G. M. MERWIN.

ENSILAGE CUTTER.

APPLICATION FILED JULY 10, 1915.

1,247,307. Patented Nov. 20, 1917.

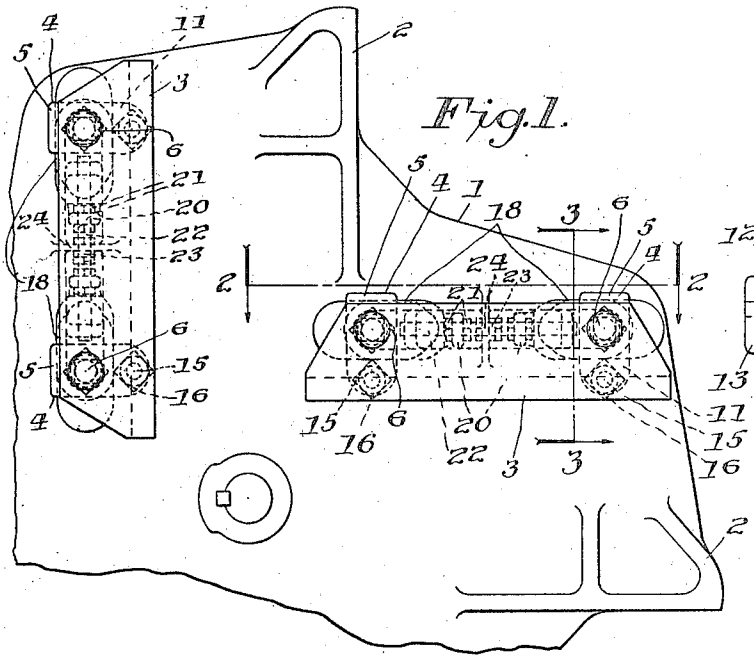


Fig. 1.

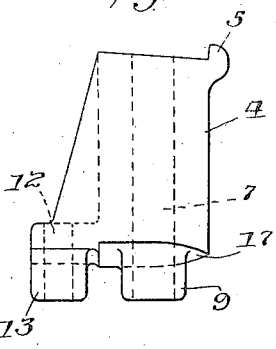


Fig. 4.

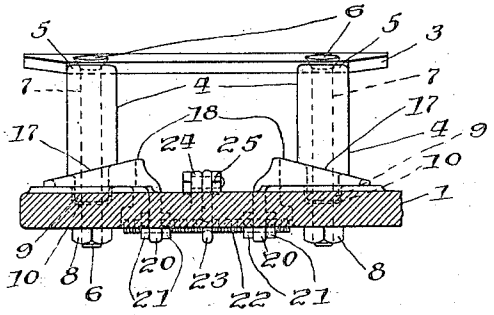


Fig. 2.

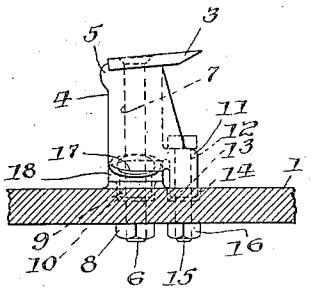


Fig. 3.

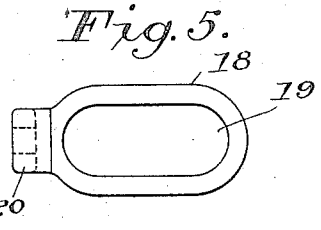


Fig. 5.

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ENSILAGE-CUTTER.

1,247,307. Specification of Letters Patent. Patented Nov. 20, 1917.

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To all whom it may concern:

Be it known that I, GEORGE M. MERWIN, a citizen of the United States, residing at Berwyn, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ensilage-Cutters, of which the following is a full, clear, and exact specification.

My invention relates to ensilage cutters.

It has among its objects to provide an improved knife adjustment whereby the operation of adjusting the knife is facilitated and adjusting means are provided of a simple and rugged character. More specifically my invention has for its object to provide an improved knife adjustment whereby, through a single adjusting means carried at the back of the cutter head, a plurality of knife adjusting wedges may be moved relative to their knife posts. I attain these objects by an improved construction wherein a plurality of wedge members are disposed longitudinally of a knife and operatively connected to their knife posts and to an adjusting member carried on the back of the cutter head in such a manner that they may be adjusted relative to their posts from the back of the cutter head.

In the accompanying drawings I have, for purposes of illustration, shown one embodiment which my invention may assume in practice.

In these drawings:

Figure 1 is a partial side elevation of a cutter head equipped with my improvement;

Fig. 2 is a detail view with the cutter head in section, taken approximately on line 2—2 of Fig. 1;

Fig. 3 is a detail view of the cutter head in section, taken approximately on line 3—3 of Fig. 1;

Fig. 4 is a detail view of one of the knife posts;

Fig. 5 is a detail plan view of one of the wedges.

In these drawings I have shown a cutter head 1 of standard construction having spaced fan blades 2 thereon and knives 3 of the inward shear type disposed substantially at right angles to each other and located preferably on opposite sides of the blades 2.

In my improvement a plurality of spaced knife posts 4 form the support for the knives 3, these posts being provided with upstanding shoulders 5 acting as supports for the back of the knife and preferably having their upper surfaces disposed at an angle to the horizontal so that the knife itself when seated in them is disposed at a slight angle. To these posts 4 the knife is connected by bolts 6 which extend down through a suitable bore 7 in the post and through the cutter head to the back of the same, where clamping nuts 8 are attached thereto. It will also be noted that each of these posts is provided with a lug or cylindrical portion 9 forming an extension of the bore 7, which is countersunk or seated in a correspondingly shaped recess 10 in the knife carrying face of the cutter head. Attention is also directed to the fact that each of these posts is provided with a laterally disposed extension 11 also having a bore 12 therein and a cylindrical portion 13 extending downward in such a manner as to correspond to the member 9, the portion 13 being seated in a corresponding recess 14 in the knife carrying face of the cutter head 1 and clamped therein by a bolt 15 and nut 16.

As shown, each of these posts 4 is provided with an inclined surface 17 disposed longitudinally with respect to the knife, the two inclined surfaces on each pair of posts preferably being so disposed that their planes will intersect at a point substantially midway between the posts. Coöperating with these inclined surfaces 17 are wedge members 18, each having a longitudinally disposed slot 19 therein and themselves disposed longitudinally with respect to the knife 3, back to back, and slidable along the flat surface of the knife carrying face of the cutter head 1. As shown, each of these wedge members 18 is provided with a downwardly and rearwardly extending arm or slotted lug 20 which protrudes through a suitable opening in the cutter head to the back thereof. Operatively connected between these slotted members 20 by adjustable locking nuts 21, is a threaded member 22. As shown, this member 22 extends through a post 23, which in turn extends through the cutter head from the knife carrying surface of the same, where it is attached to a lug 24 formed on that surface by means of a nut and bolt connection 25.

In the operation of adjusting the mechanism set forth, it is obvious that by a sim-

ple adjustment of the nuts 21, made from the back of the cutter head, either or both of the wedge members 18 may be moved relative to the posts to provide adjustment of the knife, the nuts 8, 16 clamping the parts to the cutter head, being, of course, loosened to permit such adjustment. Attention is also directed to the fact that with this construction not only is the knife securely held in each position of adjustment, but that the post members are also securely held in position due to their being countersunk or inset in the cutter head and clamped in their recesses.

While I have in this application specifically described one embodiment which my invention may assume in practice, it is, of course, to be understood that the form shown is used for purposes of illustration and that the invention itself is not limited thereto but may be embodied in other forms.

What I claim as new is:

1. In combination, a cutter head, a plurality of knife carrying posts spaced apart thereon and having inclined surfaces, a plurality of wedge members disposed between said inclined surfaces and said cutter head, and means located in the rear of said posts and operable on the opposite side of said cutter head for adjusting said wedge members either toward or from each other.

2. In combination, a cutter head, a plurality of knife carrying posts thereon having inclined lower surfaces, a knife carried on said posts, a plurality of wedge members disposed back to back between said inclined surfaces and said cutter head having extensions protruding through to the back of said cutter head, and means located in the rear of said cutter head for adjusting said wedge members in opposite directions longitudinally of said knife.

3. In combination, a cutter head, a knife post thereon having a portion thereof countersunk in said cutter head and inclined surfaces disposed on opposite sides of said countersunk portion, a wedge member disposed between said inclined surfaces and said cutter head and movable relative to said cutter head at right angles to said post, said wedge member having a portion protruding through said cutter head to the back thereof, and means located in the rear of said post and operable on the opposite side of said cutter head from said post, whereby said wedge may be adjusted relative to said post.

4. In combination, a cutter head, a plurality of knife posts spaced apart thereon having inclined lower surfaces and portions thereof countersunk in said cutter head, a plurality of wedges disposed between said inclined surfaces and said cutter head and movable relative to the countersunk portions, said wedges having portions protruding through said cutter head to the back of the same, a threaded member carried in the back of said cutter head, and adjusting means carried on said threaded member coöperating with the protruding portions of said wedge members.

5. In combination, a cutter head, a post thereon having an inclined surface, a wedge disposed between said cutter head and the inclined surface of said post, and means located on the opposite side of said cutter head from said wedge and coöperating with said wedge for adjusting the same.

In testimony whereof I affix my signature.

GEORGE M. MERWIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."