

*H. H. Robbins.*  
*Trimming Straw Braid.*

*N<sup>o</sup>. 984.*

*Patented Feb. 18, 1841.*

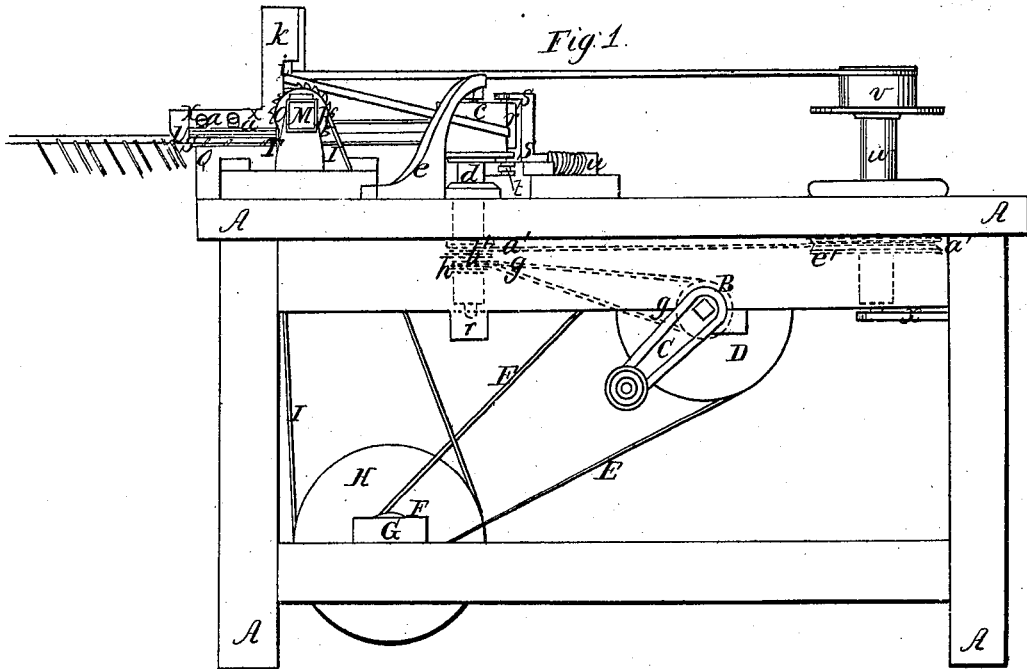
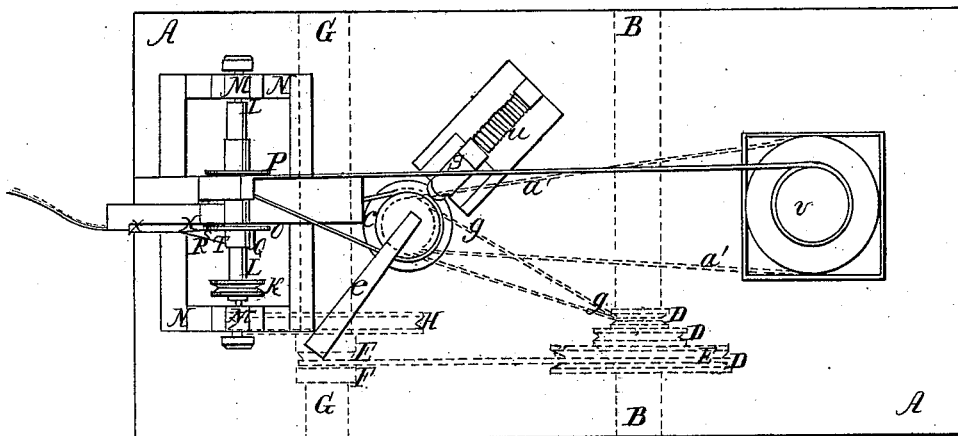


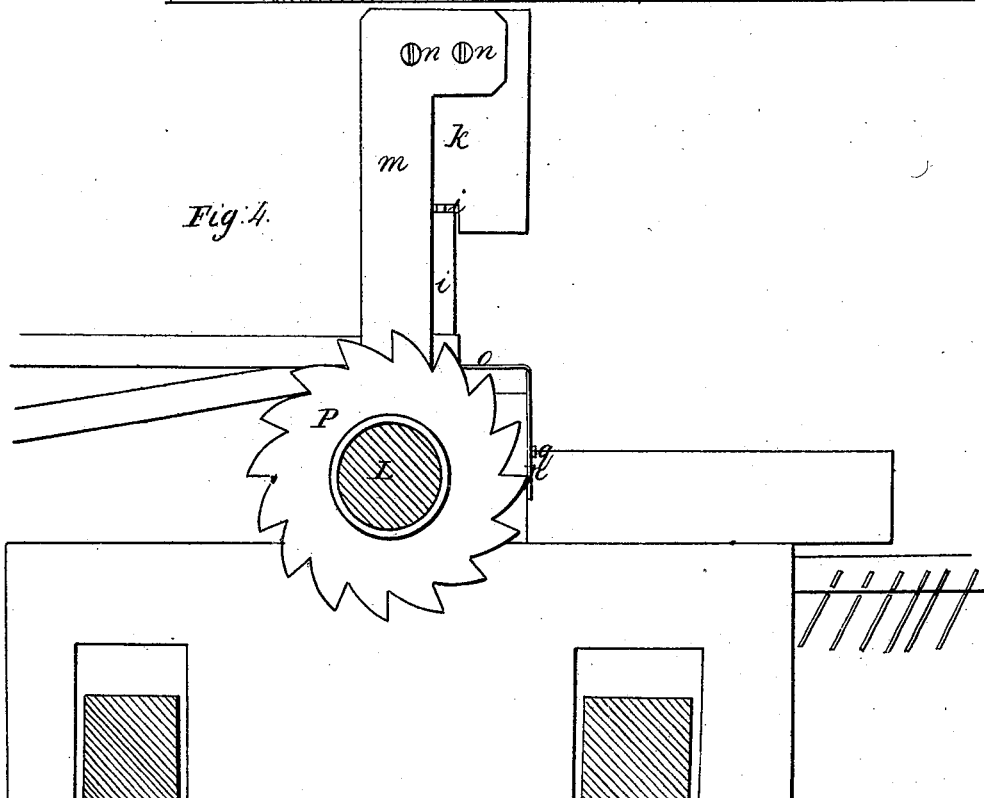
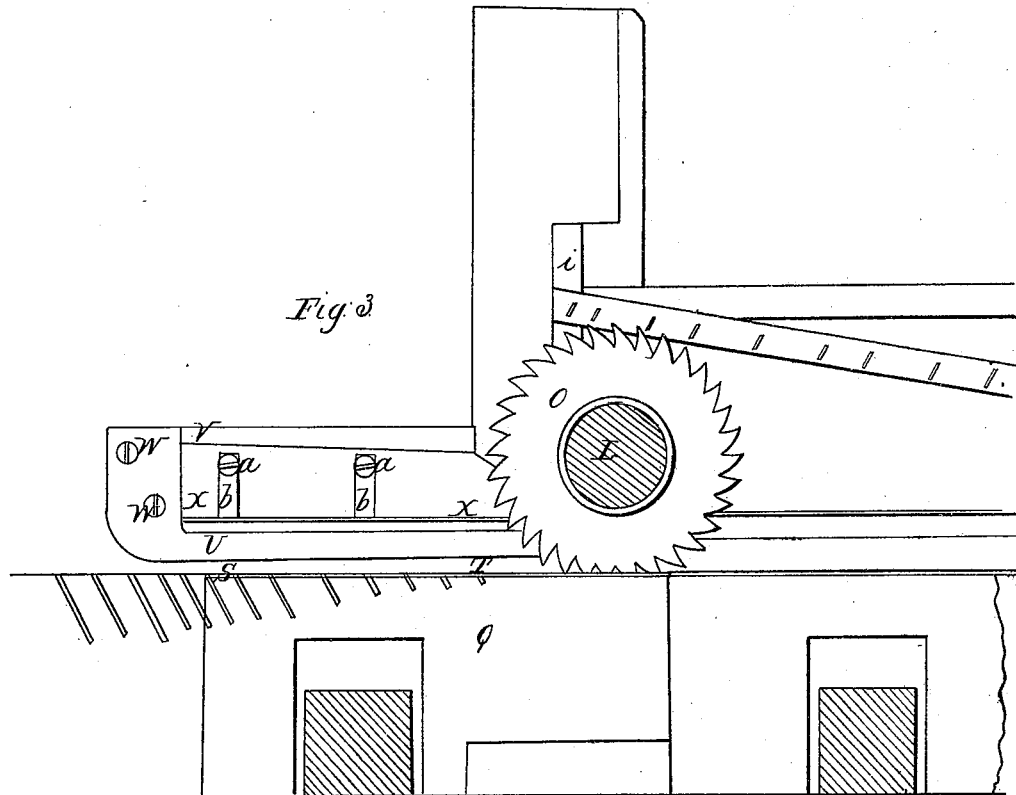
Fig. 2.



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# UNITED STATES PATENT OFFICE.

HENRY H. ROBBINS, OF MIDDLEBORO, MASSACHUSETTS.

## MACHINERY FOR TRIMMING STRAW BRAID.

Specification of Letters Patent No. 1,984, dated February 18, 1841.

*To all whom it may concern:*

Be it known that I, HENRY H. ROBBINS, of Middleboro, in the county of Plymouth and State of Massachusetts, have invented  
5 new and useful Improvements in Machinery for Trimming Straw Braid.

These improvements, the principles thereof, the application of said principles by which the same may be distinguished from  
10 other inventions, together with such parts, improvements or combinations as I claim to be my invention and for which I solicit Letters Patent I have herein set forth in the following description and accompanying  
15 drawings herein referred to, which taken in connection form my specification.

Figures 1, 2, 3 4 represent my improvements. Fig. 1 is a side elevation of my machine and Fig. 2 a plan of the same. Figs.  
20 3 and 4 being detailed views of some of the important parts.

A A A A is the framework to which the different operative parts of the machine are attached.

25 B B is the driving shaft having proper bearings in the framework A A, to which shaft power may be applied by a winch C or in any other proper way. A cone of pulleys D, D, D, is firmly fixed on the shaft B B a  
30 band E E from one of which pulleys passes to and around a pulley F on the shaft G G the journals of which shaft have proper bearings in the lower part of the framework as shown in Fig. 1. A pulley H of larger  
35 diameter than the pulley F is firmly fixed on the shaft G G and a band I I from this pulley passes to and around a grooved pulley K on the shaft L L, the journals of which shaft have proper bearings in the  
40 uprights M M attached to the framework N N.

Two circular saws O P are arranged on and revolve with the shaft L L being placed at proper distances apart. These saws are  
45 for cutting off the long and short ends which occur in braiding straw. The long ends are first to be separated from the braid and for this purpose it is passed to the circular saw O over the block Q, one side R of  
50 which is beveled or inclined as shown in Fig. 2, the wider part of the block being under the shaft L L. On the top of the block Q is a plate of metal S T, Figs. 1 and 3, which I denominate a riser, the said plate  
55 being triangular, and the inclined side cor-

responding with the beveled side of the block Q, so that the angular part S of the plate S T will be where the braid enters.

From the arrangement above specified it will be seen that the long ends which in  
60 their natural position in the braid, when it is placed edgewise, are vertical or nearly so, will, as the braid passes along the riser S T be gradually brought to a horizontal position, see Figs. 1 and 3, so that when  
65 they arrive under the circular saw, they may be effectually operated on by the same.

The braid is kept in its vertical position as it passes along the riser by means of a steel spring U (secured at one end to the upright part V of the block Q by screws  
70 W W), and a gage X X which is formed of a piece of metal, the lower part of which is bent at right angles to the upper as shown in Figs. 2 and 3, the bent part projecting over the spring U and being at a  
75 distance from the riser sufficient only to permit the passage of the braid, keeping the lower side of the same in close contact with the surface of the riser, and likewise  
80 by this means keeping the ends to be cut off horizontal. The gage may be adjusted to any width of braid by means of the screws a a which secure it to the block V and slots  
85 b b, which arrangement will be understood by an inspection of Fig. 3. The braid is drawn from the circular saw O by a roller c firmly fixed on a vertical shaft d one end or journal of which has a proper bearing in the curved upright e attached to the  
90 framework A A, the other end or journal being supported in a step in the cross beam f as shown in dotted lines partly in Fig. 1. The shaft d and roller c thereon are caused to revolve by a belt g g passing from one of  
95 the pulleys D on the driving shaft B B to and around a pulley h on the shaft d. The braid in passing around the roller c is pressed against the same and retarded by the friction roller r properly supported in  
100 the movable frame s s as shown in Fig. 1, which is guided by the tongueing and grooving shown at t, and pressed up by the wound circular spring u, the operation of which will be readily understood by an inspection of Figs. 1 and 2. The braid turning  
105 around the roller c as shown in Fig. 1, is next passed to and around a small metallic roller i the journals of which are properly arranged in the opening in the upright  
110

block *k*, as shown at *l*, Fig. 4. Between this roller *i* and the circular saw *P* is a bed knife *m* properly secured to the block *k* by screws *n, n*, Fig. 4.

5 From the above it will be apparent that as the braid is passed around the roller *i*, the bend being sharp, that the short ends will project or stand out sufficiently to enable the circular saw to separate them from the braid as they come into the "bite" 10 formed by the edge of the bed knife *m* and the teeth of the circular saw *P* as it revolves, the face of the bedknife likewise serving to prevent the teeth of the saw from injuring the braid. The braid is guided in 15 passing around the roller *i* by a bent gage *O P* Fig. 4, on the bent part *O* of which the lower side of the braid rests. This gage may be raised or lowered at pleasure by means of a slot in the part *p* and a screw *q* 20 which passes through the same and confines the gage in any position to the block *k*.

The braid is drawn from the circular saw *P* by the roller *v* on the vertical shaft *w* 25 the lower part of which rests and revolves in a proper step in the projection *x* from the framework *A A*. This shaft is revolved

by a band *a' a'* passing from a pulley *h'* on the shaft *d* to the pulley *e'* on the shaft *w*.

Having thus described my improved machine I shall claim as my invention, 30

1. The combination of a revolving circular saw with a riser (so called) and a spring and gage, the whole being arranged and operating substantially as herein above 35 described for the purpose of separating the "long ends" from the braid.

2. And I also claim separating the short ends from the braid, on the opposite side of the same, by means of a circular saw in combination with a small metallic roller, bedknife and gage, the arrangement and operation being substantially as herein above 40 specified.

In testimony that the above is a true description of my said invention and improvement I have hereto set my signature thirtieth day of December in the year eighteen hundred and forty. 45

HENRY H. ROBBINS.

Witnesses:

EARL ALDEN,  
ELIAH WARD.