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J. STOKES

STRAW OR LIKE CUTTING MACHINE

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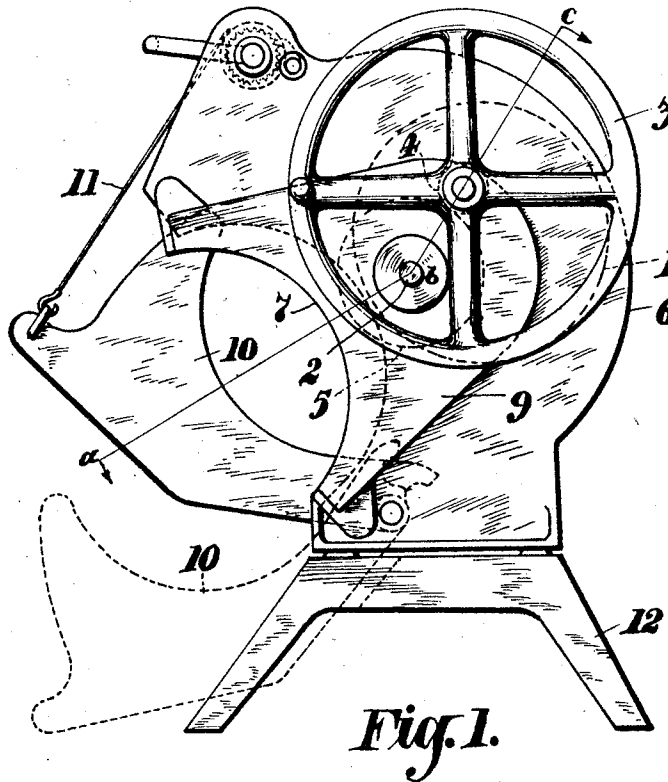


Fig. 1.

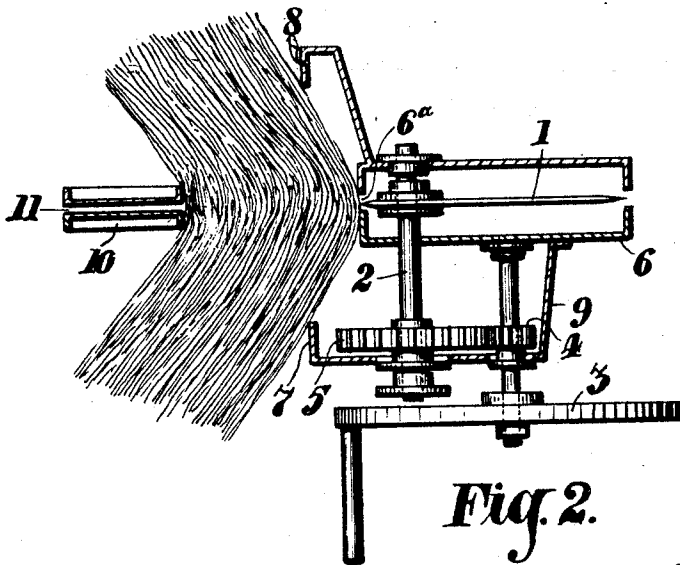


Fig. 2.

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per
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UNITED STATES PATENT OFFICE.

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STRAW OR LIKE CUTTING MACHINE.

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This invention comprises a machine for cutting bundles or boltings of straw or the like, so that the straw can be readily obtained of a length which can be more efficiently and economically used than heretofore, for the bedding of animals, the making of manure, for use as packing material and for other purposes.

According to the present improvements, the bundles or boltings of straw are adapted to be very readily fixed between clamping jaws in such a manner that the straw may be cut by means of a revolving knife. This knife is circular or has a curved edge eccentrically arranged in relation to the pivot axis so that the cutting edge is passed through the bundle of straw and at the same time drawn across the straw. The clamping of the straw is so arranged that the bundle of straw is curved towards the cutter whereby the straw is arranged to provide a resistance against the cutting pressure. For this purpose two outer fixed jaws are provided and a movable jaw is located intermediate these fixed jaws. The fixed jaws may form part of the framing and the movable jaw is conveniently mounted and pulled into the clamping position such as by means of a flexible cord which is wound on a drum. The jaws are also curved inwardly to grip the bundle of straw. The cutter is mounted in a casing, a portion of which is presented towards the centre of the bundle of straw and the cutter is adapted to move out through a slot in this projecting portion. The movable clamp is also bifurcated so that the cutter can enter the slot thus formed.

Referring to the drawings:—

Figure 1 is a side elevation of a machine constructed according to this invention, and

Figure 2 is a sectional plan view of the parts shown by Figure 1, the section being taken on the lines *a—b—c*, Figure 1.

According to a convenient embodiment, the cutting knife 1 is circular, the cutting edge of which is arranged eccentrically to its pivot axis so that the knife is passed through and drawn across the bundle of straw when the knife is rotated. The knife or cutter 1 is rotated by means of a hand wheel 3 which has a toothed wheel 4 fixed in relation thereto, such toothed wheel engaging another toothed wheel 5 which is fixed to and rotates the cutter spindle 2. The cutter 1 is mounted in a casing 6 located immediately in front of the bundle of straw, such cutter passing out through a slot 6^a.

The bundle of straw is clamped in position by means of a pair of fixed jaws 7 and 8, which are formed on the frame 9 of the machine, and a pivoted or movable jaw 10 which is pivoted at its lower end to the frame 9 and is drawn up to the clamping position by means of a flexible cord or band 11 connected at one end to the jaw 10 and at the other end to a winding drum. The winding drum is rotated by a suitable crank or handle and is fitted with a ratchet wheel and detent pawl to lock the drum against backward rotation. The pivoted jaw 10 is located intermediate the fixed jaws 7 and 8 so that when the straw is clamped in position it is curved inwardly towards the cutting knife 1.

The fixed jaws 7 and 8 and also the pivoted jaw 10 have concave or inwardly curved faces so that the cross section of the bundle of straw when clamped between such jaws is oval, a curved face being presented to the cutting knife. The pivoted jaw 10 has a slot 13 formed therethrough so that the cutter 1 may pass therein when rotated. The machine may be mounted on supporting legs 12.

It will thus be seen that a straw cutting machine has been constructed which is easily operated and which will cut bundles or boltings of straw or the like so that such straw or the like may be more efficiently and economically used than heretofore.

Claims:

1. A machine for cross cutting bundles or boltings of straw, comprising a machine frame having two concave or inwardly curved projecting parts forming fixed outer clamping jaws, a pivoted bifurcated jaw having a concave or inwardly curved face for bearing against the centre of the bundle of straw, a cutting disc eccentrically mounted on the machine frame so that during the cutting stroke it passes through the bundle of straw and between the bifurcations of the said pivoted clamping jaw.

2. A machine for cross cutting bundles or boltings of straw comprising a machine frame having two concave or inwardly curved projecting parts forming fixed outer clamping jaws, a pivoted bifurcated jaw having a concave or inwardly curved face for bearing against the centre of the bundle of straw, a cutting disc eccentrically mounted on the machine frame so that during the cutting stroke it passes through the bundle of straw and between the bifurcations of the said pivoted clamping jaw, and a flexible

band connected at one end to the movable jaw and at the other end to a revolvable drum or member.

3. A machine for cross cutting bundles or
5 boltings of straw comprising a machine frame having two concave or inwardly curved projecting parts forming fixed outer clamping jaws, a pivoted bifurcated jaw having a concave or inwardly curved face
10 for bearing against the centre of the bundles of straw, an eccentrically mounted disc knife, and a casing enclosing the disc and having a slot through which the knife projects during the cutting stroke.

4. A machine for cross cutting bundles or 15
boltings of straw, comprising a knife having a curved periphery mounted to rotate about an axis eccentric to the curved cutting edge, relatively movable jaws for gripping the bundle of straw on each side of the cutter, 20
and a frame on which the rotary cutter is mounted and having a slotted part behind which the cutter lies in the out of cutting position.

In witness whereof I have signed this 25
specification.

JOSEPH STOKES.