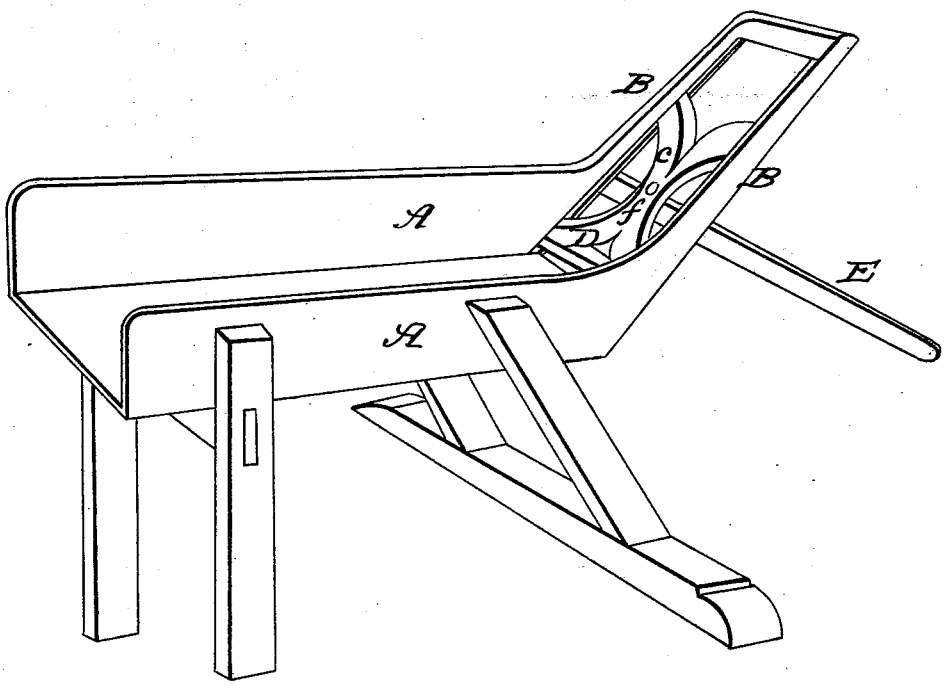
C. T. BOTTS.

Straw Cutter.

No. 2,983. Patented March 4, 1843.



UNITED STATES PATENT OFFICE.

CH. T. BOTTS, OF RICHMOND, VIRGINIA.

STRAW-CUTTER.

Specification of Letters Patent No. 2,983, dated March 4, 1843.

To all whom it may concern:

Be it known that I, CHARLES T. BOTTS, of the city of Richmond, in the county of Henrico, in the State of Virginia, have invented an Improvement in the Manner of Constructing the Machine for Cutting Straw; and I do hereby declare that the following is a full and exact description thereof.

I construct a trough or box such as is usually made for receiving the straw to be cut; the front end of the box is cut off obliquely so that the end of the sides form with the plane of the bottom an obtuse angle. Upright pieces are attached to the sides in which guides or grooves are cut parallel to the ends of the sides. In these grooves a gate with a knife attached to the lower end is made to move by means of a lever working on a pin in the center of the gate; so that it will readily be perceived that the motion of the lever causes the gate to move up and down in a plane that forms an obtuse angle with the plane of the bottom of the box and consequently with the body of straw resting upon it. Of course this movement of the gate may be obtained by a crank and pitman or in any other way. The straw is fed forward in the usual manner by hand though any of the usual modes of feeding may be added if desired. The front of the bottom of the box is armed as is usual with a steel bed to sustain the straw against the knife.

In the accompanying drawing A is the box or trough. B, B, are the upright pieces attached to the sides in which the grooves are cut. C is the gate and D the knife attached to it. E is the lever and (*f*) the pin on which it works, the other end being secured upon the opposite side of the box which is not seen in the drawing. The benefit resulting from this particular construction is conceived to be twofold. First, in consequence of the oblique motion of the cutting knife and its diagonal direction through the body of the straw cutting as it were with the grain of the material a much easier cut is obtained than when the knife passes perpendicularly through the straw at right angles to the grain of the straw. This renders the knife peculiarly fit for the cutting of cornstalks. Secondly when the knife passes perpendicularly through the straw there is a constant tendency to press the knife from the edge of the bed against which it it cuts whereby a play in the gate is acquired which is extremely detrimental to its cutting powers; when the gate makes an acute angle with the straw, the knife runs into the grain of the straw; this tendency to shove the knife from the bed is much increased; but when the gate moves in a plane which forms an obtuse angle with the bed of the straw, the "eating of the grain" as it is commonly called has a tendency to draw the cutting knife up to the edge of the bed against which it cuts whereby a perfect clearness of cut is obtained.

All that I claim as my invention and desire to secure by Letters Patent is—

The causing the knife to move obliquely through the body of the straw stalks &c., so that the plane in which it moves shall form an obtuse angle with the plane of the bottom of the box.

CH. T. BOTTS.

Witnesses:
THOS. P. JONES,
JOHN HITZ.