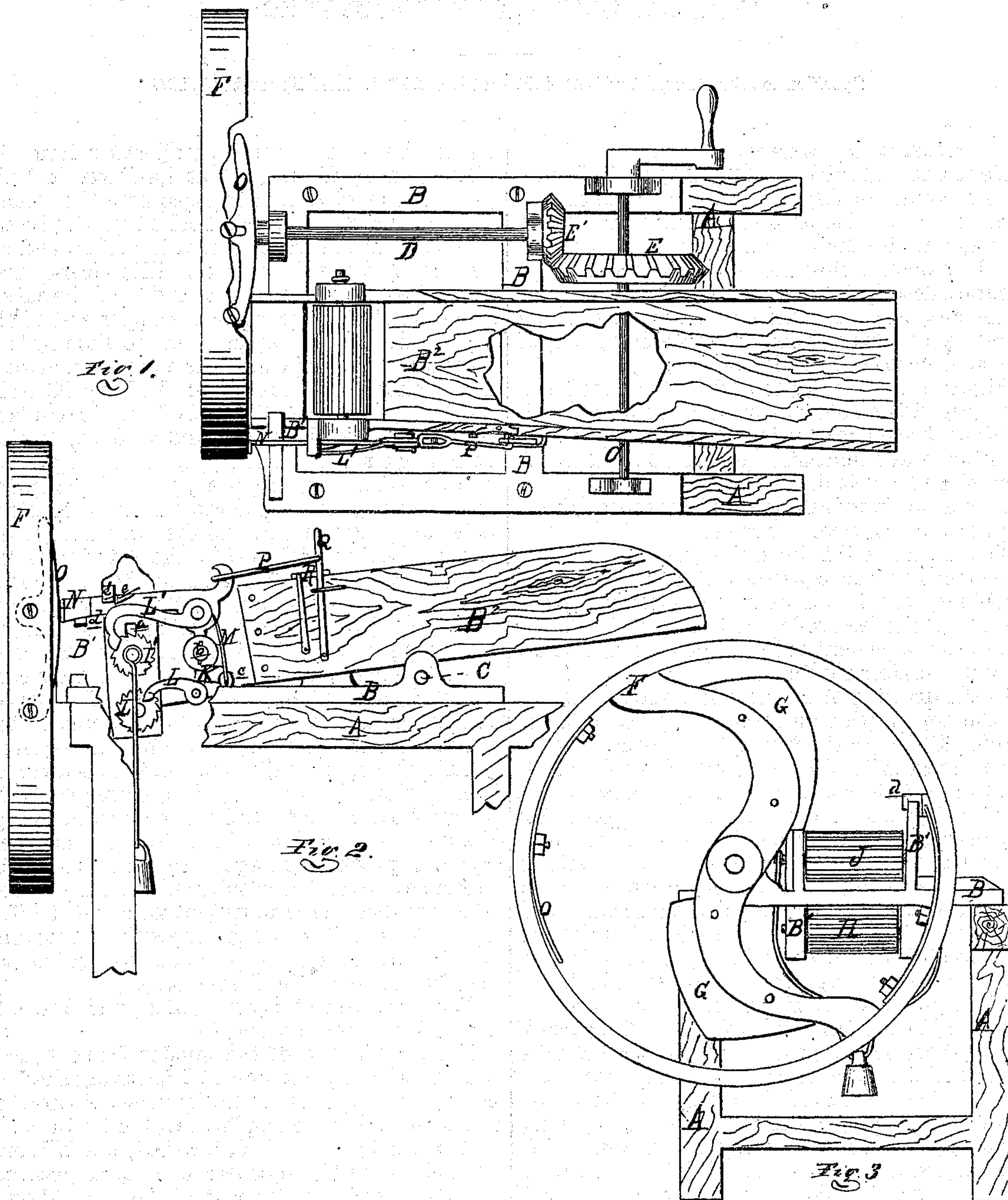


HUGH SELLS.

Improvement in Straw Cutters.

No. 120,781.

Patented Nov. 7, 1871.



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HUGH SELLS, OF VIENNA, CANADA.

IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. 120,781, dated November 7, 1871.

To all whom it may concern:

Be it known that I, HUGH SELLS, of Vienna, in the county of Elgin, in the province of Ontario and Dominion of Canada, have invented a new and useful Improvement in Feed-Cutters; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a plan or top view of my feed-cutter. Fig. 2 is a side elevation of the same, with portions broken away to better show its construction and operation; and Fig. 3 is an elevation of the front end.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of this invention relates to an improvement in the construction of feed-cutting machines, and to an improved mechanism for operating the feed-rolls; and it consists in the general arrangement of its various parts, as more fully hereinafter set forth.

In the drawing, A represents a wooden frame, on the top of which a cast-iron frame, B, is secured. B¹ B¹ are the vertical cheek-plates, cast in one piece with the front girt of the frame B, and from the throat of the cutting-box B², which is of wood joined therewith, and is supported by the rear girt of the frame B. C is the driving-shaft, transversely journaled in the rear part of the iron frame B under the cutting-box, and is rotated by a suitable crank, or in large machines by power. This shaft gives motion to another, D, journaled in the same frame at right angles with the first through the miter-gears E E', the overhanging end of which shaft carries a fly-wheel, F, to the two arms of which the curved cutters G are bolted, passing in close contact with the end of the throat in the rotation of the wheel. H is the lower feed-roll journaled in the lower parts of or pendent portions of the cheek-plates, its shaft at one end carrying a ratchet-wheel I. J is the upper feed-roll, journaled in the vertical slots *a* of the cheek-plates, and having a vertical play therein. Its outer end also carries a ratchet, I', the direction of whose teeth is the reverse of those of the lower one. K is a lever, pivoted at

its middle to the stud *b*, projecting from the cheek-plate. To a wrist at its lower end the pawl L is pivoted, and engages with the ratchet of the lower roll. L' is a hooked pawl, pivoted to a wrist at the upper end of the lever, and engages with the upper ratchet. M is a leaf-spring, secured at its lower end to a stud, *c*, on the cheek-plate, its free end pressing the upper end of the lever K in such a way as to cause the pawls to recede on the ratchets. N is a cam-rod, pivoted at its inner end to the top of the lever K, while its outer projects at the end of the cheek-plate, being supported by a hook and guide, *d*, or other equivalent means. A stop, *e*, coming against a stud, *e'*, on the cheek-plate prevents the spring from moving the bar too far. O are two adjustable cam-plates, secured to the inner face of the rim of the fly-wheel, and in the rotation of the wheel each presses the rod inward and through the ratchets and pawls simultaneously, moves the feed-rolls a part of a revolution, determined by the throw given said cam-plates. The cams are set to feed the rolls forward just after each knife has passed below the plane of the throat, and, by adjusting the throw of the cam-plates, the fodder may be cut coarse or fine, as required. A link, P, connects the cam-rod with a lever, Q, which, when drawn back of a spring-latch, R, draws the cam-rod away from the cams and stops the feeding operation, which often becomes necessary to prevent damage to the knives from the presence of extraneous substances in the fodder, often not discovered until the last moment. The upper feed-roll is weighted with a bale and weight, as shown, but any other equivalent means may be employed for the purpose.

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

The combination of the wooden frame A, iron bed-frame B B¹, cutting-box B², driving-shaft C, cutter-shaft D, gears E E', fly-wheel F carrying the cutters G and cam-plates O, the feed-rolls H and J, ratchets I and I', lever K, pawls L and L', and spring M, all constructed, arranged, and operated substantially as described and shown.

Witnesses:

HUGH SELLS.

MYRON H. CHURCH,
H. F. EBERTS.