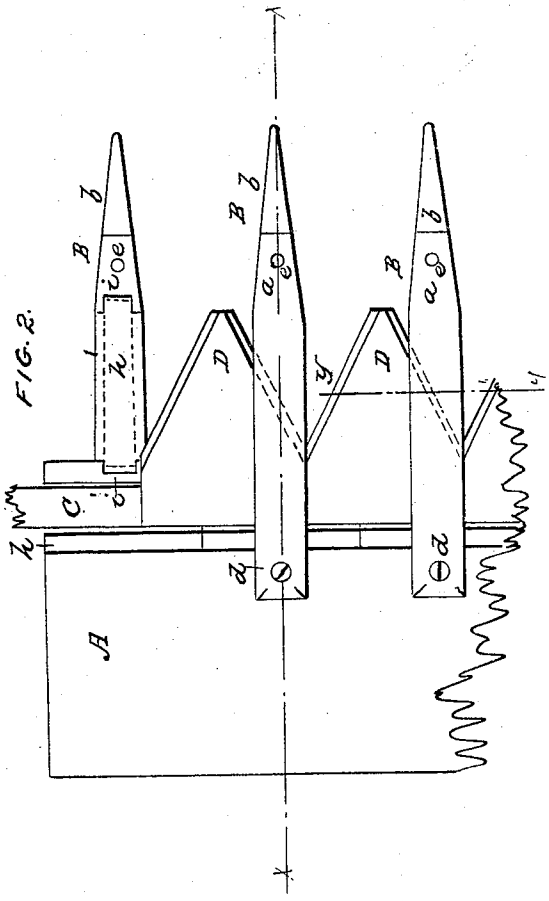


FIG. 2.



UNITED STATES PATENT OFFICE.

SYLVESTER COLBURN, OF ANSONIA, CONNECTICUT.

IMPROVEMENT IN GRAIN AND GRASS HARVESTERS.

Specification forming part of Letters Patent No. **13,160**, dated July 3, 1855.

To all whom it may concern:

Be it known that I, SYLVESTER COLBURN, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Grain and Grass Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a transverse section of the sickle-bar and sickle, *x x*, Fig. 2, showing the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse section of one of the fingers, elastic plate, and reciprocating cutter.

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

The nature of my invention consists in the employment of elastic plates fitted within the fingers and arranged as will be presently shown and described, whereby the sickle is prevented from clogging and the reciprocating cutters kept in a sharp state.

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

A, Figs. 1 and 2, represents the bar to which the fingers B are attached, and commonly termed the "finger-bar." The fingers B are formed of two parts, *a b*. The lower part, *b*, is attached to the under side of the finger-bar A by bolts or screws *c*, (see Fig. 1,) and the upper part, *a*, is attached to the upper side of the finger-bar by a bolt or screw, *d*, which passes through the back end of the part *a* into the finger-bar, and a rivet, *e*, which passes through the front end of the part *a* and through the part *b*. A recess, *f*, is cut or formed in the upper surface of the part *b* of each finger. Within these recesses springs *g* are fitted, the upper ends of which bear against plates *h*, one plate being in each finger. The ends of the plate *h* are fitted in recesses *i i*, one at the front and the other at the back ends of the parts *b* of the fingers. (See Fig. 2.) The under surfaces of the parts *a* also have recesses *j* cut in them, one in each, as clearly shown in Fig. 1.

C represents the bar to which the cutters D are attached, commonly termed the "cutter-bar." This bar is fitted in a groove, *k*, at the back ends of the parts *b*. To the upper surface of the bar C the cutters D are secured. The cutters are of the usual triangular or saw-tooth form, as shown in Fig. 2, and they work directly over the plates *h*, which are pressed against the cutters by the springs *g*. The upper surface of the plates *h* are perfectly level, or the edges may be very slightly raised, so as to form a perfect bearing against the edges of the cutters. The under surfaces of the cutters may also be level, or have their cutting-edges slightly depressed. The sides of the plates *h* may be slightly inclined, as shown in Fig. 3, so as to form a somewhat acute angular edge at the upper edges of the plates over which the cutters work. The cutters D have the usual reciprocating motion given them in any proper manner, and they work between the plates *h* and the under surfaces of the recesses *j* in the parts *a* of the fingers, the springs *g* keeping the upper edges of the plates *h* in contact with the edges of the cutters D. The grass or grain is cut between the edges of the plates *h* and the cutters D, and in consequence of the edges of the plates and cutters being kept in close contact with each other the grass or grain will be cut with facility, and the sickle will be prevented from clogging, as the grass or grain will not be drawn into the slots of the fingers, and the cutters will, in consequence of working over the plates *h*, be kept in a sharp state, or in good cutting order, the plates serving to sharpen the cutters as they work over them.

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

The employment of the elastic plates *h*, fitted within the fingers B, and acted upon by springs *g*, arranged substantially as shown, for the purpose set forth.

SYLVESTER COLBURN.

Witnesses:
JOS. GEO. MASON,
WM. TUSCH.