(No Model.)

M. C. BEAUPRE.

STRAW CUTTING MACHINE.

No. 373,431. Patented Nov. 22, 1887.

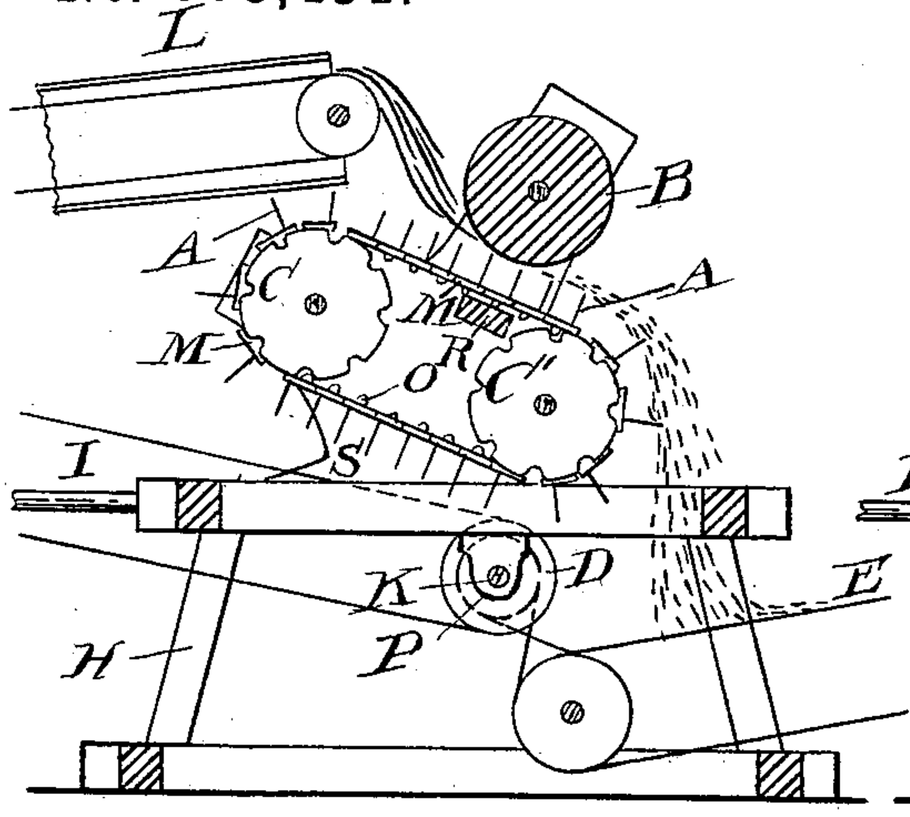

FIG. 1.

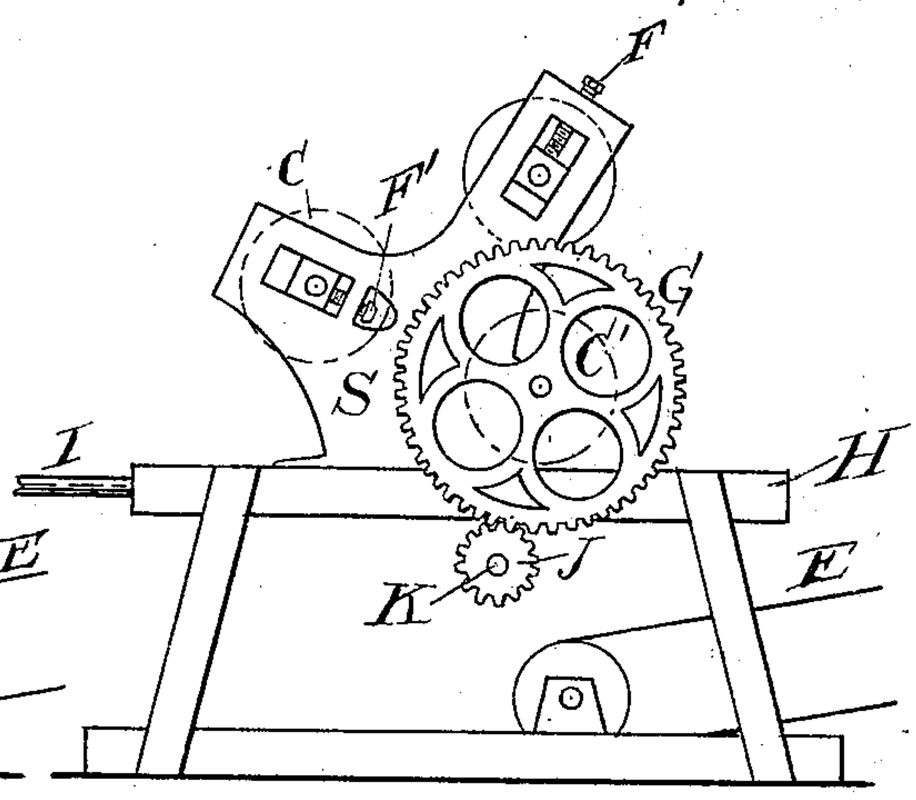

FIG. 2.

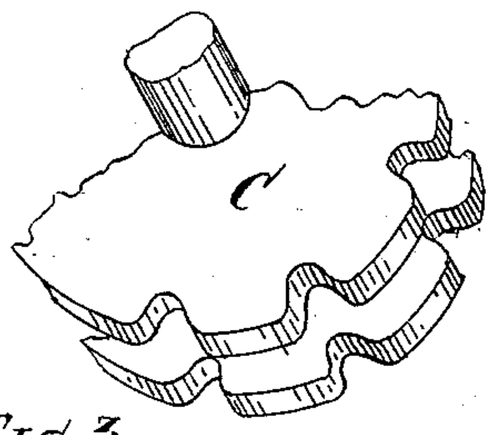

FIG. 3.

FIG. 5.

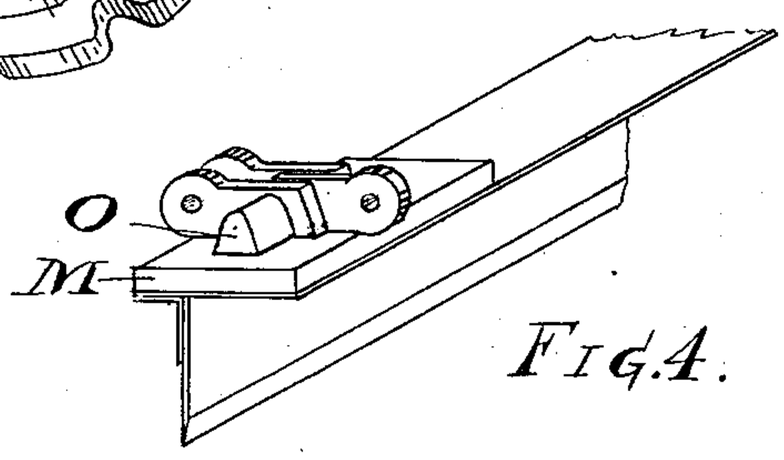

FIG. 4.

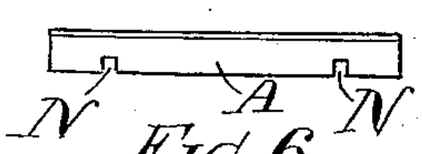

FIG. 6.

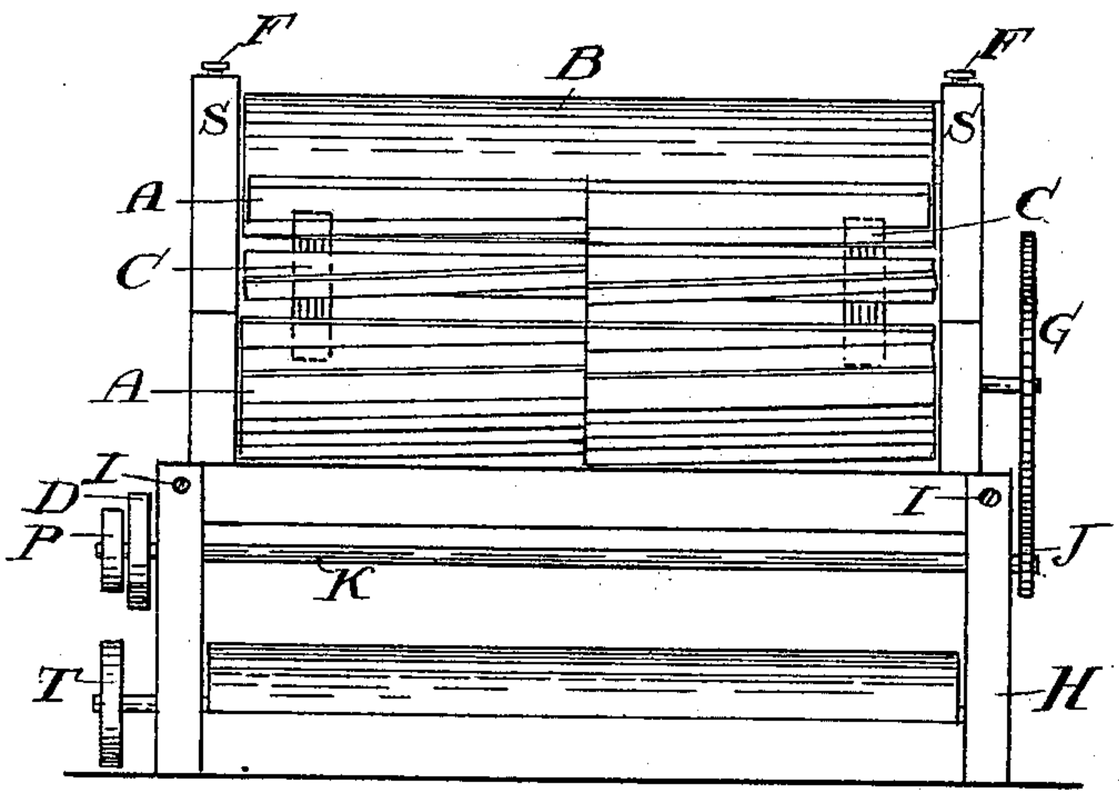

FIG. 7.

Witnesses
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MANUS CHARLES BEAUPRE, OF CHARLOTTEVILLE, ONTARIO, CANADA.

STRAW-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 373,431, dated November 22, 1887.

Application filed September 18, 1886. Serial No. 213,906. (No model.) Patented in Canada August 18, 1886, No. 24,754.

To all whom it may concern:

Be it known that I, MANUS CHARLES BEAUPRE, of the township of Charlotteville, in the county of Norfolk, Province of Ontario, Canada, farmer, have invented certain new and useful Improvements in Straw-Cutting Machines, (for which I have received a patent, No. 24,754, dated August 18, 1886, in the Dominion of Canada,) of which the following is a specification.

The object of my invention is to design and produce a straw-cutting machine which may be operated in connection with a separator or by itself, and which will cut in an efficient and satisfactory manner the straw fed to it.

My object is attained by having a number of knives carried on an endless belt suitably supported and passing under a roller of suitable material. The straw as it is fed to the straw-cutting machine falls across the knives and is carried on them under the roller, against which it is cut by the knives, reference being made to the accompanying drawings, in which—

Figure 1 is a sectional view of my straw-cutting machine. Fig. 2 is a side elevation of the machine. Fig. 3 is an enlarged view of one of the four sprocket-wheels C C′, upon which travels the endless belt M, supporting the cutting-knives. Fig. 4 is an enlarged view of a section of the endless belt M, upon which the knives A are carried. Fig. 5 is a plan of a section of the endless belt, and illustrates the position of the knives upon each section of the endless belt. Fig. 6 is a plan of a knife. Fig. 7 is an elevation, showing that end of the machine which is at the left hand in Figs. 1 and 2.

In the drawings, H represents a frame supporting my straw-cutting machine, which may be used either in connection with a grain-separator, as shown in Fig. 1, or by itself.

In Fig. 1, L is an endless band or carrier of the separator conveying the straw or similar material from the separator. I is a rod or brace connecting the straw-cutting machine with or bracing it against the separator. M is an endless band or belt of the entire inside width (see Fig. 7) of the machine. The belt M is carried by links jointed, as shown in Fig. 4, around the sprocket-wheels C C′, each side of the endless belt being supported on links passing over two sprocket-wheels. The sprocket-wheels are four in number, one pair, C, being fixed on a journal revolving in fixed bearings in cast-iron frames S S of the machine, the other pair, C′, fixed on journals revolving in sliding boxes, thus providing for the regulation by means of set-screw F′, Fig. 2, of the tension of the belt M. B is a roller, preferably of rawhide, against which the straw is cut as it passes between the knives A, carried on the endless belt M and the roller B. Motion is imparted to the roller B by the knives coming in contact with it as they pass under. E is an endless band or conveyer similar to that, L, from the separator, but intended to convey the cut straw to a suitable distance from the cutting-machine. D is a pulley operated by a driving-belt from the motive power working the separator. K is the shaft of the pulley D, Fig. 2. On the shaft K, at the end remote from pulley D, is fixed the pinion-wheel J, working in the cog-wheel G, which is fixed on the same journal as is the sprocket-wheel C′. The movement of the sprocket-wheel governs that of the belt M, the knives carried on which, passing under and pressing against the roller B, impart motion to the latter. The roller or pulley at the base of the endless band E is suitably connected with the pulley P, fixed on same shaft as is the pulley D. The straw as it is delivered from the separator falls almost invariably at right angles with the position of the bars of the belt M, and is thus carried on the edges of the knives A till it reaches the rawhide roller B, where it is by pressure against the knives cut into short pieces. The knives A are preferably placed on the bars of the belt M, in the position as illustrated in Fig. 5, thus giving the straw a shearing cut. R is a support for the band, and is located at a point immediately under the rawhide roller. The form of this support is immaterial; but in the present instance it is shown as a bar or beam.

Besides acting as a support to the endless-band on which the knives are carried, the part R may act as a brace and assist in keeping in position the cast-iron sides S S of the machine.

The journal of the rawhide roller B revolves in sliding boxes, as shown in Fig. 2, thus providing for the regulation by set-screws F F, Figs. 2 and 7, of the pressure of the roller

against the edges of the knives. The tension of the endless belt M may be regulated by the set-screws F′, as the journal of the uppermost sprocket-wheels, C, revolve, as before explained, in sliding boxes.

Fixed to the bars forming the belt M are angle-irons, to which are bolted the knives A. The slots N N, Fig. 6, shown in the knives are to provide for the adjustment upward or downward of the knives on the bolts of the angle-irons.

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

The combination of a frame, the sprocket-wheels C and C′, the endless belt M, having knives, the support R between the sprocket-wheels, and the roller B located above the support R, substantially as described.

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Witnesses:

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