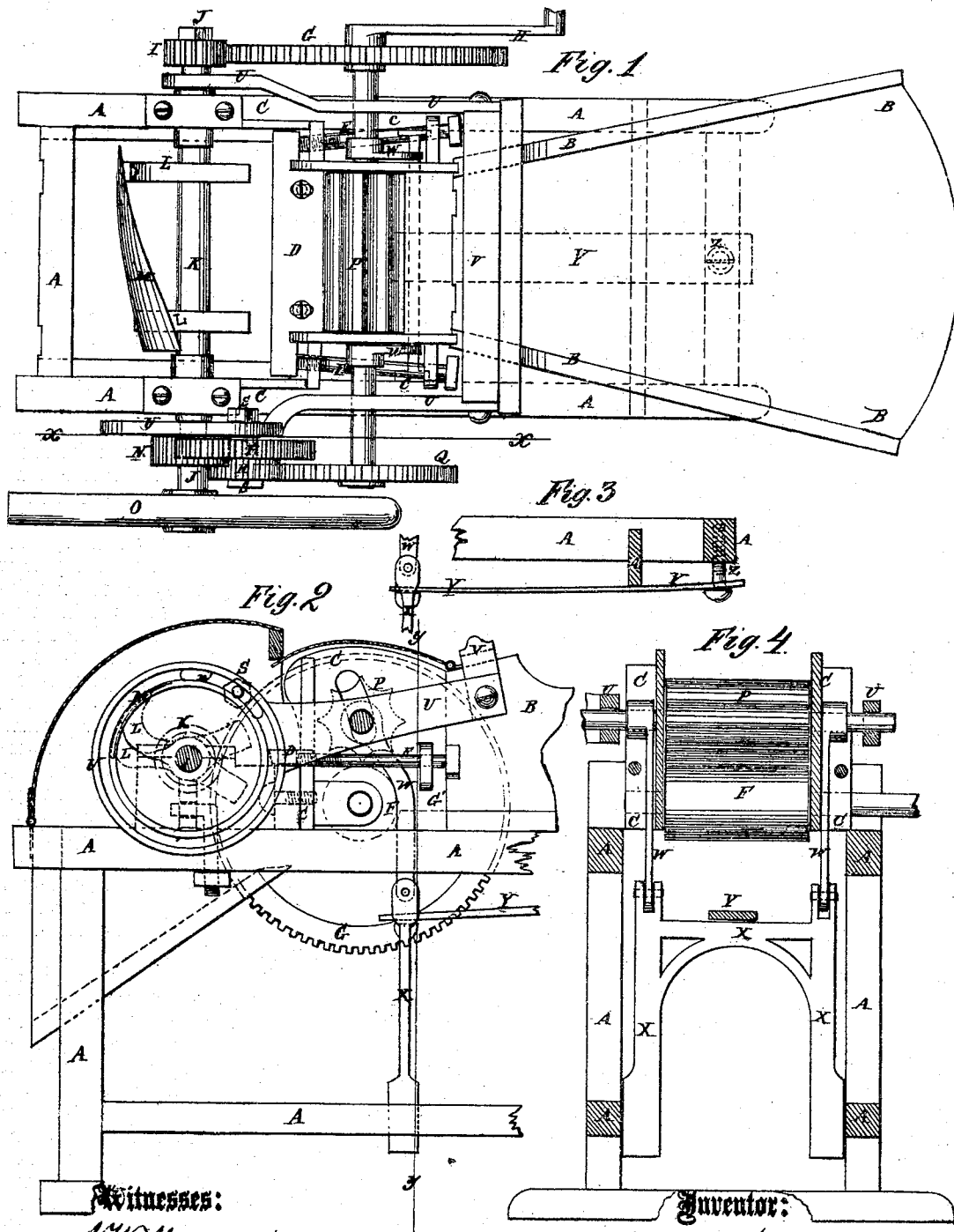


H. BALDWIN.
Improvement in Straw-Cutters.
No. 128,273. Patented June 25, 1872.



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IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. 128,273, dated June 25, 1872.

Specification describing a new and useful Improvement in Fodder-Cutter, invented by HERMAN BALDWIN, of New Haven, in the county of New Haven and State of Connecticut.

In the accompanying drawing, Figure 1 is a top view of my improved fodder-cutter, the covers being removed. Fig. 2 is a side view of the same, partly in section through the line *xx*, Fig. 1, to show the construction. Fig. 3 is a detail view of the spring for holding down the upper feed-roller. Fig. 4 is a detail cross-section of the fodder-cutter taken through the line *yy*, Fig. 2.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved fodder-cutter, which shall be so constructed that the upper or movable feed-roller may be made to move up and down squarely, whether the material to be cut be thicker under one end of said roller or not, and which may be readily adjusted to cut the feed longer or shorter, as may be desired; and it consists in the construction and combination of various parts of the machine, as hereinafter more fully described.

A is the frame of the fodder-cutter, to the rear part of which is attached the feed-box B, in which the material is placed and from which it is fed forward to the knife. To the forward part of the frame A are attached the castings C, in which are formed the bearings for the various shafts, and the rear part of which forms the forward part of the feed-box B. D is the plate upon which the material rests while being cut, and which is moved forward to take up the wear by bolts E, which pass through side flanges of the castings C, and the forward ends of which rest against the rear edges of the ends of the plate D. The bolts E are made long, so that they may be conveniently reached and operated, and their rear parts pass through and are supported by guide loops or lugs formed upon the sides of the rear parts of the castings C. F is the lower feed-roller, the journals of which revolve in bearings in the lower rear part of the castings C, and which is placed just in the rear of the plate D. One of the journals of the roller F projects, and to it is attached a large gear-wheel, G, to which, or to the said

journals is attached the crank H, by which the machine is operated. The teeth of the gear-wheel G mesh into the teeth of the small gear-wheel I attached to the shaft J, to which is attached the sleeve K that carries the arms L, to the outer ends of which the knife M is attached. To the other end of the shaft J is attached a small gear-wheel, N, and also a large fly-wheel, O, to give steadiness of motion and momentum to the machine. P is the upper feed-roller, which I prefer to make fluted, and the journals of which pass through and revolve in slots in the rear part of the castings C. To the projecting journal of the feed-roller P is secured a large gear-wheel, Q. The gear-wheel Q may be secured to the journal of the feed-roller P, by a key or other suitable means to enable it to be moved in or out in adjusting the feed. The teeth of the gear-wheels N Q mesh into the teeth of two gear-wheels, R, rigidly connected together, or into the teeth of a single gear-wheel, R, which revolves upon a journal, S, which is adjustably secured in a slot, *u'*, in the circular forward end of the lever U. This construction allows the gear wheel or wheels R to be exchanged for larger or smaller gear-wheels, according as a slower or faster feed is desired, the slot *u'* enabling the journal S to be adjusted as the various sizes of the gear-wheel or wheels R may require. The slot *u'* may be formed in any desired part of the circular end of the lever U that may be most convenient. The journals of the upper feed-roller P revolve in bearings in the levers U, which are placed one on each side of the machine, and the forward ends of which have holes formed through them to receive the journals of the shaft J, so that the forward ends of the said levers U may be supported by and may be pivoted to the journals of the said shaft J. The rear ends of the two levers U are rigidly connected to each other by a yoke or cross-bar, V, which passed across the top of the forward part of the box B, so that one of said levers cannot rise without the other, thus causing the upper feed-roller P to move up and down squarely, however uneven may be the thickness of the material being cut. Upon the journals of the upper feed-roller P are hung the hooks or eye rods W, to the lower ends of which are pivoted the upper ends of the side bars of the

frame X. The lower ends of the side bars of the frame X pass down across the inner sides of the lower side bars of the frame A, as shown in Figs. 2 and 4. The frame X thus causes the upper feed-roller P to move up and down squarely, however uneven may be the thickness of the material passing between the feed-rollers. Y is a strong wooden spring, the forward end of which rests upon the upper side of the cross-bar of the frame X. The spring Y passes beneath and rests against the lower side of a cross-bar of the frame A as a fulcrum. The rear end of the spring is supported by a bolt, Z, which passes up into a cross-bar of the frame A, so that by turning the said bolt Z up or down, the tension of the spring Y may be regulated as may be required to hold the upper feed-roller P down with the necessary force upon the material being operated upon.

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

1. The hook or eye bars W and frame X, in

combination with the upper feed-roller P and the frame A of a fodder-cutter, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the adjustable spring Y with the guide-frame X, hook or eye bars W, upper feed-roller P, and frame A, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the detachable gear-wheels R, one or both, and adjustable journal S, with the gear-wheel N attached to the journal of the knife-shaft J, the gear-wheel Q attached to the journal of the upper feed-roller P, and the circular slotted forward end of the lever U pivoted to the knife-shaft J, and carrying the journal of the upper feed-roller P, substantially as herein shown and described, and for the purpose set forth.

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