E. GILLETT.

Straw Cutter.

No. 553. Patented Jan'y 9, 1838.

Fig. 2.

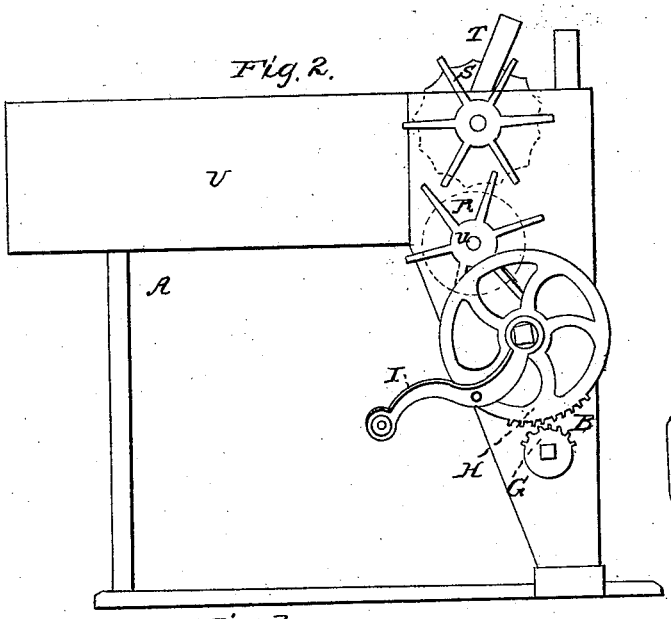


Fig. 3.

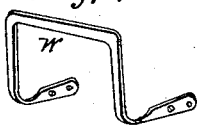


Fig. 1.

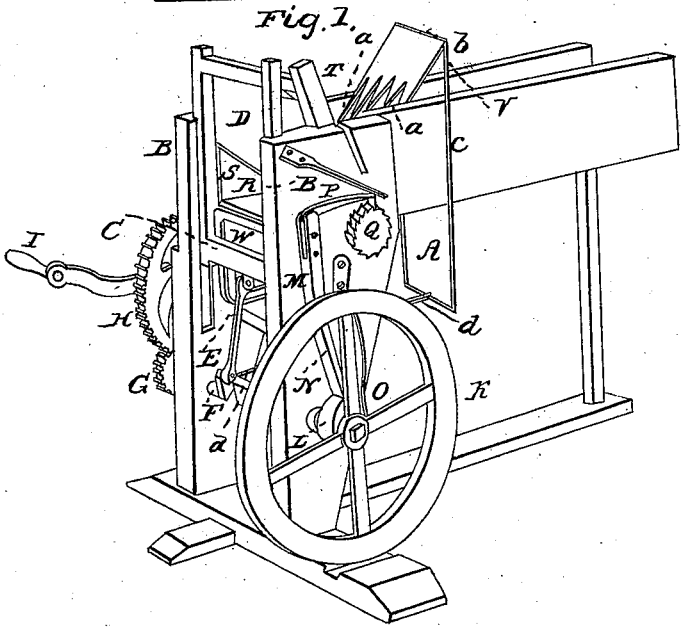
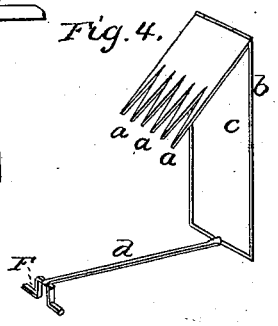


Fig. 4.



N. PETERS. Photo-Lithographer. Washington. D. C.

UNITED STATES PATENT OFFICE.

EDWIN GILLETT, OF ELLINGTON, CONNECTICUT.

MACHINE FOR CUTTING STRAW AND OTHER SUBSTANCES.

Specification of Letters Patent No. 553, dated January 9, 1838.

To all whom it may concern:

Be it known that I, EDWIN GILLETT, of Ellington in the county of Tolland and State of Connecticut, have invented a new and useful Improvement in Machines for Cutting Straw and other Substances, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

The frame, cutting box, feeding rollers, knife, and knife-gate, cog wheels, crank shaft, and fly wheel being arranged similar to those in other straw cutting machines in use, need not, therefore, be particularly described in words. The drawings, however, will represent them accurately.

The improvement is in the mode of feeding; and in the arrangement of a spring rest in front of the cutting knife to prevent the machine clogging.

A, represents the frame, B, the two posts of the frame, between which the knife-gate slides up and down. C, the knife gate; D, the knife for cutting the straw or other substance, placed obliquely in the knife-gate. E, pitman rod connecting the knife-gate to a crank shaft. F, crank shaft for moving the knife-gate up and down. G, pinion on the end of the crank shaft. H, cog-wheel working into the pinion. I, crank for turning the cog-wheel. A pulley may be substituted for the crank turned by any known power. K, balance-wheel for equalizing the motion of the crank-shaft. L, a cam on the crank shaft for moving the lever of the feeding apparatus. M, the lever of the feeding apparatus just mentioned: This lever turns on a pin near its center inserted into the side of the frame, the lower end being pressed against the cam on the crank shaft by a spring the upper end of said lever being as high as the bottom of the feeding box, to which end is attached a reaching arm, with a hand working in the notches of a ratchet wheel on the end of the lower feeding roller for turning said roller to bring forward the substance to be cut. N, the pin on which the lever turns. O, spring for bearing the lever in contact with the cam on the crank shaft. P, reaching arm and hand for turning the ratchet wheel. Q, ratchet wheel. R, lower feeding roller—smooth on its surface. S, upper feeding roller—fluted on its surface. T, vertically sliding frame in which the gudgeons of the upper feeding rollers turn—said frame moving in channels on the inside of the cutting box. U, U, Figure 2—cog-wheels on the ends of the gudgeons of the feeding rollers projecting beyond the sides of the frame opposite to that where the ratchet wheel is placed, working into each other for causing the rollers to move together—the cogs being set far apart. V, the feeding box. W, Figs. 1 and 3—a spring-rest placed in front of the edge of the cutting box for supporting that portion of the substance to be cut which projects beyond the edge of the knife for preventing the machine clogging in its operation. This spring-rest consists of a bar of steel or iron whose ends are bent at right angles so as to form the center part into a rest in length equal to about the width of the cutting box—then it is bent again at right angles forming a figure such as is represented at Fig. 3 the ends which are flattened are then secured to the insides of the frame of the cutting box by screws or bolts as represented in Fig. 1 so as to bring the rest on a level with the bottom of the cutting box, but without touching it. The knife in its vertical movement passes between the edge of the cutting box and spring-rest.

The feeding may be effected by means of a number of fingers *a* Figs. 1 and 4 placed in the feeding box and resting on the bottom of the same at an angle of about 45 degrees: attached loosely to the upper end of a rectangular frame *b* suspended on pins *c* inserted into the sides of the cutting box and vibrated by connecting the lower side of said frame with the crank F by a connecting rod *d* for another cut and so on. The knife being thicker at the back than at the cutting edge presses the spring rest from the end of the box as it passes between them: and as it again rises the spring-rest closes in toward the box.

The invention claimed by me the said EDWIN GILLETT and which I desire to secure by Letters Patent consists in—

1. The spring rest in front of the knife in combination as above described and for the purpose herein set forth.

2. The method of feeding by the vibrating fingers as represented in Fig. 4 is likewise claimed.

EDWIN GILLETT.

Witnesses:

SIMEON WHITON,

A. GILLETT.