O. MOSES.

STRAW CUTTER.

No. 15,342. Patented July 15, 1856.

Fig. 6

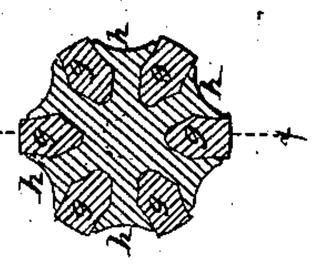


Fig. 7

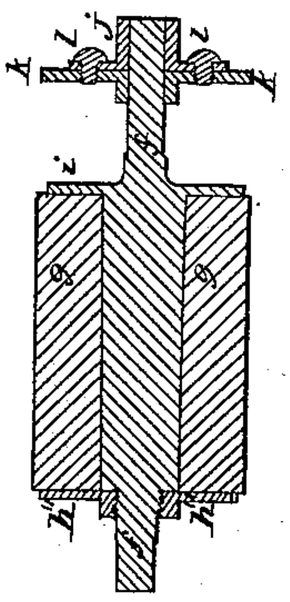


Fig. 5

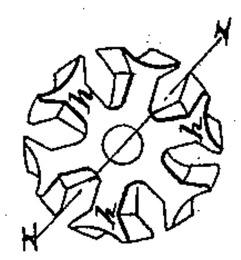


Fig. 8

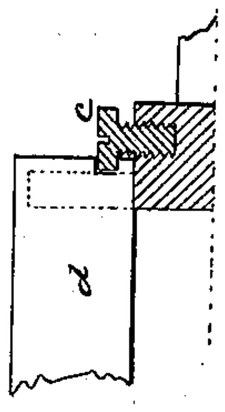


Fig. 4

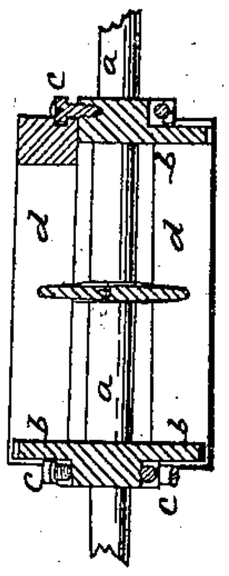


Fig. 3

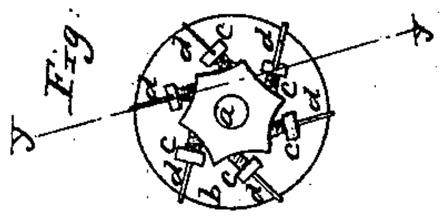


Fig. 2.

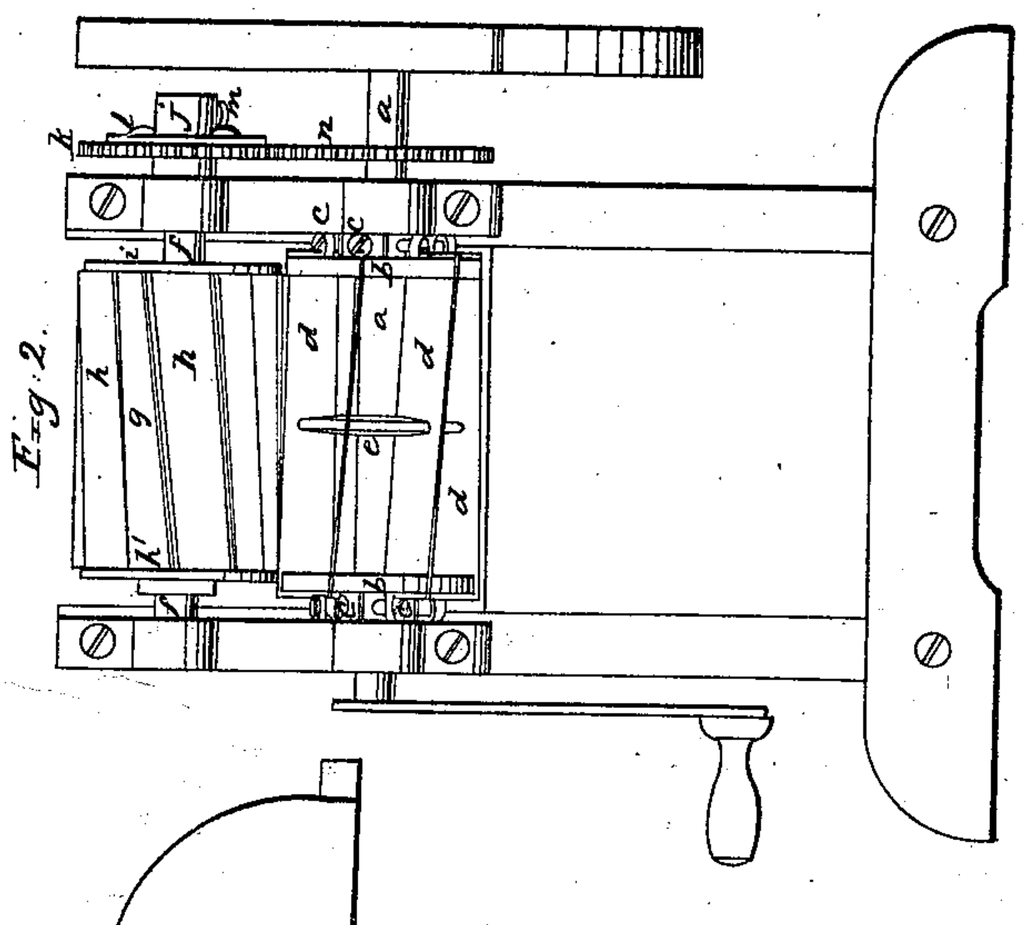
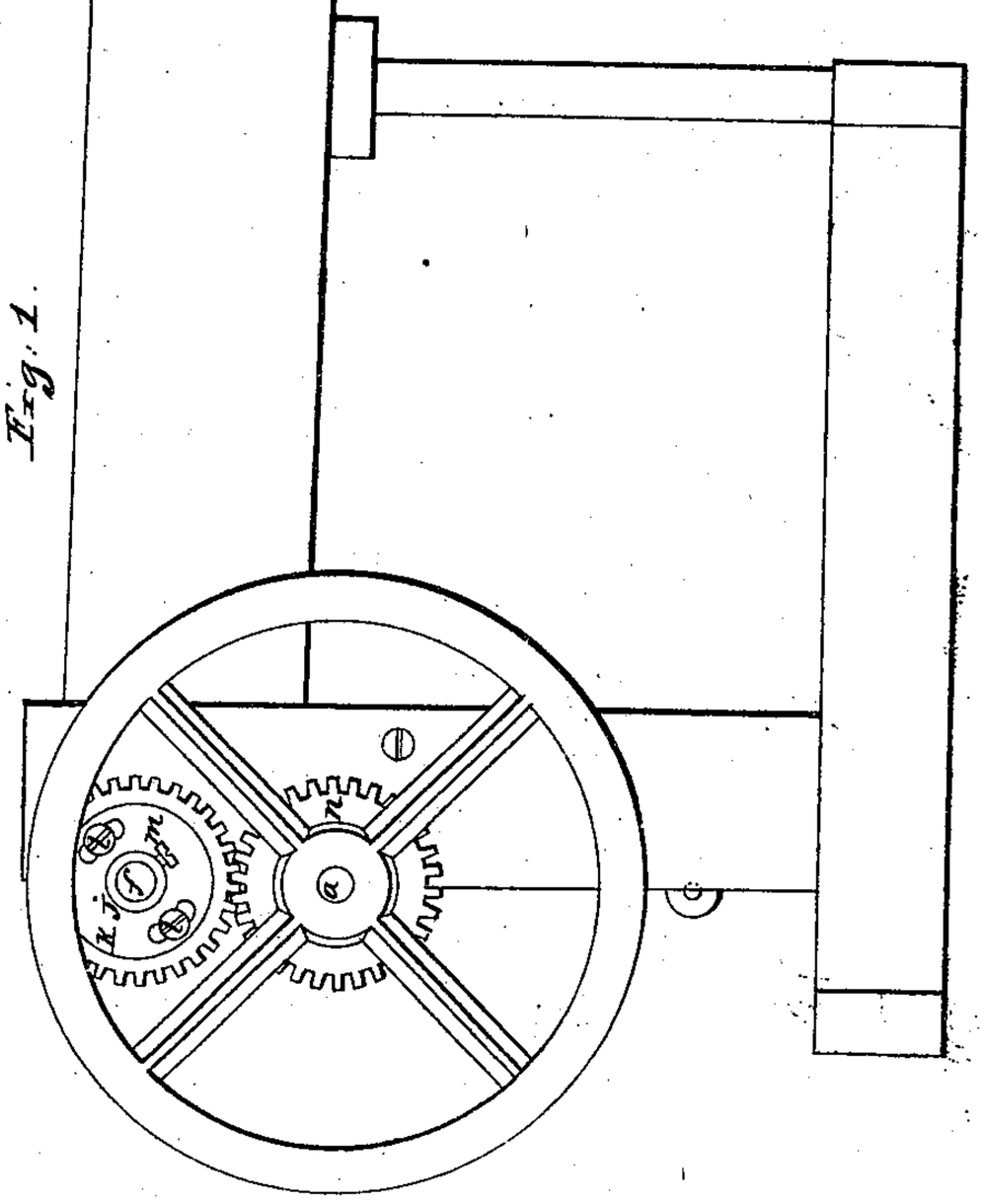


Fig. 1.



UNITED STATES PATENT OFFICE.

OREN MOSES, OF MALONE, NEW YORK.

STRAW-CUTTER.

Specification of Letters Patent No. 15,342, dated July 15, 1856.

To all whom it may concern:

Be it known that I, OREN MOSES, of Malone, in the county of Franklin and State of New York, have invented a new and useful Improvement 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.

Figure 1 is a side elevation of my improved straw cutter; Fig. 2, an elevation of the front end thereof; Fig. 3, an end view of the cutting cylinder detached from the machine; Fig. 4, a section of the cutting cylinder, in the line *y*, *y*, of Fig. 3; Fig. 5, an end view of the skeleton of the auxiliary cylinder detached from the machine; Fig. 6, a transverse section of the auxiliary cylinder; Fig. 7, a longitudinal section of said auxiliary cylinder, in the line *x*, *x*, of Figs. 5 and 6; and Fig. 8, a representation of a detached portion of the cutting cylinder enlarged.

Similar letters indicate like parts in all the figures.

The improved cutting cylinder employed by me, is constructed in the following manner, viz.: the knives *d*, *d*, are received into slits in the flanches *b*, *b*, *e*, which radiate the central shaft *a*. In each end of each one of said knives, a notch is formed which receives a portion of the radiating head of a set-screw *c*, that is inserted in a screw aperture in the hub, or offset, which projects outwardly from each of the flanches *b*, *b*. The said set screws *c*, *c*, it will therefore be observed, not only serve to hold the knives *d*, *d*, securely in their positions within the slits of the disks *b*, *b*, *e*, but they also enable the knives to be moved outwardly or inwardly, by turning said set-screws, for the purpose of adjusting the edges of the knives to any desired position.

The auxiliary cylinder which acts in conjunction with the cutting cylinder in my improved straw cutter, is composed of a cast-iron skeleton cylinder, having curved grooves that are filled in with wood, horn, or other suitable material. The form of said skeleton cylinder, is shown by Figs. 5, 6, and 7. The said grooves in the skeleton cylinder, between its short arms *h*, *h*, are closed at one end by the cast head, or flanche, *i*, and at the opposite end by the removable head *h''*, which may be secured in its closed position by means of a screw-cut central aperture matching to screw threads formed on the journal of the said auxiliary cylinder, as shown in Fig. 7, or the said head may be secured in its place by any other suitable means. The arms *h*, *h*, of the auxiliary cylinder, increase in thickness from their inner to their outer extremities, which causes the grooves between said arms to increase in width as they increase in depth, thereby rendering it necessary for the fillings *g*, *g*, of said cylinder, to be driven in from the ends of said grooves which are closed by the removable head *h''*. The journals *f*, *f*, of the auxiliary cylinder are cast in one piece with the body of said cylinder.

The cutting cylinder is geared to the auxiliary cylinder, by means of the toothed wheel *n*, on the shaft of the former, gearing into the toothed wheel *k*, on the elongated journal *f*, of the latter. The said toothed wheel *k*, is secured to the journal *f*, in such a manner that its position can be varied and so adjusted as to cause the edges of the knives *d*, *d*, to act upon any desired portion of the outer surfaces of the filling strips *g*, *g*, of the auxiliary cylinder. This is accomplished by means of a sleeve *j*, on the said elongated journals *f*, of the auxiliary cylinder, which has a radiating flanche at its inner end that fits against the surface of the said toothed wheel *k*, and is secured thereto by means of the set screws *l*, *l*, which pass through curved slots in the said flanche into screw apertures in the said toothed wheel. The said sleeve *j*, may be secured in any desired position upon the journal *f*, by means of the set-screw *m*.

When wood is employed to fill the grooves in the auxiliary cylinder, the blocks must be so shaped as to cause the grain of the wood to be parallel with the radius of the cylinder, when the said blocks are driven into their receiving grooves.

What I claim as my invention and desire to secure by Letters Patent, is—

Constructing the auxiliary cylinder of an iron skeleton combined with fillings *g*, *g*, of wood, horn, or other suitable material, when the shaft of said cylinder is secured to its driving pinion in such a manner that the relative position of the cutting cylinder and the auxiliary cylinder can be so adjusted as

to cause the edges of the knives *d*, *d*, in the former, to act equally and uniformly upon every portion of the face of each of the fillings in the latter cylinder, for the purpose of preventing the formation of deep channels in said fillings, substantially as herein set forth.

The above specification of my improvements in straw cutters, signed this 3rd day of May 1856.

OREN MOSES.

Witnesses:

Z. C. ROBBINS,

FRED MATHYS.