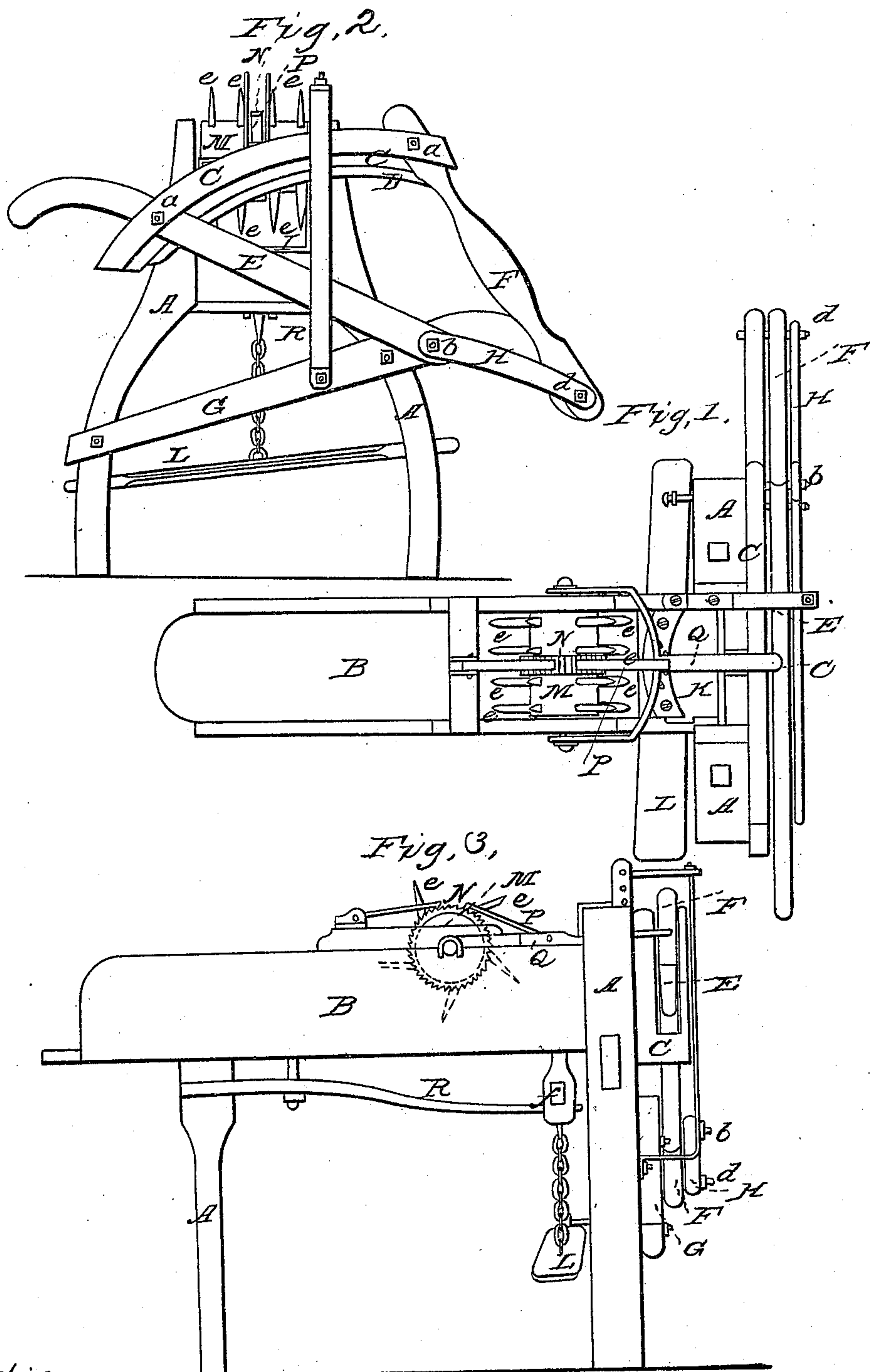


J. B. DRAKE.
Straw Cutter.

No. 24,014.

Patented May 17, 1859.



Witnesses:
John W. Brown
Jacob S. Poulle

Inventor:
J. B. Drake

UNITED STATES PATENT OFFICE.

J. B. DRAKE, OF GOSHEN, INDIANA.

STRAW-CUTTER.

Specification of Letters Patent No. 24,014, dated May 17, 1859.

To all whom it may concern:

Be it known that I, J. B. DRAKE, of Goshen, in the county of Elkhart and State of Indiana, have invented a certain Improvement in Straw-Cutters, the construction and operation of which I have described in the following specification and illustrated in the accompanying drawings with sufficient clearness to enable competent and skilful workmen in the arts to which it pertains or is most nearly allied to make and use my invention.

My said invention consists in the combined construction and arrangement of the toothed feeding roller, and the ratchet wheel by means of which motion is given to it, by which arrangement while the ratchet wheel is made to operate more effectually as a band to keep the roller from splitting, at the same time the teeth are made to keep the ratchet wheel from working out of place as hereinafter described and shown.

In the accompanying drawings Figure 1 is a plan of my improved machine. Fig. 2 is an end elevation. Fig. 3 is a side elevation.

A is the frame of the machine.

B is the feed box in which the straw is to be fed to the cutting knife D. This knife is made curved as shown in Fig. 2, and is attached by bolts *a a* to the curved bars C C. These bolts *a a* also act as journals or points of connection and vibration to the links E and F as shown in Fig. 2. The link E also serves as a handle by which the machine may be operated. These links E and F are hung by small bolts *b* and *d* to the cross bar G as shown, and are further supported between those two points by the link H. By this mode of hanging the knife a peculiar drawing cut is produced in such a manner as to keep the angle of intersection between the knife and the throat piece I nearly or quite the same at all points of the stroke,

which arrangement when combined with the curvature of the knife gives a very happy and useful gathering action as well as drawing cut to the knife.

K is a clamp by which the straw near the cutting points is condensed, which clamp is operated by means of a treadle L.

M is the feed roller by which the straw is pushed forward to the knife. It is made of wood and filled with spikes *e e* which enter the mass of straw to move it forward. Before these spikes are driven into the roller, the ratchet wheel N is driven upon it and into a central position as shown in Figs. 1 and 2, which prevents it from splitting, and the spikes *e e* being driven in, keep it from working off the roller or getting out of position, and at the same time and by the same means a central position of the ratchet wheel is secured which gives a better action of the parts.

The ratchet or pawl P is operated by the forked lever Q which has its bearings or points of vibration upon the ends of the journals of the feeding roller M. It is operated by the beam to which the knife is directly attached. The clamp is kept up in position by the spring R which gives an upward pressure to the bow *f* which is a part of the frame of the clamp.

The particular improvement which constitutes my said invention and which I claim as having been originally and first invented by me is—

The arrangement of the hinged, forked, feeding pawl frame Q, feeding and stop pawls P and T, centrally arranged ratchet wheel N, spiked feed roller M, and rising and falling knife frame, substantially as and for the purposes set forth.

J. B. DRAKE.

Witnesses:

JOHN W. IRWIN,
JACOB L. POWELL.