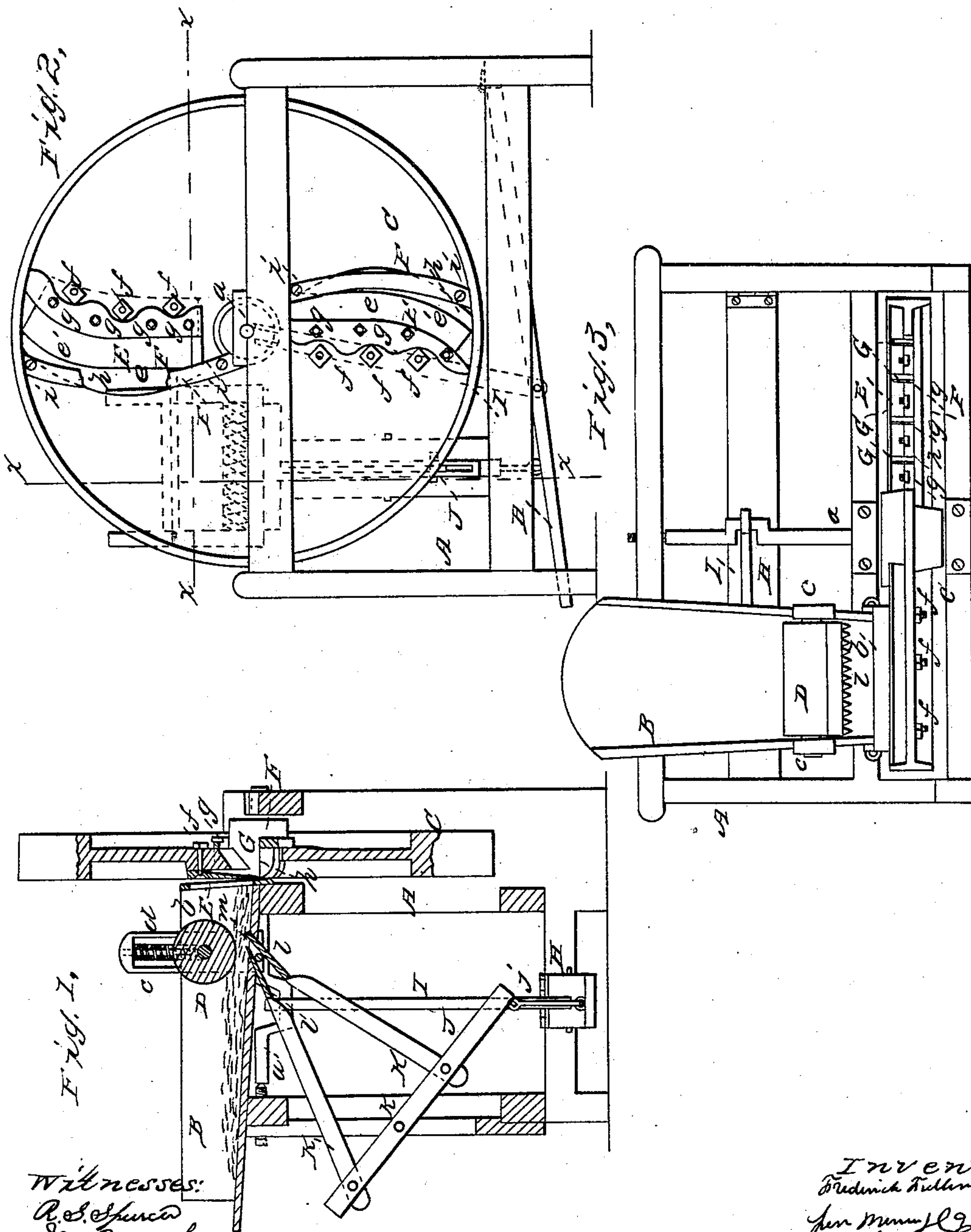


F. FIDLER.
Stalk and Root Cutter.

No. 29,775.

Patented Aug. 28, 1860.



Witnesses:
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FREDRICK FIDLER, OF BATAVIA, NEW YORK.

STALK AND ROOT CUTTER.

Specification of Letters Patent No. 29,775, dated August 28, 1860.

To all whom it may concern:

Be it known that I, FREDRICK FIDLER, of Batavia, in the county of Genesee and State of New York, have invented a new and Improved Stalk and Root Cutter; 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 vertical section of my invention, taken in the line x, x , Fig. 2; Fig. 2, a front or face view of the same; Fig. 3, a horizontal section of the same, taken in the line x', x' , Fig. 2.

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

This invention relates to certain improvements in that class of stalk and root cutting machines in which knives are attached to the side of a wheel.

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

A, represents a rectangular frame, which may be constructed in any proper way to support the working parts of the machine. On the frame A, a feed box B, is placed. This feed box may be of the usual form, and its front end is placed at right angles to the face of a cutting wheel C, the axis or shaft a , of which is on the frame A. The relative position of the feed box and cutting wheel is shown clearly in Figs. 1 and 3. The discharge end of the feed box B, is faced with metal, the upper part b , of the metal facing serving as a ledger blade, and the feed box is provided with a pressure roller D, the journals of which are fitted in slotted up-rights c, c , and have springs d , bearing on them.

The wheel C, is provided with two knives E, E, which are attached to the wheel at two opposite points of its axis or shaft a . These knives it will be seen have cutting edges which are straight a certain distance from their inner ends as shown at e , and are then curved to their outer ends as shown at e' . The form of the knives is shown clearly in Fig. 2. The straight portions e , of the cutting edges of the knives extend about half their length and the knives are secured to the wheel C, by screw bolts f , and are adjusted by means of set screws g , to have a greater or less rake, the set screws g , passing through the wheel C, near the edges of the throats h ,

and bearing against the blades of the knives, the bolts f , being relaxed or adjusted to admit of the desired adjustment of the screws g , as will be fully understood by referring to Fig. 1.

At the edges of the throats h , opposite the edges to which the knives E, E, are attached, there are secured by screw bolts i , bars F, having short blades or scorers G, attached at right angles, which blades extend across the throats h , to the edges of the knives, as shown in Figs. 1 and 3.

In the lower part of the frame A, there is placed a treadle H, to which a pitman I, is connected, the upper end of said pitman being attached to a crank on the shaft a , of the cutting wheel C. The treadle H, also has connected to it by a link j , one end of a lever J, which is secured in the frame A, by a fulcrum pin k . To the lever J, arms K, K, are attached one at each side of the fulcrum pin k , and to the upper end of each arm K, a serrated or toothed plate l , is attached and these plates work through an oblique slot m , in the bottom of the feed box and just below the roller D, as shown clearly in Fig. 1.

The operation is as follows. The stalks, straw, or roots to be cut, are placed in the feed box B, and the treadle H, actuated by the foot of the operator. The serrated plates l, l , are moved simultaneously in opposite directions, and with a reciprocating movement, and feed the material to be cut to the knives E, E. The cutting wheel C, is rotated, from the treadle H, by the pitman I, and crank of shaft a , and the knives E, cut the substance or stuff in the feed box B, into pieces of the desired length, the screws G, subdividing or slitting longitudinally the pieces cut by the knives E, E. By having the knives E, E, of the form shown and described, that is to say of a straight and curved portion, a regular or even cut is obtained as the curved portions of the knives compensate for the increased velocity of the outer part of the cutting wheel. The setting or adjusting of the knives E, also is attended with considerable advantage as more or less "rake" or "set" may be given the knives as may be required. The scorers G, by subdividing and still further reducing by longitudinal cuts, the pieces cut by the knives E, are extremely valuable in cutting roots and cane stalks. The reciprocating serrated plates l, l , insure a regular and even feed

of the substance or material to be cut to the knives.

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

1. In connection with the knives E, E, the scorers G, for the purpose specified.

2. The serrated reciprocating plates l, l,

operated through the medium of the treadle H, link j, lever J, and arms K, K, for the purpose of feeding the substance to be cut to the cutters.

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Witnesses:

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