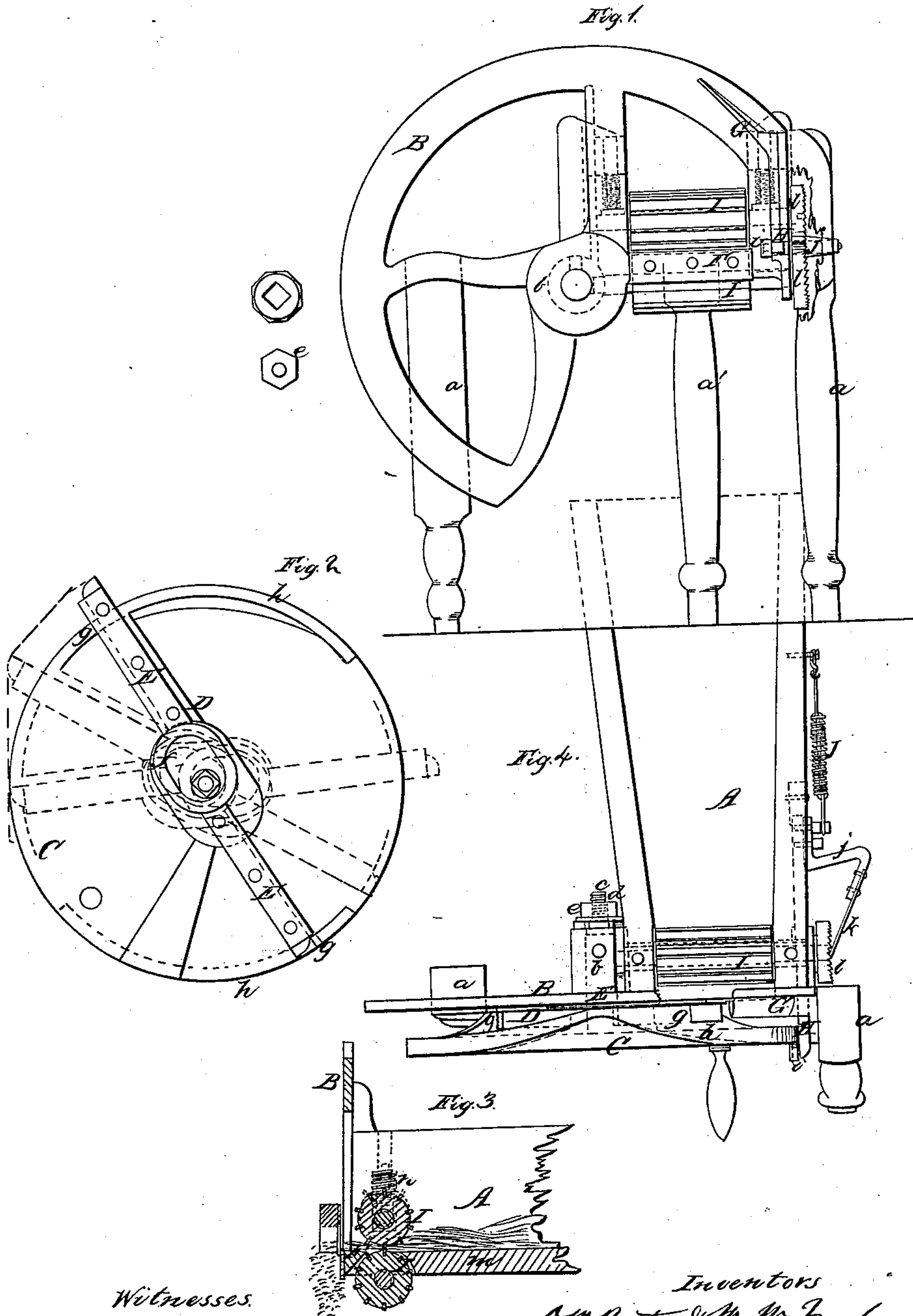


O. W. Preston, Jr. & W. W. Farnham.

Straw Cutter.

N^o 29,442.

Patented Jul. 31, 1860.



Witnesses.
R. S. Spence
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UNITED STATES PATENT OFFICE.

OLIVER W. PRESTON, JR., AND WILLIAM W. FARNHAM, OF CORNING, NEW YORK, ASSIGNORS TO THEMSELVES AND PAYNE & OLCOTTS, OF SAME PLACE.

STRAW AND STALK CUTTER.

Specification of Letters Patent No. 29,442, dated July 31, 1860.

To all whom it may concern:

Be it known that we, OLIVER W. PRESTON, Jr., and WM. W. FARNHAM, both of Corning, in the county of Steuben and State of New York, have invented a new and Improved Straw and Stalk Cutter; and we 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 front view of our invention with the cutting wheel detached. Fig. 2 is a detached inner face view of the cutting wheel. Fig. 3 is a longitudinal vertical section of the feed-box. Fig. 4 is a plan or top view of the whole device.

Similar letters of reference indicate corresponding parts in the several figures

This invention relates to certain improvements in that class of straw and stalk cutters in which a rotary cutting wheel is employed. The invention consists in a novel feeding mechanism, and a peculiar arrangement of the knives or cutters, substantially as hereinafter described, whereby it is believed that the implement is rendered more efficient than those of the same class hitherto constructed.

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

A represents a feed-box which may be constructed in the ordinary way, and B is a frame, which may be of cast metal, secured to the front end of the feed-box and to supports *a*, which, in connection with a support *a'*, at the outer end of the feed-box, support the whole machine. The frame B, is a section of a wheel, as shown clearly in Fig. 1; and at its center there is a hub or projection *b*, which serves as a bearing for a shaft or axle *c*, of a wheel C, the axle passing entirely through the projection *b*, and having a screw *d*, cut upon it to receive a nut *e*,—see Fig. 4.

To the inner side of the wheel C, there is fitted a bar D. This bar D, has an oval opening *f*, at its center, through which the axle *c*, passes, said opening admitting of a longitudinal play or movement of the bar, the ends of which are fitted in suitable guides or bearings *g*, at the periphery of the wheel. To the bar D, two knives or cut-

ters E, are attached, one at each side of the opening *f*, both of which are shown in Fig. 2.

The inner or discharge end of the feed box A, is provided with a leger blade F, and the wheel C has its plane of rotation at right angles with the feed-box, the cutters E, working over the leger blade, as the wheel C, is rotated. The bar D, is a little longer than the diameter of the wheel C, and the former will project beyond the edge of the wheel at one end—see Fig. 2.

On the frame B, at its upper part, there is a flanch G, the use of which will be presently explained. This flanch projects laterally from the frame and upward over the discharge end of the feed box, as shown in Figs. 1 and 4.

The periphery of the wheel C, has two zig-zag ledges *h*, *h*, at opposite points, which ledges cause the wheel C, to perform the office of a cam, as well as that of a cutting wheel.

The ledges *h*, *h*, act, as the wheel C, is rotated, against a friction roller *i*, of a slide-bar H, which is fitted in one side of the feed box A. This bar H, has a bent arm *j*, attached to it; and to the arm *j*, there is secured a pawl *k*, which engages with the ratchets *l*, *l*, of the feed rollers I, I, which are placed at the front part of the feed-box A, one above the other, the upper roller I, having springs *n*, bearing on its journals as usual. To the slide-bar H, a spring J, is attached, said spring having a tendency to keep the friction roller *i*, in contact with the wheel C,—see Fig. 4.

The operation is as follows:—The wheel C, is rotated by any convenient power, and the straw or stalks to be cut are placed in the feed-box A. As the wheel C, rotates the zig-zag ledges *h*, *h*, and spring J, give a reciprocating movement to the slide bar H, and the pawl K, actuates the ratchets *l*, *l*, and consequently the rollers I, I, and the straw or stalks are fed to the cutters E, and are cut as the cutters pass the leger blade F. As the cutters act upon the straw or stalks they have a drawing cut given them in consequence of the end of the bar D, coming in contact with the flanch G, which gives a longitudinal movement to the bar D, and causes it to be shoved back so that the opposite end of the bar will project beyond the

edge of wheel C, and be acted upon in turn by the flanch G, as the other cutter acts upon the straw or stalks. The arrangement, it will be seen, is extremely simple, and gives
5 a drawing cut to the cutters rendering them far more efficient than usual.

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

10 1. The employment or use, on a cutting wheel C, of a straw and stalk cutter, of zig-zag ledges *h*, *h*, in connection with a slide bar H, having a pawl *k*, attached for the

purpose of operating the feed rollers I, substantially as set forth.

2. Attaching the knives or cutters E, E, to a sliding bar D, fitted to the wheel C, in a way to be operated by the flanch G, attached to frame B, for the purpose of giving a drawing cut to the knives or cutters,
substantially as described. 15 20

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Witnesses:

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