C. MERRY.

Straw Cutter.

No. 2,930. Patented Jan. 27, 1843.

Fig. 1,

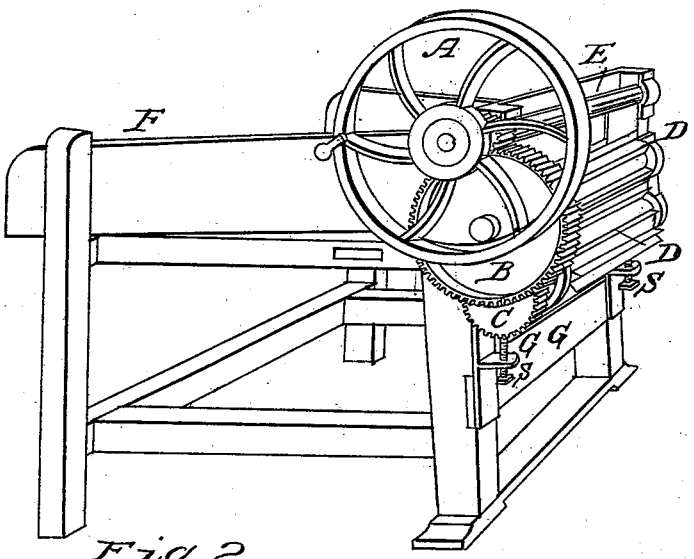


Fig. 2,

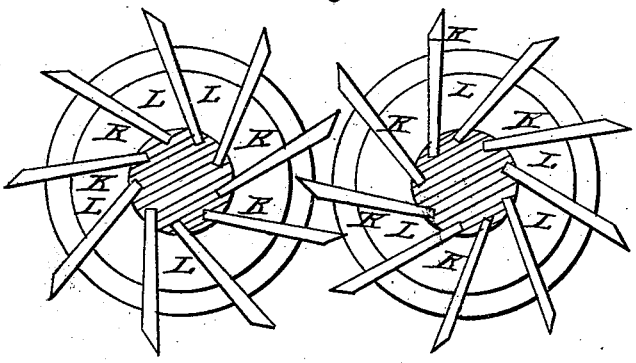


Fig. 4,

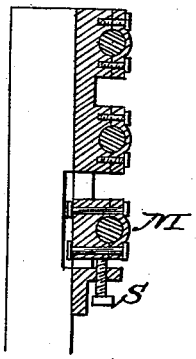
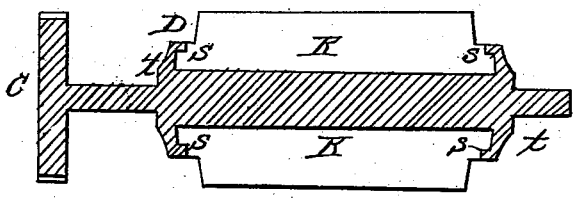


Fig. 3,



UNITED STATES PATENT OFFICE.

CORNELIUS MERRY, OF ITHACA, NEW YORK.

IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. **2,930**, dated January 27, 1843.

To all whom it may concern:

Be it known that I, CORNELIUS MERRY, of Ithaca, in the county of Tompkins and State of New York, have invented a new and useful Machine for Cutting Hay and Straw; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the machine. Fig. 2 is a cross-section through the cylinders, showing the arrangement of the knives. Fig. 3 is a longitudinal section through one of the cylinders. Fig. 4 is a section showing the boxes and set-screws for raising and lowering the lower cylinder.

Similar letters refer to corresponding parts.

To construct said machine I procure a cast-iron frame G of suitable size, thirteen and one-half by fifteen and one-half inches, (but to be varied in size and dimensions in proportion to the size and power of the machine,) in each side of which are to be three boxes with caps for three several shafts, the upper one of which for the balance-wheel shaft and the two lower of which for the cylinder-shafts, and which are to be equidistant the one from the other and nearer or more distant each from the other in proportion to the size of the cylinders. The caps to the boxes are to be fastened by iron screws or keys with bolts, and the iron frame is to be made fast to the box or wooden frame by means of screws or bolts. Two cylinders D are to be constructed by iron heads at each end of the cylinder-shafts within the iron frame, the outer ends of which to form the shoulders to the shafts and in the inner heads thereof to be inserted horizontally ten or more knives of equal distance one from the other, to be gaged a little in advance from the center of the shaft, and to be secured to the heads by means of a shoulder at each end of the knives, and the backs of which to be inserted into flutes made longitudinally in the shafts. The knives K are to be made of steel, tempered, and seven and one-half inches in length and one and three-fourths inch wide, to be varied according to the size of the cylinders. Between the knives are to be fixed firmly pieces of wood L, about one inch thick and of equal length with the knives, to be secured in the same manner as the knives, and upon which the knives are to cut. The cylinders are to be connected together by spur-gearing B, or two spur-wheels C, which are to be of equal size, and with an equal number of cogs to be fastened to the cylinder-shafts at the outer side of the iron frame. At the outer end of the upper cylinder is to be a spur-wheel seven inches in diameter, to be made fast to the cylinder-shaft to gear into the power or driving-wheel, and to be attached to the balance-wheel shaft. A balance-wheel A twenty-eight inches in diameter, in which is to be inserted a handle so as to form a crank, is to be secured and made fast to the outer end of the balance or power wheel shaft. Near the lower end of the iron frame upon each side the frame projects, so as to admit of perpendicular set-screws S, by means of which the elevation of the lower cylinder is to be gaged. The shafts, together with the gearing and balance-wheel, are to be made of cast-iron. To an ordinary-sized machine the power or driving wheel to be two and one-half inches in diameter, and the two wheels which connect the cylinders to be four and one-fourth inches in diameter but the whole to be varied according to the size and power of the machine.

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

Arranging the knives upon the shaft in the manner herein set forth, and also in setting the knives on lines tangential to the circumference of the shaft of the cylinder.

CORNELIUS MERRY

Witnesses:

EDMUND MAHER,

JONATHAN HODGES.