E. B. CARR.

STRAW-CUTTER.

No. 188,338. Patented March 13, 1877.

Fig. 1

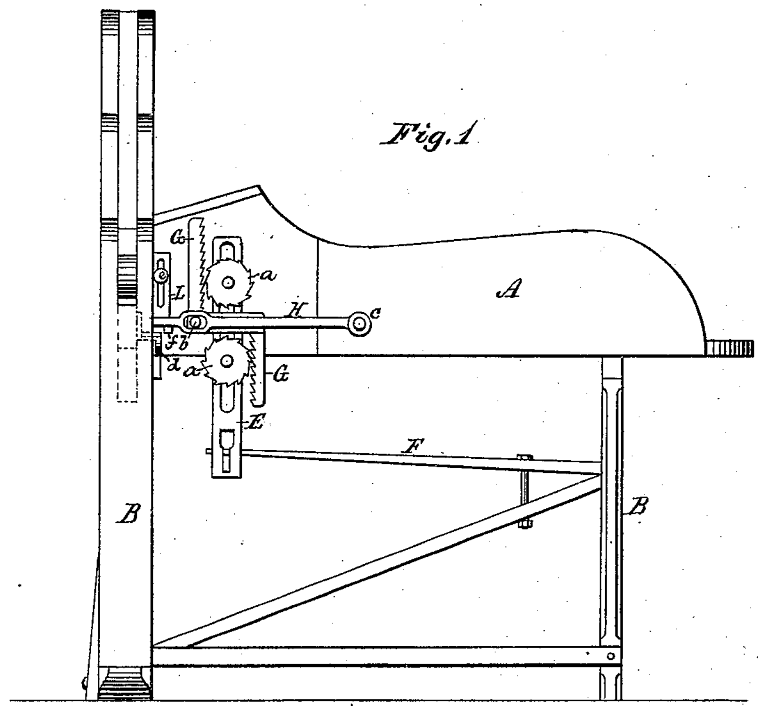
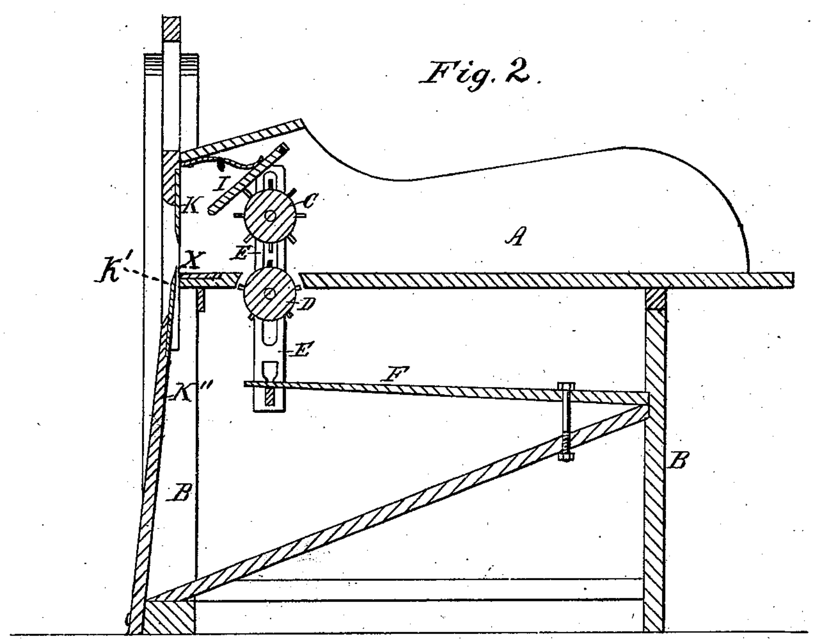


Fig. 2.



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EDWARD B. CARR, OF SNYDERTOWN, PENNSYLVANIA.

IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. **188,338**, dated March 13, 1877; application filed September 14, 1876.

To all whom it may concern:

Be it known that I, EDWARD B. CARR, of Snydertown, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Straw-Cutters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to novel combination and improvements upon Letters Patent granted respectively to A. Buch, November 5, 1867, and G. S. Garth, November 15, 1870. It has for its object to combine the advantages incident to each of the above-named inventions, and providing the said combined machine with a regulating device for the feed mechanism, and with an automatic spring-compresser for holding down the straw while being cut, and presenting the same evenly and uniformly to the action of the knife, as will be hereinafter more fully set forth.

In my improved straw-cutter the metallic plate arranged at the mouth of the apparatus to co-operate with the spring-board and bottom plate and cutting-knife, as well as the feed-rollers and ratchet-wheels and duplex pawl, being fully described in the above-mentioned patents, reference is here made to said patents for a more full description of said parts as represented in my improved machine.

In the accompanying drawing, Figure 1 represents a side elevation of a straw-cutter embracing the features of my invention, as before alluded to, and Fig. 2 a central vertical longitudinal section of the same.

Similar letters denote like parts in both figures.

A represents the box mounted upon suitable legs B. C is the upper, and D the lower, feed-rolls, provided with sprockets, the lower one mounted in bearings secured to the bottom or sides of the box, and the upper one in the upper ends of vertically-sliding bars E, adapted to move in vertical grooves in the side of the box A. These bars are slotted, to enable them to straddle the shaft of the lower roll. The bars E extend below the bottom of the box, and are connected at their ends by a cross-tie, upon which lies the free end of a spring-bar, F, which holds the upper roll down to its work. K is the cutting-knife, which passes by the end of the metal-covered bottom X of the box, and between it and a vertical knife, K′, attached to a spring-board, K″, which insures a clean cut of the straw fed to the same. The axes or shafts of the feed-rolls are provided at one end, outside the box A, with ratchet-wheels *a a*, the teeth of which are pitched in opposite directions, so that the upward movement of a duplex pawl, G, will rotate the feed-rolls in opposite directions, to cause them to feed the straw passing between them. The duplex pawl is connected by a pin, *b*, with a lever, H, pivoted to the side of the box at *c*, and arranged to be struck by a tappet or lug, *d*, attached to the cutter-lever, so that as the lever is raised preparatory to making a cut with the knife, the pivoted lever is acted upon, and the duplex pawl causes the feed-rolls to rotate to feed the straw under the knife. I is a spring board or plate, with its free end in advance of the feed-rolls, so that it will compress the ends of the straw and compel it to advance properly under the knife K. L is a gage-plate secured to the side of the box by a thumb set-screw, *e*, and having at its lower end a projecting arm, *f*, upon which rests the forward free end of the lever H, so that the downward movement of the same is determined and regulated by the altitude of the arm *f*; hence the duplex pawl G will engage with a greater or less number of teeth of the ratchet-wheels on the feed-roller shafts in its ascent, caused by the lifting of the knife-lever, and will, obviously, rotate the same to a greater or less extent, and thus make a longer or shorter feed of the straw, and, as the gage-plate L is adjustable, it follows that the feed may be readily controlled.

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

1. A straw-cutter embodying in its construction and arrangement the lever-knife K, bottom X, yielding knife K′, feed-rolls C D, provided with ratchet-wheels, the duplex pawl

G, lever H, tappet *d*, upon knife-lever, and gage-plate L, substantially as hereinbefore set forth.

2. In combination, the feed-rolls, double-acting pawl G G, lever H, and the gage-plate L, provided with the arm *f*, substantially as and for the purpose hereinbefore set forth.

Witness my hand and seal this 8th day of September, 1876.

EDWARD B. CARR. [L. S.]

Witnesses:
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