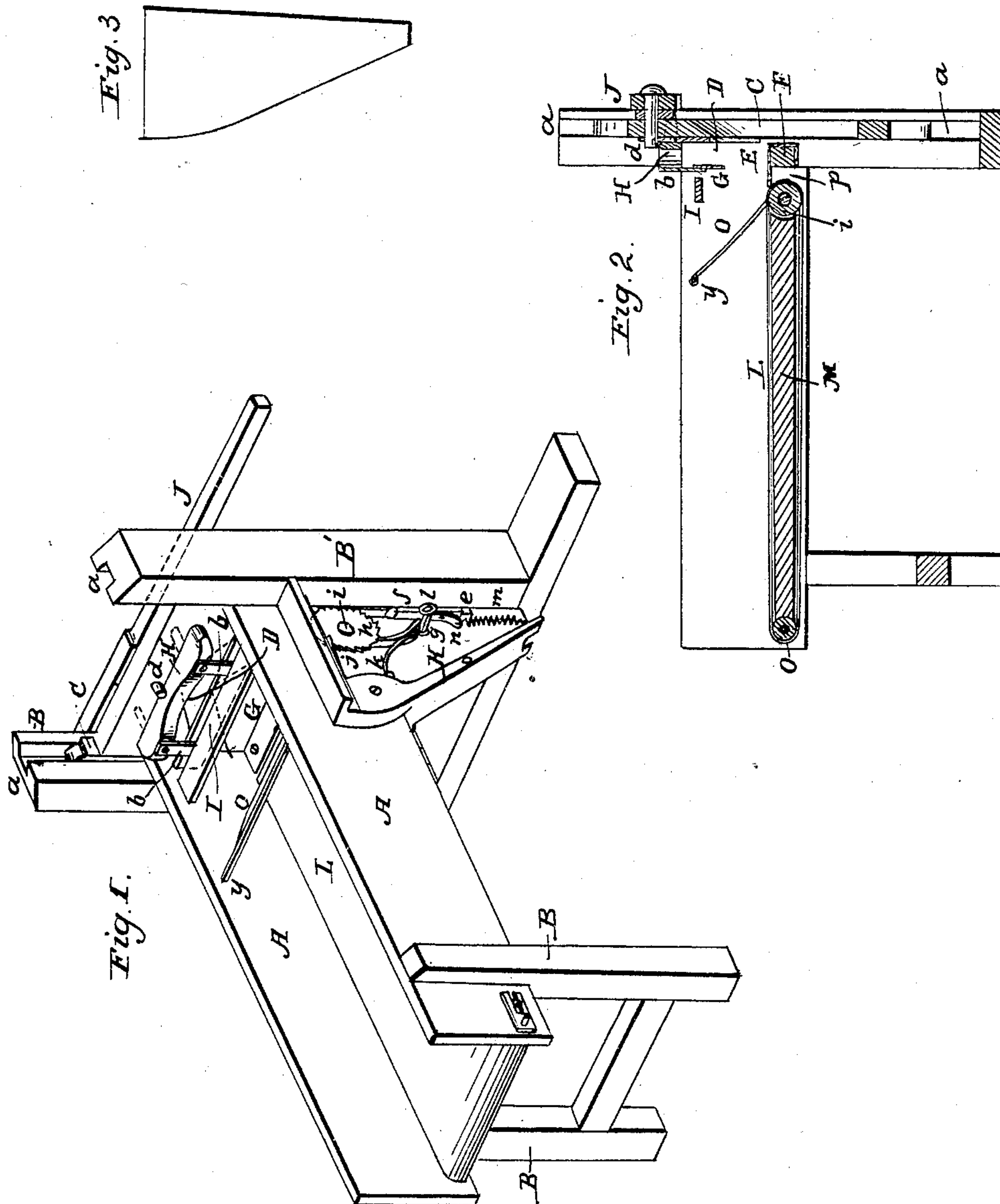


J. D. COCHRAN.

Straw Cutter.

No. 32,962.

Patented July 30, 1861.



Witnesses:
 Wm. J. Atlee
 Geo. Patterson.

Inventor:
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UNITED STATES PATENT OFFICE.

JOHN D. COCHRAN, OF MILFORD, NEW HAMPSHIRE.

STRAW AND HAY CUTTER.

Specification of Letters Patent No. 32,962, dated July 30, 1861.

To all whom it may concern:

Be it known that I, JOHN D. COCHRAN, of Milford, in the county of Hillsboro and State of New Hampshire, have invented a certain
5 new and useful Improvement in Straw and Hay Cutters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part
10 of this specification, and in which—

Figure 1. represents a perspective view of the machine with the side board removed, to show the device which communicates motion to the endless apron. Fig. 2. is a longitudinal section.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings A, represents the box or receptacle for the hay or straw. It is supported on legs B, B', the latter being grooved out as seen at *a, a*, to receive the cutter frame C. To the upper inner side of said cutter frame, C, is attached a knife D,
25 of the form shown in dotted lines Fig. 1. This knife works down past a metallic cutting plate E, fastened to the top of cross piece F, it sometimes happens that it is not only quite convenient but very desirable to
30 use two knives, to save time in cutting, especially is this the case when cutting or slicing vegetables. For this purpose a knife G, is fastened to the lower ends of plates *b, b*, attached to frame piece H, which is provided
35 with pins *c, c*, shown in dotted lines Fig. 1., to fit into holes in the upper cross piece of the cutter frame, as fully illustrated in the drawings. When, therefore it is desired to use the second knife G, frame H, can be
40 quickly applied to the cross piece, and, as quickly removed.

I, is a stay board and hand rest which connects the sides of box A, and is placed just back of the second knife G.

45 Motion is communicated to the knife frame by means of a hand lever J, pivoted to the upper cross piece of the cutter frame at *d*, while the end of lever J, opposite the operator is slotted and held in proper position by a pin in one of the front pieces B'. It will thus be seen that when the operator raises lever J, the cutter frame and cutters are also raised and vice versa. When
50 both knives are used knife G, cuts down

upon plate E, while the other knife D cuts 55 by the edge of the plate.

The bottom of box A, is provided with an endless band or apron L, which encircles the wooden or stationary bottom M, and revolves on rolls *o, p*, the former being sustained in adjusting plates *y*, one of which
60 is seen in Fig. 1. for the purpose of keeping the apron straight or taut.

Motion is communicated to apron L, by means of a projection *e*, on the end of the
65 bottom, cutter frame C, striking against a movable block piece *f*, fitted in a groove in the front of piece K, whereby an "up" motion is given to said block piece *f*, at each upward motion of the cutter frame, the
70 block piece being drawn down by a spring *m*, attached to a projection *n*, see Fig. 1. To the rear of piece *f*, is fastened a pawl *g*, which takes into teeth on a ratchet wheel *h*, on the end of shaft *i*, of roll *p*. Pawl *g*,
75 is kept up against ratchet wheel *h*, by a spring *k*, while spring catch *j*, prevents the wheel from turning back. Pawl *g*, rests against a pin *l*, when drawn down by its spring *m*, pin *l*, passes through the side
80 board when that is on.

At every rising of the cutter frame, apron L, by the mechanism above described, is moved forward and thus, feeds the straw or hay to the knife. The operator by rais-
85 ing the cutter frame high can make the apron feed a greater length of straw or hay.

O, is a swing apron, hung at *y*, to keep the straw or hay pressed gently down while being fed forward. 90

Having described my improved hay and straw cutter, what I claim therein, as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement of projecting *e*, movable block *f*, pawl *g*, and
95 ratchet wheel *h*, operating in relation to each other for the purposes stated.

2. The combination with the cross head piece of the cutter frame, of the removable frame H, with its knife G, and pins, constructed and operating, as and for the purposes stated. 100

In witness whereof, I have hereunto subscribed my name.

JOHN D. COCHRAN.

In presence of—

PARIS H. HILL,
A. W. SAWYER.