

C. T. BOYER.

BUNCHING ATTACHMENT FOR MOWING MACHINES.

No. 586,114.

Patented July 13, 1897.

Fig. 1.

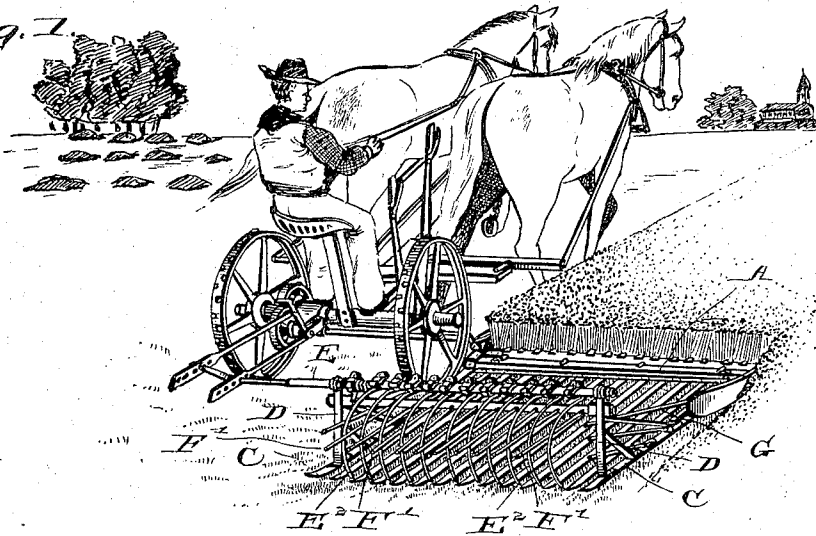


Fig. 2.

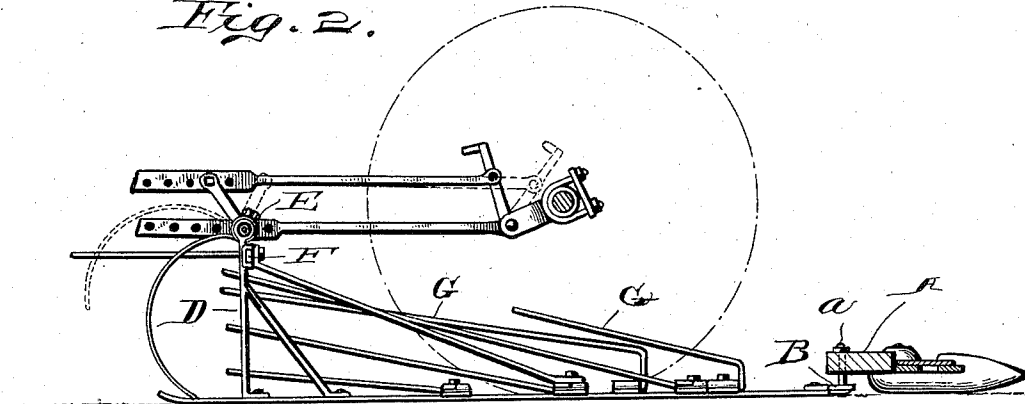
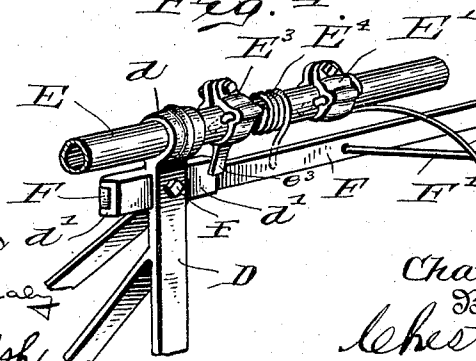
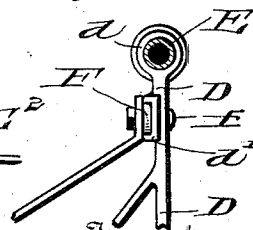


Fig. 4.



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Fig. 5.



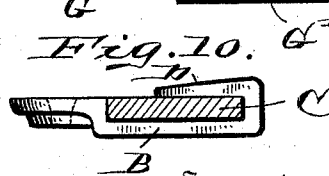
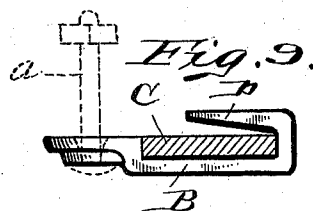
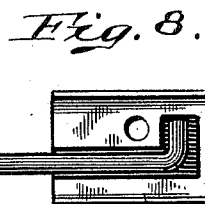
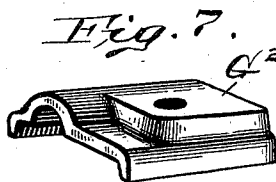
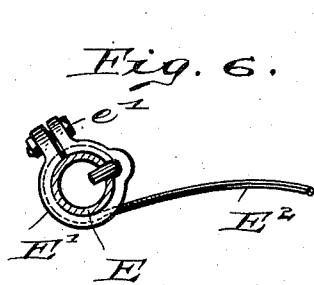
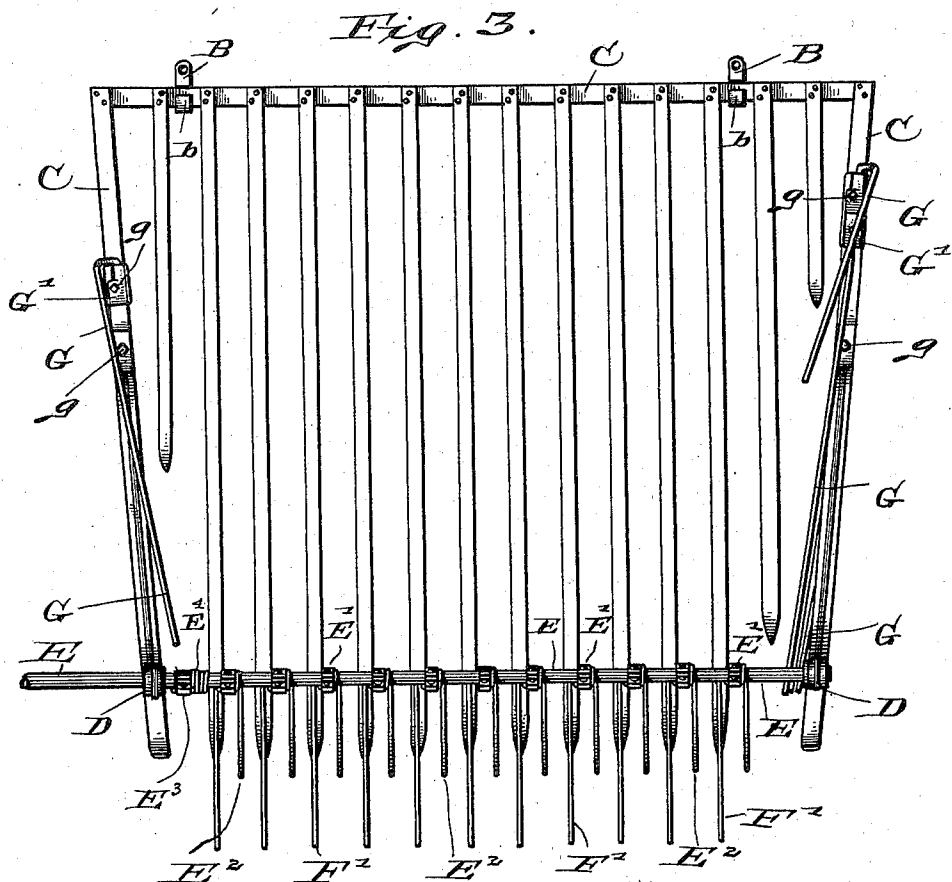
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# UNITED STATES PATENT OFFICE.

CHARLES T. BOYER, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE AMERICAN BUNCHER MANUFACTURING COMPANY, OF SAME PLACE.

## BUNCHING ATTACHMENT FOR MOWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 586,114, dated July 13, 1897.

Application filed May 11, 1896. Serial No. 591,095. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES T. BOYER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Bunching Attachments for Mowing-Machines, of which the following is a specification.

My present invention consists in the improvement of certain details of construction relating to that class of machines of which Letters Patent No. 558,032, dated April 14, 1896, shows an example.

Said improvements will be first fully described, and then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a machine provided with an attachment embodying my present improvements; Fig. 2, a side elevation of said attachment with the finger-bar of the mowing-machine shown adjacent thereto in section; Fig. 3, a top or plan view of said attachment; Fig. 4, a detail perspective view of a portion of the rock-shaft carrying the rake-teeth and some of the immediately adjacent parts; Fig. 5, a detail view showing the upper end of the supporting-standard in side elevation; Fig. 6, a detail sectional view illustrating the attachment of one of the teeth more clearly; Fig. 7, a perspective view of the cap portion of the clamp by which the side guards are secured in place; Fig. 8, a plan view of the bottom part of said clamp; Fig. 9, a transverse sectional view of the front bar of the bunching-attachment frame and a side elevation of one of the clamps being placed thereon, and Fig. 10 a similar view after the clamp has been completely put in position.

In said drawings the portions marked A represent the finger-bar of the mowing-machine; B, the clips by which the bunching attachment is secured thereto; C, the frame or platform of said bunching attachment; D, standards attached to the rear ends of the side pieces of the said frame; E, a rock-shaft mounted in said standards; F, a cross-bar also mounted on said standards, and G side or guard bars on the frame C.

The clips B are formed of malleable iron or

other similar material capable of being bent and are originally formed of a shape shown in Fig. 9. They are secured to the finger-bar A by bolts *a* at one end, and the other ends are adapted to embrace the front bar of the frame C. After said bar has been placed within said loops the points *b* thereof are bent down from the position shown in Fig. 9 to the position shown in Fig. 10, and thus closely embrace and hold the said bar C. This is a very inexpensive attaching device and one which can be applied to the frame C at any point and may be shifted from point to point, as may be desired, thus readily accommodating itself to larger or smaller machines.

The standards D are in my present construction also made as castings and have at their upper ends eyes *d* to receive the rock-shaft E and ears *d'*, forming T-heads to receive the bar F. Said standards are thus not only less expensive, but more rigid than those heretofore used, the ears *d'* especially lending much to the stiffness of the structure.

The rock-shaft E is preferably made of a hollow tube, such as gas-pipe, and carries the clamps E', in which are mounted the raking-teeth E<sup>2</sup>. A similar clamp E<sup>3</sup> serves both as a holder for the spring E<sup>4</sup> and by means of its tailpiece *e*<sup>3</sup>, which is adapted to come in contact with an ear *d'*, as a stop to limit the movement of said rock-shaft. The spring E<sup>4</sup> serves to hold the rock-shaft to that position where the parts *e*<sup>3</sup> and *d'* are in contact, except when additional force is applied to the rock-shaft, whereby it is revolved in the other direction and the teeth or fingers E<sup>2</sup> raised.

As shown most plainly in Fig. 6, there is an interior groove in one side of the clamps E' and E<sup>3</sup>, through which an end of either the tooth E<sup>2</sup> or spring E<sup>4</sup> may pass, and which end is then turned inwardly and passes through a hole into the rock-shaft itself, also as most plainly shown in said Fig. 6. Said clamps are also tightly held in place by the clamping-bolts *e'*.

The cross-bar F is held into seats provided therefor in the ears on the standards D by bolts *f*. Said bar carries the arms F', which serve to clear the teeth E<sup>2</sup> as they are raised, thus securing the depositing of the bunch at the point desired. Said bar is shown as formed of flat iron and set vertically, and it thus

also serves as a strong support for the rear end of the structure, whereby the side pieces of the frame C are held firmly in place, this being aided, as before stated, by the T-shaped wing portions *d'* on the standards D, within which the ends of this bar F are seated.

The guard-bars G are secured to the guide-pieces of the frame C and serve to prevent the escape sidewise of the grain being cut. In order that these rods may be easily removed and replaced and firmly held in position, I have devised a peculiar form of socket-clamp therefor, consisting of the two parts G' and G<sup>2</sup>, the form of which is most clearly illustrated in Figs. 8 and 7. The lower portion G' of these clamps has a groove including a transverse portion, and the end of each of the rods G is correspondingly bent sidewise, as illustrated in Fig. 8, and thus when said rods are clamped in place they are held firmly from revolving. Caps fit over these and hold the clamp parts firmly together and the guard-bars firmly in place by the application of a single bolt *g*. These clamps are so formed that by reversing ends of the same they can be placed close together, and one of the rods G thus extend out in each direction, as is shown most plainly near the right in Fig. 2.

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

1. The combination of a mowing-machine, a bunching attachment therefor, and couplings B adapted to connect the bunching attachment to the finger-bar of the mowing-machine, said couplings being connected to the finger-bar by means of bolts, and provided

with loops to receive the transverse member of the bunching-attachment frame, the points thereof being adapted to be bent down and thus hold said bar securely in the members thereof without other fastening, substantially as shown and described.

2. The combination, with a mowing-machine, of a bunching attachment therefor, consisting of a frame, standards on the rear end of said frame, a rock-shaft mounted in said standards, a transverse bar extending below said rock-shaft and also secured to said standards, rake-teeth mounted on said rock-shaft, a clip on said rock-shaft having a tail-piece adapted to come in contact with a stop carried by said standard or cross-bar, and a spring attached thereto and operating to hold said rock-shaft to the predetermined point, said several parts being constructed, arranged and operating substantially as shown and described.

3. The combination, in a bunching attachment for mowing-machines, of the frame of said bunching attachment embodying the cross-bar F, a rock-shaft mounted above said cross-bar, a clip E<sup>3</sup> having a tail-piece *e*<sup>3</sup> mounted on said rock-shaft, a spring E<sup>4</sup> also mounted on said rock-shaft and secured by the same clip having the tail-piece, all substantially as shown and described and for the purposes specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 6th day of May, A. D. 1896.

CHARLES T. BOYER. [L. S.]

Witnesses:

CHESTER BRADFORD,  
JAMES A. WALSH.