

Straw Cutter.

Patented July 15, 1856.

This technical drawing illustrates a mechanical assembly, possibly a pump or engine component, viewed from the side. The device is mounted on a base structure labeled 'H' at the bottom. A large, curved lever or arm, labeled 'V', is positioned on the left side. A central mechanism features a piston or plunger, labeled 'C', which is connected to a rod or shaft, labeled 'T'. The piston is shown in a position where it is compressing or displacing a fluid, indicated by the wavy lines representing the fluid. Other components include a valve or check valve, labeled 'G', and a spring, labeled 'S'. The entire assembly is supported by a frame of vertical bars, labeled 'V' and 'H'. Various other parts are labeled with letters and numbers, including 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z', '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100'.

Witnesses
J. F. Single
H. Steele Jr.

UNITED STATES PATENT OFFICE.

COTTON FOSS, OF PAINESVILLE, OHIO.

STRAW-CUTTER.

Specification of Letters Patent No. 15,333, dated July 15, 1856.

To all whom it may concern:

Be it known that I, COTTON FOSS, of Painesville, in the county of Lake and State of Ohio, have invented a new and useful
5 Improvement in Straw-Cutters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, in which—

10 Figure 1 is a front elevation of my improved straw-cutter, and Fig. 2 a side elevation of the same, the letters of reference thereon applying to similar parts in both figures.

15 The nature of my invention consists in attaching to the handle of the cutting blade an arm in which is a friction roller, the said roller is made to travel up and down an inclined track which is secured to the
20 front of the machine, by which means a "drawing cut" is given to the blade and the operation of cutting the feed performed with less labor.

To enable others skilled in the art to make
25 and use my said invention I will proceed to describe its construction and operation.

A A' are the sills of the frame; B, a cross-tie, and C C' C'' four standards one of which stands behind C'' and is not shown.

30 D is one of a pair of side rails, (the other not seen) secured by the cross-tie E.

F is another cross-tie securing the end standards.

35 G (Fig. 1) is the cutting table, and H the cutting trough which rests on the cross-ties E and F, and which is also secured to the standards C.

I is one of a pair of blocks which are fastened to, and rest on, the side rails D.

40 J and J' is a pair of toothed feed rollers—the lower one J has its bearings in the blocks I, and the other is supported on the ends of a pair of long springs K, (only one of which is seen) which are fastened to the sides of
45 the cutting trough.

L and L' are two rollers, L' being sustained on a pair of sliding arms M, and the other in the blocks I. The said rollers are for the purpose of carrying the endless
50 apron N. On the axis of the lower feed roller, J', and on the left side of the front of the machine, is placed a ratchet wheel P.

O and Q are two pawls. Q is secured to the standard C' and O to a long vibrating
55 lever R. The said lever is pivoted to the upper part of the standard C'', its other end

projecting over the upper part of the cutter hereinafter mentioned.

S is a smoothing or compressing board.

T and T' are two other standards. These, 60 as well as the standards C' and C, are secured by the top rail U.

V is the cutter above referred to, and W the blade to which it is fastened by screws or otherwise. The farther end of the said 65 cutter is attached to a vibrating arm X pivoted to the standard T' and is secured in its place by the guide Y.

Z is another vibrating arm placed between the standards T and C'. a is a rocking lever 70 affixed on the said vibrating arm (Z).

b is a short vibrating arm connecting the cutter with the rocking lever. The short arm of the said lever is attached to the serrated blade c, its other end being pivoted to 75 the standard C behind the guide Y.

d is a stationary arm fastened to the cutter V in the position indicated in Fig. 1. On the end of the said arm is a friction roller e. Said roller is in contact with the inclined 80 plane or track f.

The endless apron roller (L) is connected to the lower feed roller (J') by a band g from which it receives motion. On the left hand side of the machine is a cam button h, 85 so secured to the block I as to be easily turned around.

The operation of the above described machine is as follows: The feed is introduced into the trough in the usual way, and the 90 compressing board, which can be weighted if necessary, allowed to rest on it. The operator then depresses the cutter, which, in descending, is moved forward by means of the stationary arm being guided down the 95 inclined track, at the same time the short arm b attached to the rocking lever puts in motion the serrated blade, the said blade having a reciprocal and simultaneous movement with the blade of the cutter. The feed 100 rollers are put in motion thus: On the descent of the cutter the long vibrating lever (R) falls and the pawl O takes into the ratchet wheel at such intervals as are regulated by the cam button, which of course 105 adjusts the length of the feed. The pawl Q is for the purpose of preventing the feed roller from turning back. The pressure of the springs K to which the upper roller is secured, as explained, enables it to receive 110 motion from the lower one when the feed passes between them as it is carried forward

on the endless apron. The teeth of the serrated blade holds the feed while being cut.

Having fully described the nature, construction, and operation of my improvement, what I claim therein as new and desirable to secure by Letters Patent, is—

The stationary arm *d*, friction roller *e*,

and inclined track *f*, combined and operating as herein specified and for the purpose set forth.

COTTON FOSS.

Witnesses:

J. F. SINGLE,

H. STEELE, Jr.