

UNITED STATES PATENT OFFICE

HENRY SLUSSER AND FREDERICK SCHMIDT, OF GLEN ROCK, PA.

IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. **175,182**, dated March 21, 1876; application filed December 10, 1875.

To all whom it may concern:

Be it known that we, HENRY SLUSSER and FREDERICK SCHMIDT, of Glen Rock, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Feed-Cutters; and we 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, and to the letters of reference marked thereon, which form a part of this specification.

Our invention consists of a novel construction, arrangement, and combination of the knives of a feed-cutter.

In the accompanying drawings, Figure 1 is a front view of our feed-cutter, with the movable knife elevated. Fig. 2 is also a front view, with the movable knife carried down to complete its stroke. Fig. 3 is a vertical section. Figs. 4, 5, and 6 are detached views of the knife.

In our improved feed-cutter, the frame A and box B may be of ordinary construction. The movable or reciprocating knife C is pivoted to the lever D, which in turn is pivoted to the floating-arm E, in order to operate the knife without binding. The bed-knife F is provided with slots G for the purpose of making this knife adjustable. Thus when the edge becomes worn and ground away, the knife may be moved forward on its bed, so as to meet the knife C and give a nice shear or scissors cut, and, as the edge of the knife C is set obliquely, secure the advantage of a drawing cut, added to that of the scissors or shears.

We make the bed-knife flat on the under side and thin at the back, in order to fit the bed of the box B, and to allow the straw to slide forward with ease on the knife. Then the lip or edge of the knife is raised very high, as seen in section, Fig. 1, so that in cutting straw the under layer of the same (in the box)

will slide downward and backward on the top of the knife and away from the edge of the latter.

A flat knife, shown in Fig. 6, may be tilted up at the edge, so as to work in cutting very similar to the knife shown in Fig. 5. In both cases the downward stroke of the reciprocating knife will push the straw back on the top of the knife, because the upper surface of the lip in both cases has a plane set obliquely, and not in the usual horizontal position, or at right angles to the vertical stroke of the reciprocating knife.

The two principal advantages of our construction of knife are, first, we secure a peculiar shear-cut, the edges of the two knives being set in such relation and at such an angle that the reciprocating knife C sweeps from the plane side to the bevel side of the bed-knife F, and thus the cut is keener than in the ordinary shears, where the two flat surfaces of the knives come together, and may soon wear "rounding." In the second place, the lower knife requires to be ground only on the bevel side, and if the upper knife be worn on its flat side, so as to be slightly rounded at or near the edge, yet it will work well, when common shear-edges might slide over the hay and choke the cut.

Having described our invention, we claim—

A ledger-knife, having the upper surface of the lip or edge extending obliquely downward and backward from the edge, so that the downward stroke of the reciprocating knife will push the under layer of straw away from the edge and within the box, substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

HENRY SLUSSER.
FREDERICK SCHMIDT.

Witnesses:

DANIEL BREED,
S. S. KIRK.