2 Sheets—Sheet 1.

J. Q. CROSBY.

STRAW-CUTTER.

No. 183,285. Patented Oct. 17, 1876.

Fig 1.

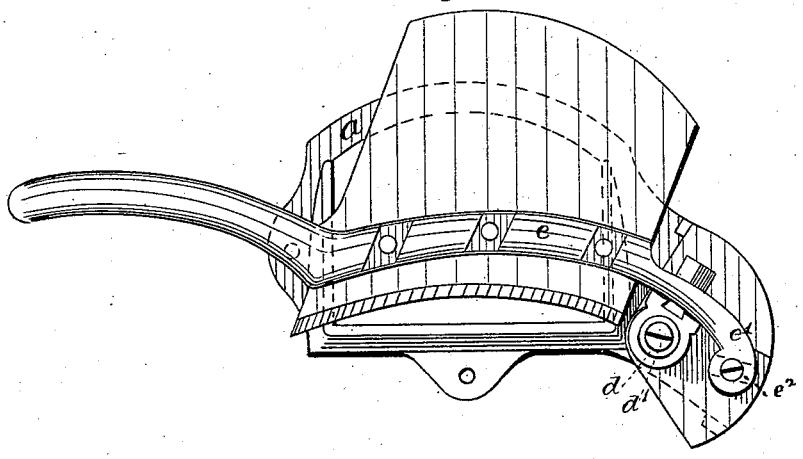
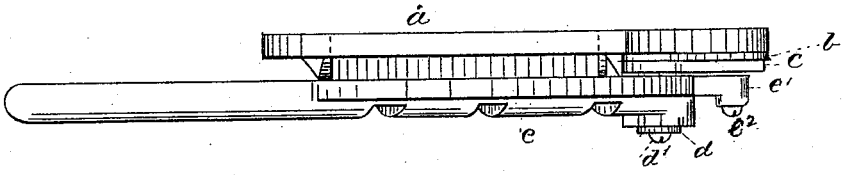


Fig 2.



WITNESSES:

James Dyrenforth Jr.
G. B. Lewis

John Q. Crosby
INVENTOR.

per R. S. & A. P. Lacey
ATTORNEY.

2 Sheets—Sheet 2.

J. Q. CROSBY.

STRAW-CUTTER.

No. 183,285. Patented Oct. 17, 1876.

Fig 3.

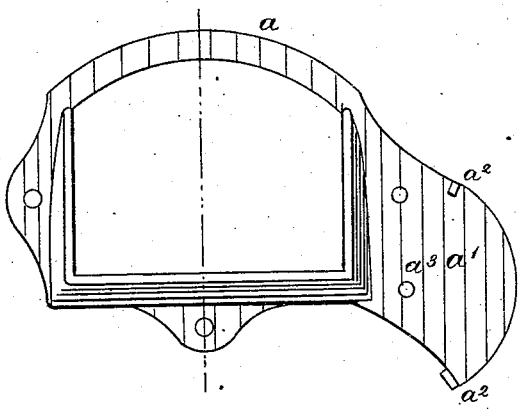


Fig 4.

Fig 5.

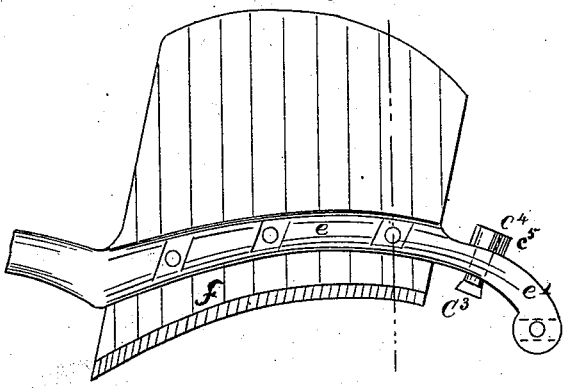


Fig 6.

Fig 7.

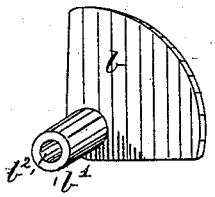


Fig 8.

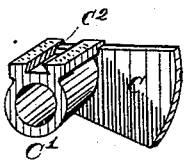


Fig 9.

WITNESSES

James Drummond Jr.

G. B. Fowler

John Q. Crosby
INVENTOR.

per R. S. & A. P. Lacey
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN Q. CROSBY, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN STRAW-CUTTERS.

Specification forming part of Letters Patent No. **183,285**, dated October 17, 1876; application filed January 29, 1876.

To all whom it may concern:

Be it known that I, JOHN Q. CROSBY, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Straw or Feed Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in straw-cutters; and has for its object to provide means whereby the knife may be readily adjusted to the mouth-piece or cutter-frame, and whereby those parts liable to break or to be bent may readily be replaced at small cost.

It consists in a removable hollow axial stud, in a detachable hub or bearing for the knife-lever, and in other mechanism, as hereinafter fully explained.

In the drawings, Figure 1 is a front elevation of my device complete. Fig. 2 is a top edge view of Fig. 1; and Figs. 3, 4, 5, 6, 7, 8, and 9 are detail views of the several parts.

a is the mouth-piece of the cutter, on which is formed the extension a^1, to which the several parts hereinafter described are secured. a^2 a^2 are two clips or lugs attached to the extension a^1. They have their inner sides under beveled or grooved, so that the edges of the supplemental plate or arc hereinafter described will slip therein, and be held securely to the extension a^1. b^1 is the axial stud. It is made hollow, as shown at b^2, and is held to the frame *a* by the retaining-screw *d'*, passing through the bore b^2 and hole a^3 in the extension a^1. It is connected with the plate or arc *b*, with which it forms a single piece or casting, and may be readily removed when desired. The plate or arc *b* has its edges slightly beveled, so that it will slip into the under grooves on the clips a^2, by which it will be held firmly in place. It will be seen that when the retaining-screw *d'* is put through the stud b^1 and hole a^3 in the frame *a*, the plate or arc *b*, with its stud b^1, will be held as securely in place as if it was a part of the said frame. c^1 is the hub or bearing by which the knife-lever is connected with the axial stud b^1. Attached thereto, and forming a part thereof, is the plate *c*, which oscillates or turns with the hub, and which is made to extend out flush with the outer edge of the plate *b*, on which it slides in the operation of the knife. c^2 is a dovetail groove or slot formed in the upper side of the hub c^1. c^4 is a screw or bolt for connecting the knife-lever to the hub. Its head c^3 is made dovetail-shaped, so that it will slide into the groove c^3. When the head c^3 is in the groove c^2 the hub and lever are tightened together by the nut c^5. By means of the dovetail groove c^2 and bolt-head c^3, the knife-blade *f* may be adjusted near to or far off from the frame *a*, as desired. *d* is a washer placed over the top of the stud b^1 and hub c^1, after the latter has been placed on said stud. *e* is the knife-lever, which is secured to the hub or bearing c^1 by the screw or bolt c^4.

The knife-lever is provided with the extension e^1, in the end of which is placed the set-screw e^2, by which the knife may be adjusted to the mouth-piece. The screw e^2 bears or abuts against the plate *c*, and in adjusting the knife by turning the screw in or out the plate is not moved, and by reason thereof no strain will be placed on the hub c^1, nor on the stud b^1. The plate *c* protects the screw from being worn away or bent, as would be the case did the end of said screw slide on a stationary bearing.

It will be readily seen that should any injury be done to the stud b^1, or to the hub c^1, these parts could be replaced at small cost.

It will be further understood that the plate *b*, carrying the stud b^1, could be secured to the extension a^1 by means of screws or bolts passing through, the screw-heads being countersunk in the plate *b*, to permit the free movement of the arc or plate *c*; but I prefer the construction with clips, as described.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The plate *b*, provided with the hollow axial stud b^1, secured to the plate or frame *a* by the clips a^2 and screw *d'*, substantially as

2. The hub or bearing c^1, provided with the dovetail groove c^2, and oscillating plate or arc c, substantially as set forth.

3. The combination, with the hub c^1, having the groove c^2, and arc or plate c, of the knife-lever e, provided with the screw c^4, having the dovetail-shaped head c^3 and set-screw e^2, as and for the purpose specified.

4. The combination, with the frame a, having the extension a^1 and clips a^2, and the knife-lever e, having the extension e^1 and screws c^4 e^2, of the plate b, having hollow axial stud b^1, and hub c^1, having groove c^2, and arc or plate c, all constructed and operating substantially as and for the purpose set forth.

5. The combination of the detachable hub c^1 and plate or arc c with the removable hollow axial stud b^1 and plate b, substantially as shown.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN Q. CROSBY.

Witnesses:

A. P. LACEY,

A. B. CANAGA.