

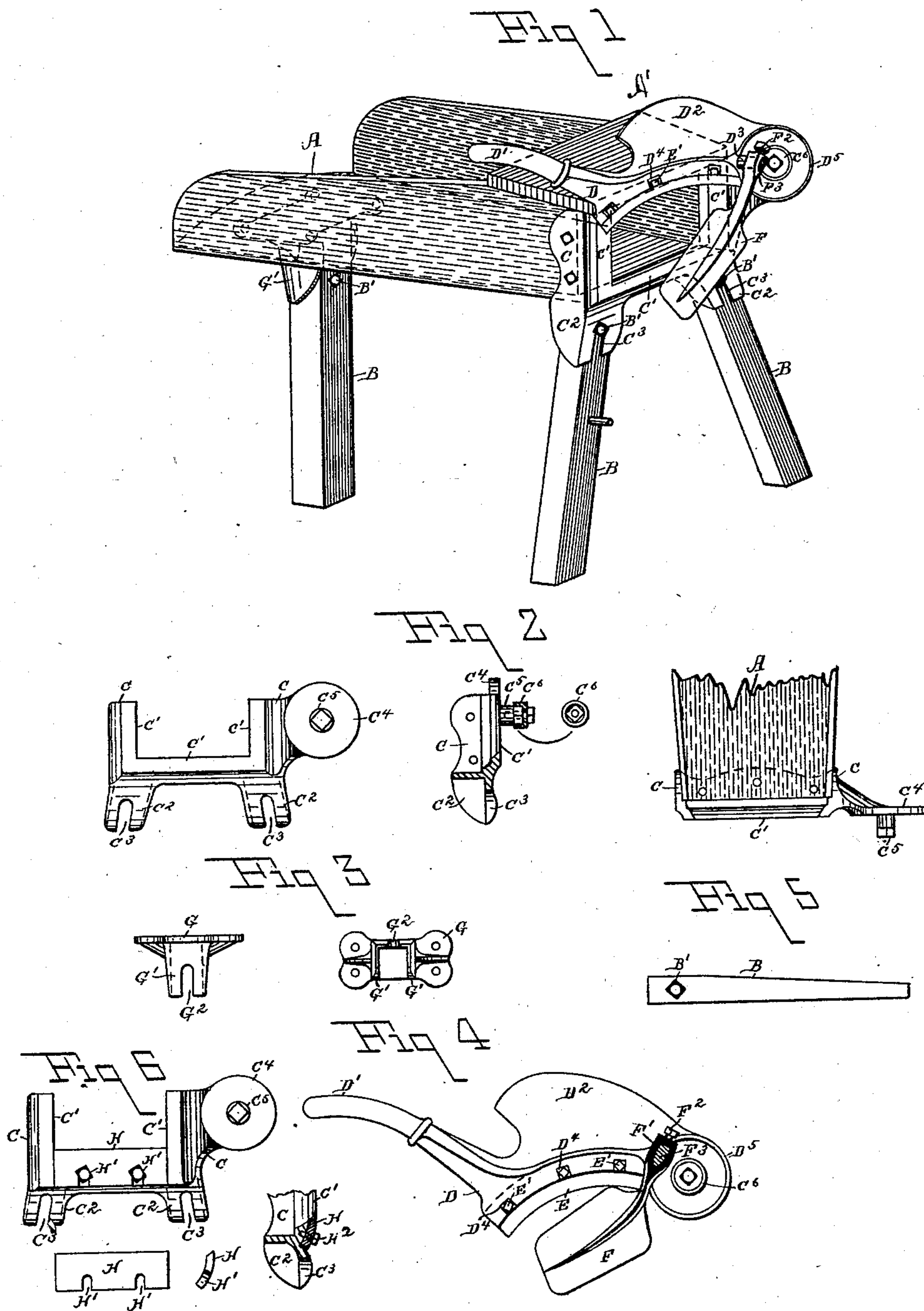
(No Model.)

A. G. CHRISTMAN.

FEED CUTTER.

No. 282,052.

Patented July 31, 1883.



Witnesses

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UNITED STATES PATENT OFFICE.

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FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 282,052, dated July 31, 1883.

Application filed March 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS G. CHRISTMAN, a citizen of the United States, residing at Litiz, county of Lancaster, State of Pennsylvania, have invented a new and useful Improvement in Feed-Cutters, of which the following is a specification.

This improvement relates to that class of implements where provision is made for shipment; also, that class where self-sharpening surfaces are provided for the same.

The object of the invention is to furnish a feed-cutter easily separable in its parts for shipment in knockdown parcels, and to furnish at the same time a cheap feed-cutter, easily kept in good cutting order. The drawings herewith, forming a part of this specification, will show the manner in which this is attained, similar letters of reference designating similar parts in all the figures.

Figure 1 is a perspective elevation of the feed-cutter as prepared for work. Fig. 2 represents a front elevation, plan, and cross-section of the throat-piece, exhibiting the self-sharpening form of the opening. Fig. 3 represents the rear leg-bracket. Fig. 4 represents the knife-lever and gage detached from the cutter. Fig. 5 represents a leg detached from its socket; Fig. 6, an elevation and part section of the throat-piece, also elevation and end view of a bed-knife, showing its application, in all of which—

A represents the usual feed-cutter box; A', the throat-cover; B, the legs; B', the screws for securing the same to the leg-sockets; C, the throat-piece, provided with bed-knife edge C'; C², leg-brackets, having open bolt-slots C³; and C⁴, fulcrum-arm; C⁵, fulcrum-pin, and C⁶ cap. D represents the cutting-knife lever; D', the handle; D², the evener; D³, gage-post; D⁴, recess for knife-bolt; D⁵, fulcrum-head. E represents the cutting-knife, secured to the lever D by bolts E'. F represents the usual gage, having a head, F', mounted upon the lever-post F², and adjustable thereon by a set-screw, F³. G represents the bracket for the back leg, which has a three-sided socket-recess, G', for the leg, with an open slot, G², for the bolt B' to slide freely therein. H represents a steel or chilled cast-iron bed-knife, in section a segment of a circle, having slots H' and bolts H²,

to secure the same to the throat-piece. When a bed-knife is to be used, it is adapted to be applied to the throat by a curvilinear recess within the front face.

It will be seen that by the arrangement of the open slot in the leg-sockets a slight turn of the screw-bolt B' will loosen the leg and permit its withdrawal; the same with the knife-lever and gage. The loosening of a single bolt in either case permits the removal of the piece. The legs, knife-lever, and gage may then be packed within the straw-box A, thus permitting the full freightage of the car, instead of occupying the area of the car, and shipping about one-third of its freight capacity.

In constructing feed-cutters (of the cheapest class) in accordance with my improvement, the face of the throat at C' is formed as shown in plan and side section in Fig. 2. The throat-piece may be cast of hard iron throughout; but I prefer to cast the edge C' upon suitable chills, and thus form a superior cutting-surface, making it virtually the equivalent of a steel bed-knife. From the angle at which the interior face meets the outer parallel face, the wear of the knife-lever upon the throat continually renews the cutting-edge of the same. It will be noticed, also, that the interior angular face permits the application of a file thereto, and thus it may at any time be resharpened.

For the higher-priced feed-cutters I make use of a steel bed-knife, H, made of a circular section, embedded in a corresponding recess in the front of the throat-piece; the curvature of the knife and its cutting-edge being so arranged relative to the face of the throat that as it wears away and has its cutting-edge renewed its adjustment by the bolts H² in the slots H' will always bring the cutting-edge in line with the face of the throat, similar to the face presented by the chilled front of the same. The projected fulcrum-post C⁵ is formed square on the end, and the cap C⁶ is correspondingly recessed, which prevents movement of the cap through the movement of the knife-lever, and therefore the bolt or end screw binding the cap upon the post has no tendency to become loosened. The leg-sockets C² are flanged or faced on three sides, the transverse face being slotted from the lower edge, as at C³, for the reception of the screw-bolt B'. The legs being inserted

therein, the bolt is screwed until it comes in contact with the surface of C^2 , which securely connects the leg B with the box A, and a very slight turn in the reverse direction will permit the withdrawal of the leg by pulling it away from the box. The bracket G for the rear leg is constructed in a similar manner, and is operated in the same way to connect or release the leg.

10 The evener D^2 of the lever D receives the thrust of the material being cut, and keeps it even for the next projection of the same to be cut, the gage F being adjusted on the post F^3 to the position to give the desired length to the feed to be cut.

15 The drawings are so fully detailed that an expert will easily comprehend the same.

Having shown its novelty and use, I desire to obtain by Letters Patent the following 20 claims on the same:

1. In combination with a feed-cutter box, A, a throat-piece, C, provided with the usual knife-arm, C^1 , and leg-sockets C^2 , the fulcrum-

post C^5 , having a square shank at or near its outer end, and the leg-sockets having each 25 open bolt-slots C^3 , or bifurcated on one of their faces, the throat C^1 , upon three of its sides, being formed of retracted angular internal faces, as shown, the usual reciprocating knife, E, and evener F, mounted upon the fulcrum-post C^5 , 30 and secured thereon by the square-eyed cap C^6 , all arranged to operate as and for the purpose set forth.

2. In combination with a feed-cutter box, A, provided with a metallic throat-piece, C, as 35 shown, fulcrum-post C^5 , bifurcated slotted sockets C^2 , retracted angular-faced mouth C^1 , reciprocating lever D, knife E, cap C^6 , the rear leg-bracket, G, constructed as shown, and arranged to operate as and for the purpose speci- 40 fied.

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Witnesses:

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