

(No Model.)

D. LAWTON.  
STRAW CUTTER.

No. 372,157.

Patented Oct. 25, 1887.

*Fig. 1.*

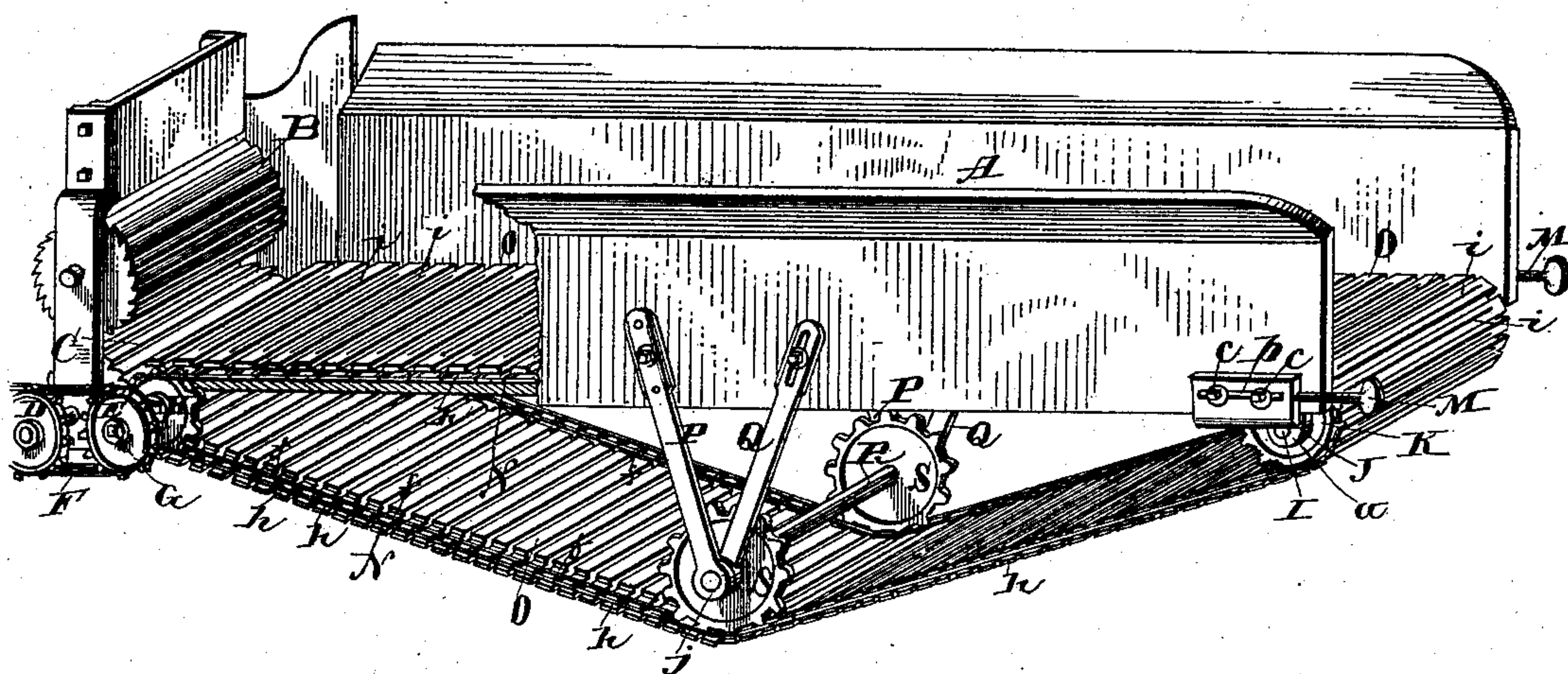
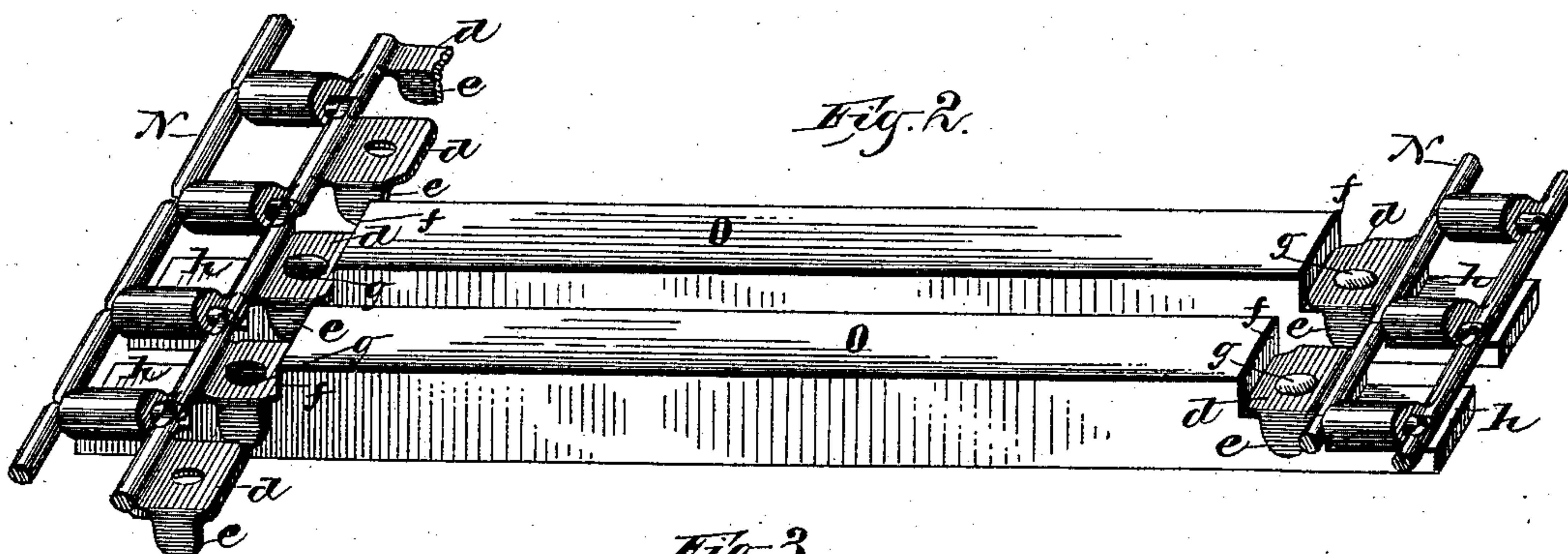
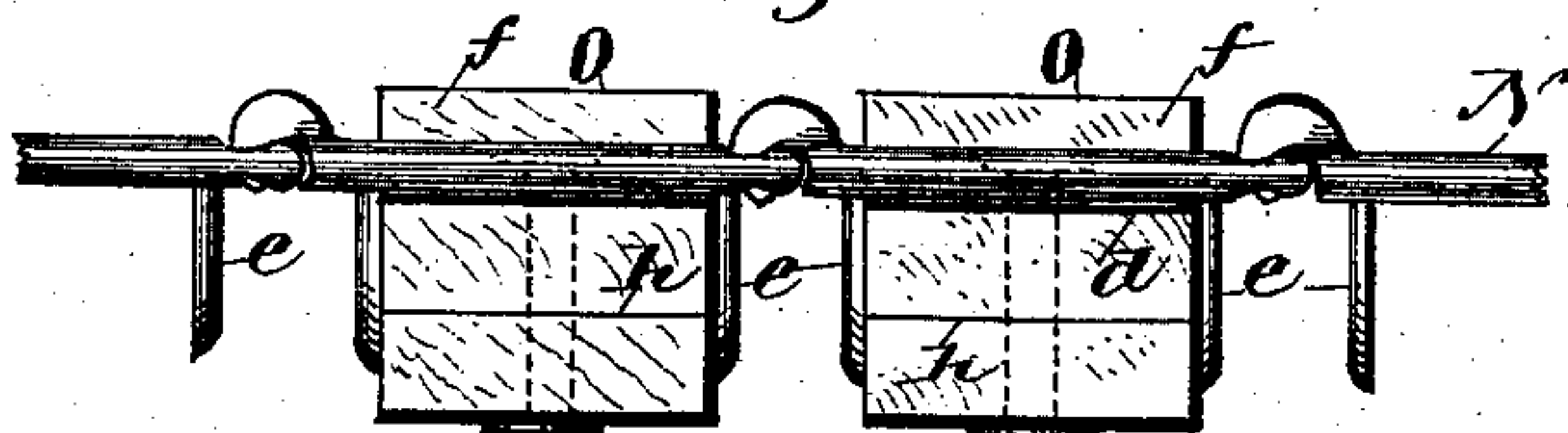


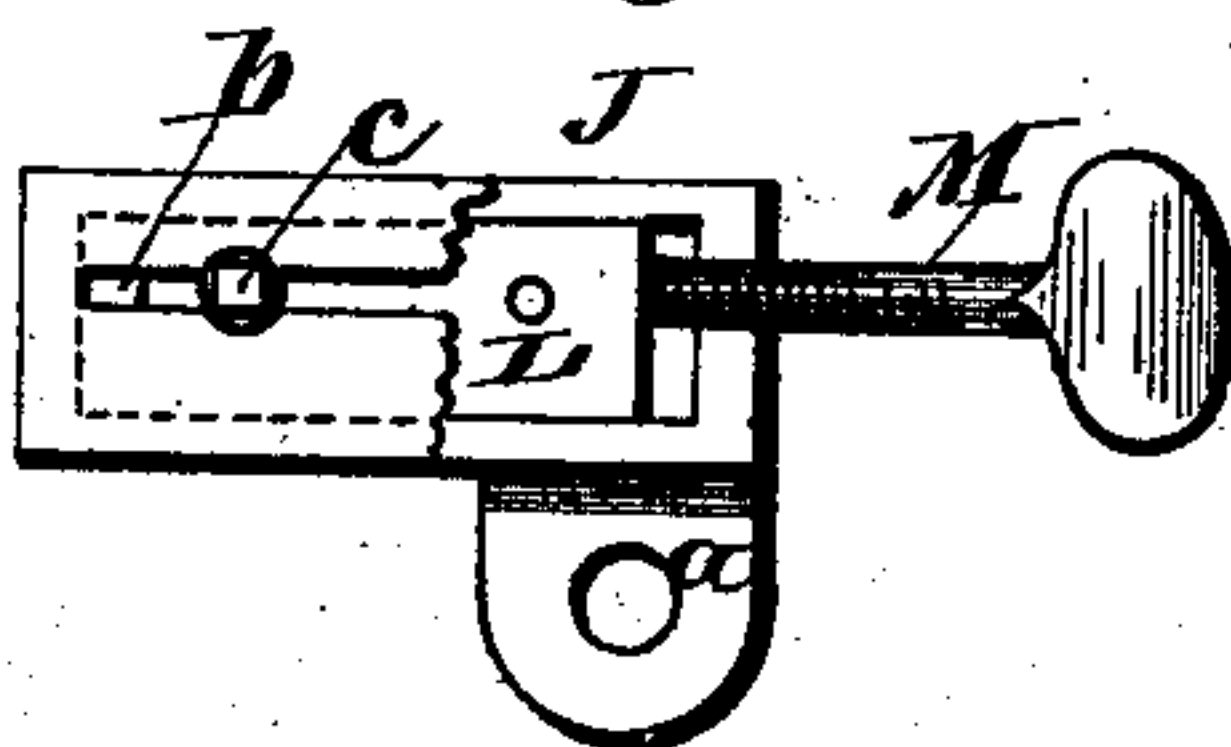
Fig. 2.



*Fig. 3.*



*Fig. 4.*



Witnesses:  
E. G. Jones  
M. F. Fear.

Inventor:  
David Lawton  
By Stuart H. Underwood  
Attorneys.



# UNITED STATES PATENT OFFICE.

DAVID LAWTON, OF RACINE, WISCONSIN.

## STRAW-CUTTER.

SPECIFICATION forming part of Letters Patent No. 372,157, dated October 25, 1887.

Application filed February 7, 1887. Serial No. 226,797. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID LAWTON, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Straw-Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to straw-cutters; and it consists in certain peculiarities of construction and combination of parts to be hereinafter described, with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 is a perspective view of a portion of a straw-cutter, parts being broken away to show the application of my invention; Fig. 2, a detail view in perspective, showing the construction of the feed-apron; Fig. 3, a similar view in elevation, and Fig. 4 a like view of the longitudinally-adjustable bearing.

Referring by letter to the drawings, A represents the feed-box of a straw-cutter, and B C the upper and lower feed-rolls thereof in operative position. Fast on a journal of the lower feed-roll, C, is a sprocket-wheel, D, connected by a drive-chain, F, with a sprocket-wheel, E, on the adjacent outer end of a transverse shaft, G, the latter being also provided with other sprocket-wheels, H, at opposite sides of the feed-box A. Only one of the sprocket-wheels H has been shown in the drawings, Fig. 1, but both have the same function, differing only as to location. At the rear end of the feed-box another transverse shaft, I, is hung in longitudinally-adjustable bearings J, and provided with sprocket-wheels K, (one only of which is shown,) the latter being in line with sprocket-wheels H on the front shaft, G.

Each bearing J for the rear shaft, I, is simply a flanged plate provided with an offsetted and perforated ear, *a*, that vertically depends therefrom, and in which a journal of said shaft is mounted. The flanged plate is also provided with a longitudinal slot, *b*, for the passage of bolts *c*, that serve to rigidly retain in place on the adjacent side of the feed-box a flat plate, L, and permit a longitudinal movement of the former plate.

A set-screw, M, has its bearing in the rear end of the flanged plate J, and is arranged to

impinge against the corresponding end of the flat plate L, as best illustrated in Fig. 4.

Operative on the sprocket-wheels H and K are endless drive-chains N, to the individual links of which are secured slats O, of such width as to leave the smallest possible interval between each two of the latter consistent with the travel of the apron, this construction being for the purpose of securing an approximately-solid feed-bed. The links that constitute the drive-chains are of peculiar construction, each one thereof having a lateral extension, *d*, angularly bent at its ends to form ears *e*.

Each slat O of the apron has its ends right-angularly cut away to form a shoulder, *f*, to which is secured by a bolt or rivet, *g*, the lateral extension *d* of a drive-chain link, the ears *e* of this extension being brought over against the sides of said slat, so as to lock the parts securely together and prevent said link from being twisted out of its proper position. The slats O are further cut away at their ends to form other right-angular shoulders, *h*, against which impinge the teeth of the several sprocket-wheels over which the drive-chains N operate. I prefer to provide the slats O of the feed-apron with transverse grooves *i*, in order to obtain a better hold on the material in the box.

Secured to the respective sides of the feed-box A are arms P Q, that are provided with bearings *j* for a shaft, R, that carries sprocket-wheels S, arranged to engage the drive-chains N, forming part of the feed-apron. As shown by Fig. 1, each arm P has its upper end pivoted to the feed-box A, while each arm Q is provided at its upper end with a slot, through which and said feed-box is passed a bolt, on which operates a set-nut. By loosening the set-nuts, the arms Q may be adjusted up or down and the arms P moved to or fro on their pivots to hold out the slack of the feed-apron.

If found desirable, the arms P may have their upper ends slotted similar to the ones Q, and be adjustably secured to the feed-box by set-screws, either construction just described serving the same purpose.

The construction just described serves to prevent the apron from flapping on its passage beneath the feed-box, the tension of the feed-



apron being regulated by the adjustment of the arms Q.

The tension of the apron is longitudinally regulated by the adjustment of the bearings J on the set-screws M, this adjustment serving to carry the transverse shaft I either to the front or rear, as may be necessary.

By the construction above described I provide a simple, easily-manufactured, and comparatively inexpensive feed-apron that obviates the difficulties heretofore experienced with the ordinary canvas aprons commonly employed on power straw-cutters, and an apron similar to mine will at all times carry the material in the box up to the feed-rolls.

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

1. In a straw-cutter, the combination of a feed box and rolls with an endless carrier, depending arms arranged in pairs on the outer side of the box, one arm in each pair being pivoted to said box and the other provided at its upper end with a slot, bolts arranged to engage the slots in the latter arms, set-nuts arranged on the bolts, a shaft having its bearings in the lower ends of said arms, and suitable wheels arranged on the shaft to come against the carrier, substantially as and for the purpose set forth.

2. In a straw-cutter, an endless carrier comprising a series of slats having their ends cut away in the form of two right-angular shoulders or seats of different depths and drive-chains having their several links provided with lateral extensions rigidly secured to the adjacent seats, in combination with suitable sprocket-wheels arranged to engage said chains, substantially as and for the purpose set forth.

3. In a straw-cutter, an endless carrier comprising a series of slats having their ends cut away in the form of two right-angular shoulders or seats of different depths and drive-chains having their several links provided with lateral extensions rigidly secured to the adjacent seats and provided with angular ears that come over against the sides of the slats, in combination with sprocket-wheels arranged to engage the chains, substantially as and for the purpose set forth.

4. In a straw-cutter, an endless carrier comprising a series of slats provided with transverse grooves and cut away at their ends to form two right-angular shoulders or seats of different depths and drive chains having their several links provided with lateral extensions rigidly secured to the adjacent seats, in combination with suitable sprocket-wheels arranged to engage said chains, substantially as and for the purpose set forth.

5. In a straw-cutter, an endless carrier comprising a series of slats having their ends cut away in the form of two right-angular shoulders or seats of different depths and drive-chains having their several links provided with lateral extensions rigidly secured to the adjacent seats, in combination with suitable sprocket-wheels arranged to engage said chains and means, substantially as described, for regulating the tension of the carrier in a longitudinal direction, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

DAVID LAWTON.

Witnesses:

S. S. STOUT,

J. M. McLAUGHLIN.