(12) **United States Patent**
Tarbox et al.

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(54) **STRAW CUTTER**

(76) Inventors: **Erastus Tarbox; Cyrus F. Kneeland**

Erastus Tarbox and Cyrus F. Kneeland.

Letters Patent.

The Schedule referred to in these Letters Patent and making part of the same, containing a description in the words of the said Erastus Tarbox and Cyrus F. Kneeland themselves of their Improvement in the Machine for cutting corn in the ear, straw or grain in the bundle, or other substances for horse provender.

Be it known that I, Erastus Tarbox and Cyrus F. Kneeland of Ogden, in the County of Monroe, and State of New York, have invented a new and useful machine for cutting corn in the ear, straw or grain in the bundle; or other substances for horse provender; which is described as follows.—

The frame is constructed of two bents; the front one consists of three posts 3 feet 2 inches long from shoulder to foot; two of said posts are 4 inches square. the other is 3 by 4 inches, framed together by a cap 3 feet long 3 by 4 inches square, and at 3 inches from the foot of the posts by a girt of 1 by 4 inches, passing thro the centre of the posts the spaces between the posts being 10 inches. The rear or after bent is composed of two posts framed together at the top by a cap 2 feet long 3 by 4 inches square and at 3 inches from the foot of the posts by a girt 10 inches long from shoulder to shoulder, 3 by 4 thick by 4 inches wide. The bents are framed together by 4 girts—two on each side the upper girt is framed into the posts at the distance of 11½ inches from the under side of the cap: the lower girts are 2 feet 1 inch from the under side of the cap.— The machine is composed of two cylinders;- the upper or cutting one is made of cast iron 6 inches in diameter 8 inches wide,

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¼ an inch thick with a flange of one inch projecting towards the centre. In the face of the cylinder are eight flutes 5/8ths of an inch deep & 3½ inches wide for the reception of the cutters, which are eight in number, made of steel 8 inches long & 1½ inch wide with a shank on each end of 3½ inches forming a right angle with the blade & ½ of an inch thick & 1 inch wide, let into the edge of the cylinder their thickness, and fastened by a bolt passing through an oblong hole in the shanks & screwed to the flange; also a bolt passing through the centre of the cutter & thro' the cylinder and fastened by a nut on the inside. The core of the cylinder is made of four arms and an eye of sufficient capacity to receive a shaft of two inches in diameter either square or round; the shaft is 2 feet 6½ inches long with 3½ inches length of bearing; The lower or grinding cylinder is also made of cast iron 1 foot in diameter & all bounded with wrought iron ¾ of an inch in thickness; which band is cut in the form of a rasp or file. The core of this cylinder and the shaft are similar to those of the cutting cylinder. The upper or cutting cylinder is hung in boxes the centre of which is dropped 8½ inches below the under side of the cap on the back side of the front posts. The lower or grinding cylinder is placed 1 foot 9½ inches below the under side of the cap on the front side of the front posts. The concave belongs to the lower cylinder & is the segment of a circle 13 inches in diameter, with a flange on the convex side; the concave is 8 inches wide made of cast iron inlaid with steel bars cut similar to the cylinder, the concave is fastened at the upper end by a bolt passing through the casing of the cylinders and the flange of the concave; the lower end is fastened by bolting to a block running in grooves in the posts. Beneath this block is another bolted to the posts, leaving a space of about ¾ of an inch for the passage of

of regulating the machine. There are two bolts with screws passing through the lower block into the upper one, in which nuts are placed to lower or raise the cone axle at pleasure. The apron is 2 feet long & 10 inches wide made of plank 1½ inch thick, having three flutes, resting at the upper end in the cap of the rear bent; the lower end resting on a girt placed across the upper girts of the frame so as to be moved as occasion may require, secured by bolts at each end. On the movable girt is placed a casting the cap piece fluted like the apron. The cylinders are enclosed in wooden boxes lined entirely with sheet iron for the purpose of preventing waste and wear.

On the upper shaft are two pullies one of 8 inches diam^r placed near the centre part of the front bent, the other of 6 inches diam^r placed near the outer part of the same bent. On the lower shaft is one pulley of 6 inches in diam^r with a strap passing from it to the 8 inch pulley, in the upper shaft.—

The face of the lower cylinder may be cut in furrows and lands in all the varieties in which Mill stones are dressed & the cone axle may be made of cast iron, wrought iron, steel or French burr, or other stone; & also the knives or cutters may be placed on the sides of the cutting cylinder.—

What we claim as our invention and desire to secure by Letters Patent consists in the before described Machine for the purposes herein set forth.

Witnesses
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