(No Model.)

J. W. MARSHALL.

FEED CUTTER.

No. 412,034. Patented Oct. 1, 1889.

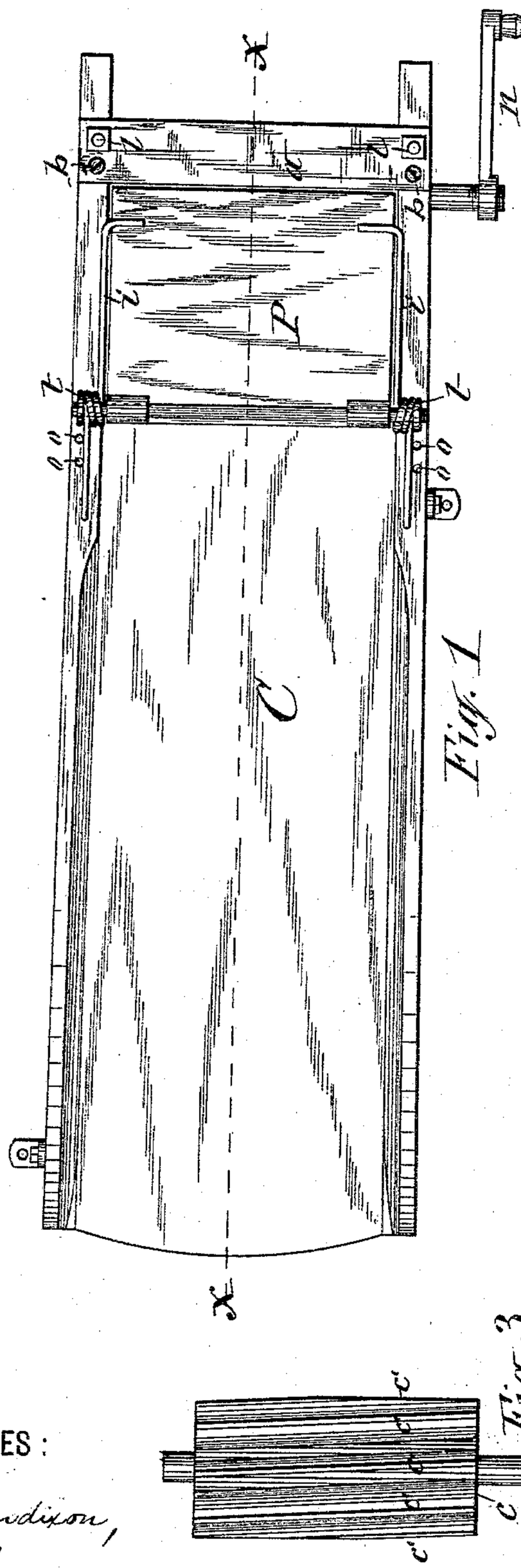

Fig. 1.

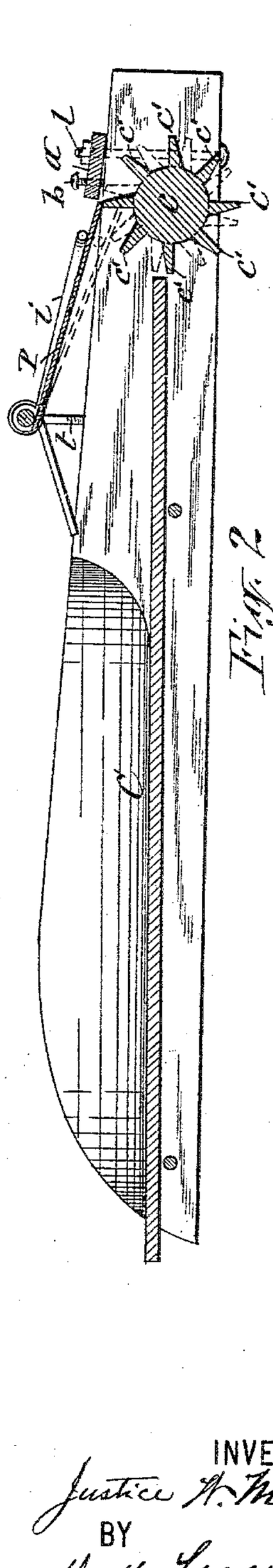

Fig. 2.

Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JUSTICE W. MARSHALL, OF CAZENOVIA, NEW YORK, ASSIGNOR TO PILSBURY A. WEBSTER, OF SAME PLACE.

FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 412,034, dated October 1, 1889.

Application filed June 7, 1889. Serial No. 313,423. (No model.)

To all whom it may concern:

Be it known that I, JUSTICE W. MARSHALL, of Cazenovia, in the county of Madison, in the State of New York, have invented new and useful Improvements in Feed-Cutters, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

In said drawings, Figure 1 is a top plan view of my improved feed-cutter. Fig. 2 is a longitudinal vertical section on line *x x*, Fig. 1; and Fig. 3 is a detached plan view of the feed-roller.

Similar letters of reference indicate corresponding parts.

C represents the usual trough in which to place the feed to be cut. Across the top of the front end of the said trough is secured a stationary knife *a*, which consists simply of a plain steel bar presenting a square face at its cutting-edge. This knife I preferably arrange adjustable in its position by securing the front portion thereof to the trough by bolts *l l*, passing vertically through the knife and through the side plates of the trough.

The rear portion of the knife is provided with screw-threaded openings, in which work set-screws *b b*, resting with their lower ends on top of the aforesaid side plates. Under the rear edge of the knife *a* is arranged the feed-roller *c*, which is extended across the trough C, and has its shaft extending through one of the side plates of said trough, and provided with a crank *n*, by which to turn the said feed-roller. This feed-roller is provided with wings *c' c'*, which are disposed longitudinally obliquely in relation to the axis of the roller, and said wings are of such widths as to cause them to pass in proximity to the cutting-edge of the stationary knife *a* during the rotation of the feed-roller.

The aforesaid adjustable attachment of the stationary knife *a* allows the same to be adjusted so as to maintain said knife in proper position to cause the wings of the roller to pass closely to the knife during the operation of the machine.

P represents a plate, which is hinged to suitable supports *t t*, secured to the side plates of the trough and at such a distance from the stationary knife *a* as to allow the free edge of the plate to lie upon the subjacent feed-roller *c*. Said plate is made to press on the feed-roller by means of springs *i i*, secured to the pivotal supports of the plate and bearing on the free end thereof.

During the operation of the machine the feed-roller *c* draws the material to be cut toward the stationary knife *a*. The plate P, pressing on the material thus carried forward, allows the feed-roller to obtain a firm grip on the material to be cut, and also prevents said material from passing up over the stationary knife *a*. By setting the plate P farther from the stationary knife *a* the feed-roller receives a longer hold on the material to be cut, and thus the cut of the feed is lengthened.

In order to allow the machine to be adjusted for different lengths of cut, I arrange the pivotal supports *t t* of the plate P adjustable toward and from the stationary knife *a*, and in a smaller machine this may be accomplished by employing screw-eyes for the pivotal supports of the plate and providing the top of the side plates of the trough with a series of holes *o o*, adapted to receive said screw-eyes.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a feed-cutter, the combination, with the trough, of a knife extended across the top of said trough and secured thereto, and a feed-roller arranged across the trough under the aforesaid knife and provided with wings adapted to pass with their free edges in proximity to the said knife, substantially as described and shown.

2. In a feed-cutter, the combination, with the trough, of the knife *a*, extended across the top of said trough and secured at its front edge to the same, the set-screws *b b*, working in screw-threaded openings near the rear edge of the said knife and bearing on top of the trough, and the feed-roller *c*, arranged across the trough under the rear edge of the aforesaid knife and provided with wings adapted to pass with their edges in proximity to the knife, substantially as described and shown.

3. In combination with the trough C, the stationary knife *a*, extended across the top of said trough and secured thereto, the feed-roller *c*, arranged across the trough under the rear

edge of the aforesaid knife and provided with wings c' c', disposed longitudinally obliquely in relation to the axis of the roller and adapted to pass with the edges of said wings in proximity to the rear edge of the stationary knife, the plate P, lying movably vertically over the feed-roller c, and a spring or springs pressing said plate toward the said roller, substantially as and for the purpose set forth.

4. In combination with the trough C, knife a, and feed-roller c, the pivotal supports t t, connected to the side plates of the trough adjustably toward and from the aforesaid knife, the plate P, pivoted to the aforesaid supports and resting with its front end upon the feed-roller, and springs i i, pressing the said plate toward the feed-roller, substantially as described and shown.

In testimony whereof I have hereunto signed my name this 29th day of May, 1889.

JUSTICE W. MARSHALL. [L. S.]

Witnesses:

FRANK J. PULFORD,

E. W. DUTTON.