A. GORDON.

Straw Cutter.

No. 15,761. Patented Sept. 23, 1856.

Fig. 1

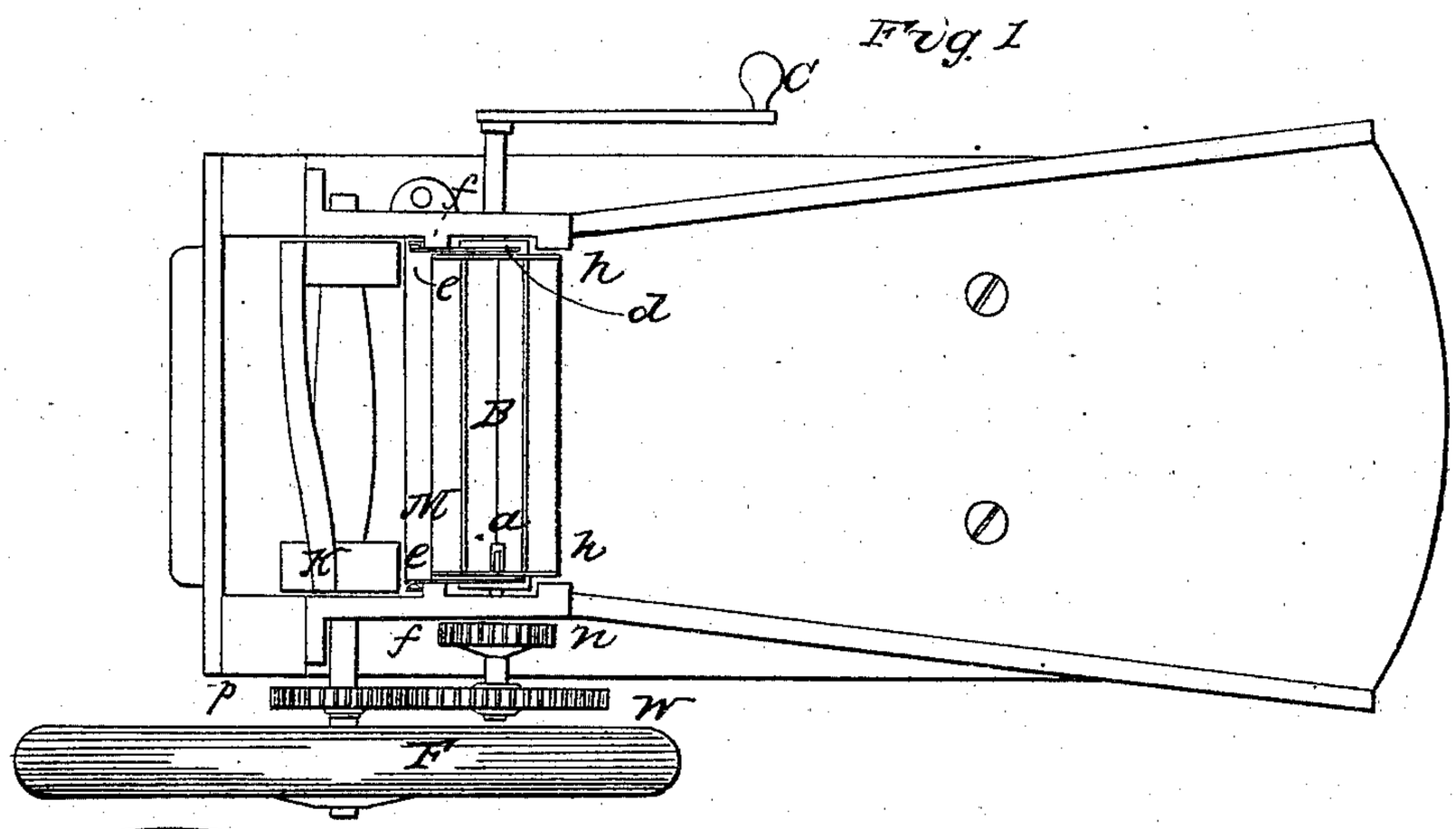


Fig. 2

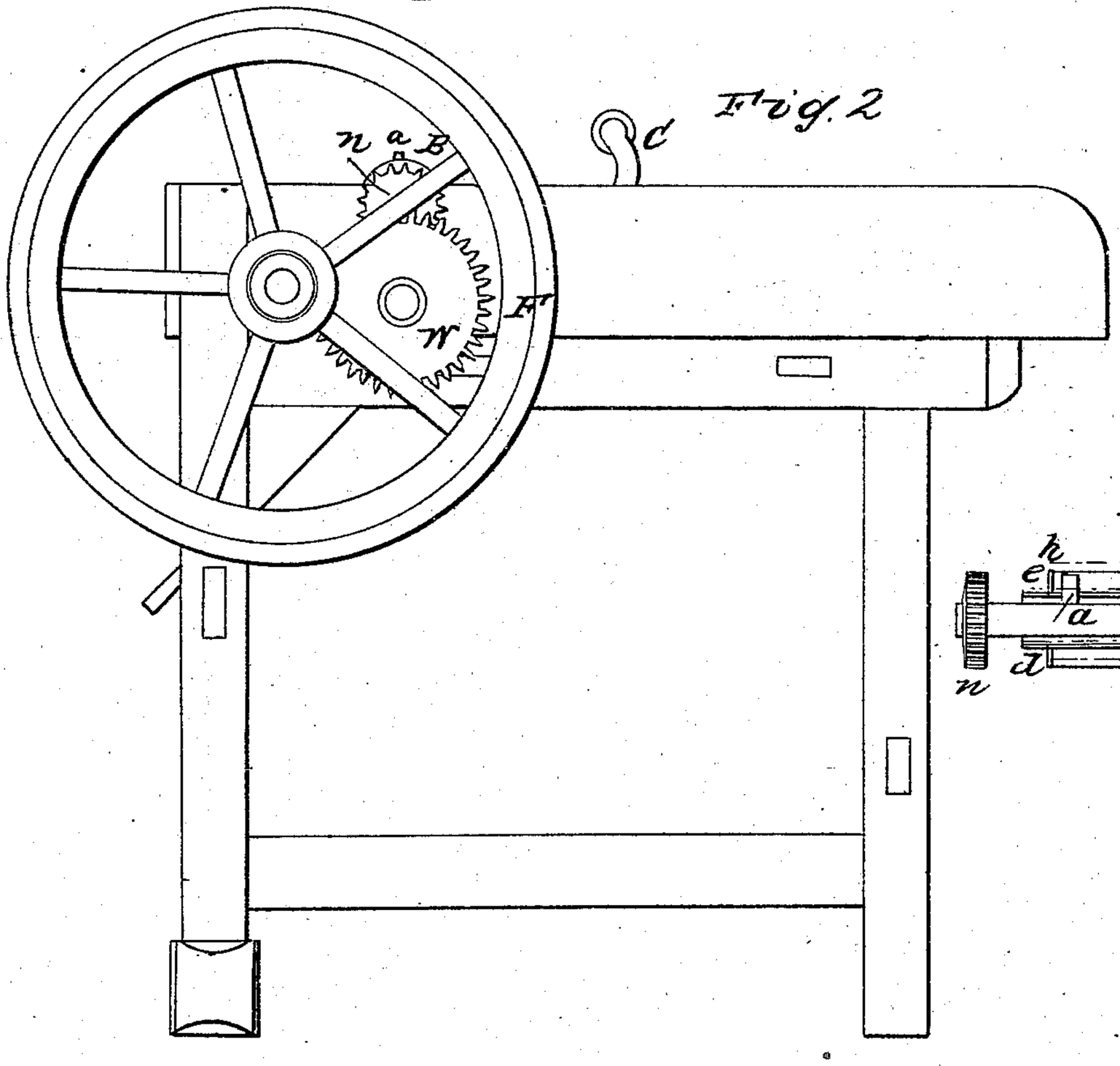
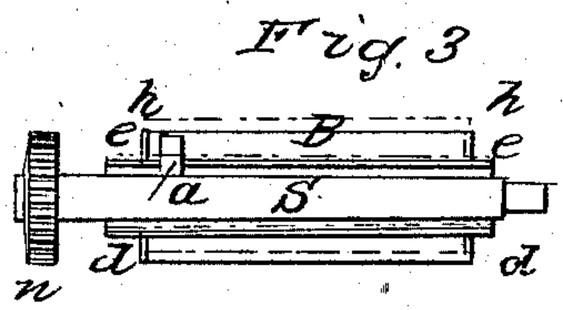


Fig. 3



UNITED STATES PATENT OFFICE.

ALEX. GORDON, OF ROCHESTER, NEW YORK.

FEED-ROLL OF STRAW-CUTTERS.

Specification of Letters Patent No. 15,761, dated September 23, 1856.

To all whom it may concern:

Be it known that I, ALEXANDER GORDON, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Straw-Cutters, of which the following is a full and accurate description, reference being had to the acompanying drawings making part of this specification, and to the letters of reference marked thereon, same letters referring to like parts in all the drawings.

Of said drawings Figure 1 is a plan of my straw cutter. Fig. 2 is a side elevation of the same and Fig. 3 is a sectional elevation of the feed roller.

The nature of this invention consists in so constructing the feed roller and its shaft and arranging it with the other parts of the machine that while the roller is sufficiently mobile to admit of any ordinary variation in the thickness of the layer of straw or hay fed into the machine yet it may be geared to the driving shaft in a solid and firm manner without the use of teeth or cogs of extra length.

Figs. 1 and 2 will show the general construction and arrangement of the machine—(C) being the crank for driving it; (W) a wheel keyed on this shaft and driving the pinion (P) which is attached to the cutter shaft. This cutter shaft carries the knife (K) and the fly wheel (F). The feed roller B is geared to the crank shaft by means of the wheel and pinion (*n n*) which are of the ordinary construction and the throat through which the straw is fed to the knife is formed by the feed roller and this crank-shaft—the straw however being cut against the stationary rest (M).

The construction of the feed roller B will be readily understood from an inspection of Fig. 3. It will there be seen that it is of a hollow or tubular form—the internal diameter of the tube being much greater than the diameter of the shaft which passes through it, and which carries the wheel (*n*) Fig. 1, by which it is driven from a pinion on the crankshaft. On the shaft (S) Fig. 3 which passes through the fluted feed roller is the projection (*a*) (Figs. 1, 2, and 3) which passes through a slot in the said feed roller and carries it around with it at the same time allowing it to move up and down to an extent limited by the difference of diameter in the shaft (S) and the hole through the roller. The roller is kept down by its own weight and the action of the springs (*e e*) and thus exerts a sufficient action on the straw to feed it to the knife, while any inequality or variation in the thickness of the layer of straw is abundantly provided for by the play which the roller has on the shaft. To keep the roller in proper position the two journals (*d d*) are turned upon its ends and fitted into the boxes in the said pieces (*f f*). The flanges (*h*) keep these journals free from grit, straw or dirt. See Fig. 3.

The advantages derived from this arrangement are obvious and important. For while all the elasticity or mobility which can be required may be given to the feed roller, the whole gearing may be of the most accurately constructed description—working without play, shake or looseness and consequently lasting longer and being much more easy to drive.

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

The construction and arrangement of the feed roller (B) and shaft (S) in the manner substantially as described whereby the advantages above set forth are fully secured.

ALEX. GORDON. [L. S.]

Witnesses:

JOHN PLURE,

T. J. DE YAMPERT.