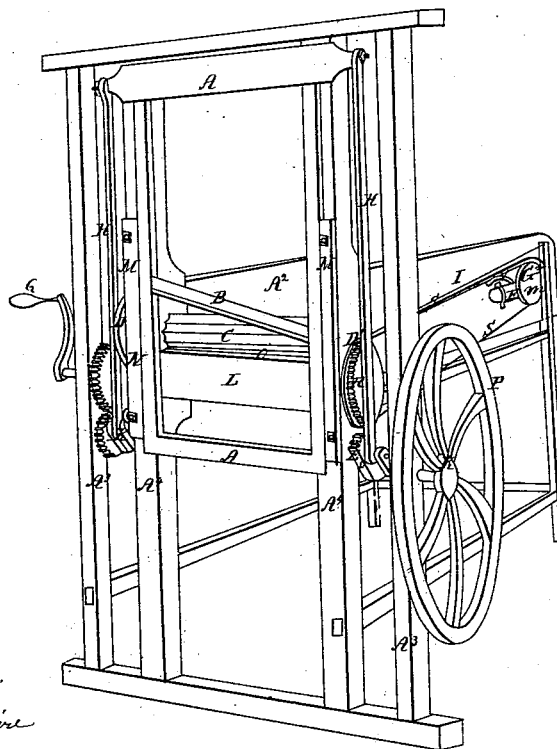
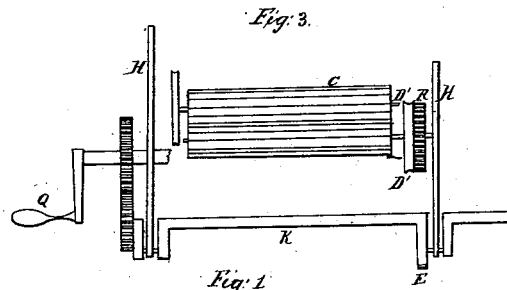
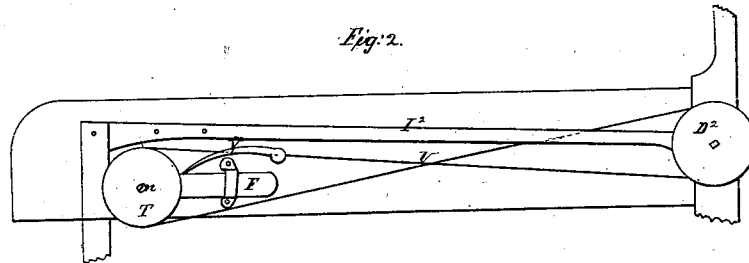


J. M. THATCHER.  
STRAW CUTTER.

No. 2,987.

Patented Mar. 4, 1843.



Witnesses;  
W. H. Fyvie  
James Thorp

Inventor  
J. M. Thatcher

# UNITED STATES PATENT OFFICE.

JOHN M. THATCHER, OF MILTON, PENNSYLVANIA.

## STRAW-CUTTER.

Specification of Letters Patent No. 2,987, dated March 4, 1843.

*To all whom it may concern:*

Be it known that I, JOHN M. THATCHER, of Milton, in the county of Northumberland and State of Pennsylvania, have invented or Improved a Machine for Cutting Straw, Hay, or Stalks; and I hereby declare that the following is a full and exact description, reference being had to the annexed drawings of the same, of which—

Figure 1 is a perspective view; Fig. 2 is a section; and Fig. 3 is a section thereof.

The straw, hay, and stalk cutter consists of a feeding box A<sup>2</sup> five feet long and fourteen inches wide. At the front of this box is fixed a wooden frame A<sup>3</sup>, A<sup>4</sup>, five feet high, having four uprights in two of which the timbers is two inches by three in diameter and in the remaining two (being the inner ones), three inches by six in diameter. The sides of the feeding box are let into the two inner uprights A<sup>4</sup> with tenon and mortise and against the front of each of said inner uprights a grooved cleat of cast iron N is screwed, between which moves a cast iron sliding frame A three feet in height. In and across the sliding frame is fixed a steel cutting blade B, at an angle of ten or twelve degrees from the horizon, which works against the edge of a steel plate laid on a wooden tie piece o over which the straw passes to be cut. The sliding frame and knife are raised and lowered with a seven inch stroke by a winch Q and double crank K with a balance wheel P attached.

The crank K acts upon the sliding frame A by means of two pitman rods H extending to the upper part of the frame. The machine is fed by two fluted rollers C' of cast iron, three inches in diameter, the lower roller laid with its upper surface on a level with the steel plate O above mentioned. The upper roller C is laid directly above the lower roller and the end of the same passing through each of the inner uprights A<sup>4</sup>, a slot made in the uprights for that purpose (the height of the slots being three and a half inches) the ends of the upper roller C are received into a box or bearing at the end of a wooden spring I extending from the hindmost part of the feeding box and in a manner similar on the other side of said box. The springs I being placed or fastened at the hindmost part of the box with screws, the farthest of which is six inches from the end of the remainder of the spring being left clear from the box so that it may

raise or lower according to the quantity of straw in the box, and on the opposite side in a similar manner. The lower roller C is placed exactly under the upper roller and behind the wooden tie piece o and steel plate, with its ends the one on the right side extending into the inner upright one inch, the other or left one going through the other upright and on the end is fastened a pulley D' and cogwheel R as may be seen on the drawing. The wheel or pinion is caught by an iron segment E which has four or more teeth on its outer edge or surface, and arms which lap over or embrace the top or arm of the crank to which it is fastened, and catches the pinion at each revolution of the crank, and turns the roller around in a degree proportioned to the number of teeth on the segment. The machine is fitted with a set of segments adapted to the different lengths of straw or other substance to be cut, the shortest being one eighth of an inch, the longest three inches. The segment is fastened to the crank by a screw and nut so as to be readily removed and another attached when it is desired to alter the length of the straw to be cut.

Against the inner surface of the pinion R belonging to the lower roller is fixed a pulley D' around which a band S passes to a similar pulley G<sup>3</sup> at the farther end of the box; which pulley is attached to a wooden roller designated by letter m, which works under the straw at the hindmost end of the box and serves to pass it forward to the fluted rollers. On the opposite end of this roller is a pulley T around which a crossed band U passes to a pulley D<sup>2</sup> on the end of the upper feeding rollers C and causes it to revolve in unison with the lower roller, and passes the straw under the knife.

The tension of the bands are maintained by sliding boxes F or bearings which are placed against the hindmost part of the feeding box, and are supported by one end passing between the box and hindmost upright, the other by a plate of hoop iron made for that purpose and on the opposite side of the boxes or bearings are teeth into which a latch or pawl V which is fastened with one end to the feeding box, the other extending toward and dropping between the teeth on the box or bearing which stays it until it is thought proper to remove it farther. Through each of these boxes or bearings

passes the wooden roller which is at the hinder part of the box, there being a horizontal slot any length thought proper.

What I claim as my invention and wish  
5 to secure by Letters Patent is—

The application of the segment or segments designated by letter E, to the arm of

the crank which causes the fluted rollers to revolve in proportion to the number of teeth on the segment herein described.

JOHN M. THATCHER.

Witnesses:

DANIEL FURYMAYOR,  
CHARLES WEAVER.