March 25, 1941. A. DION 2,235,919

CUTTER FOR ENSILAGE AND THE LIKE

Filed Sept. 15, 1938

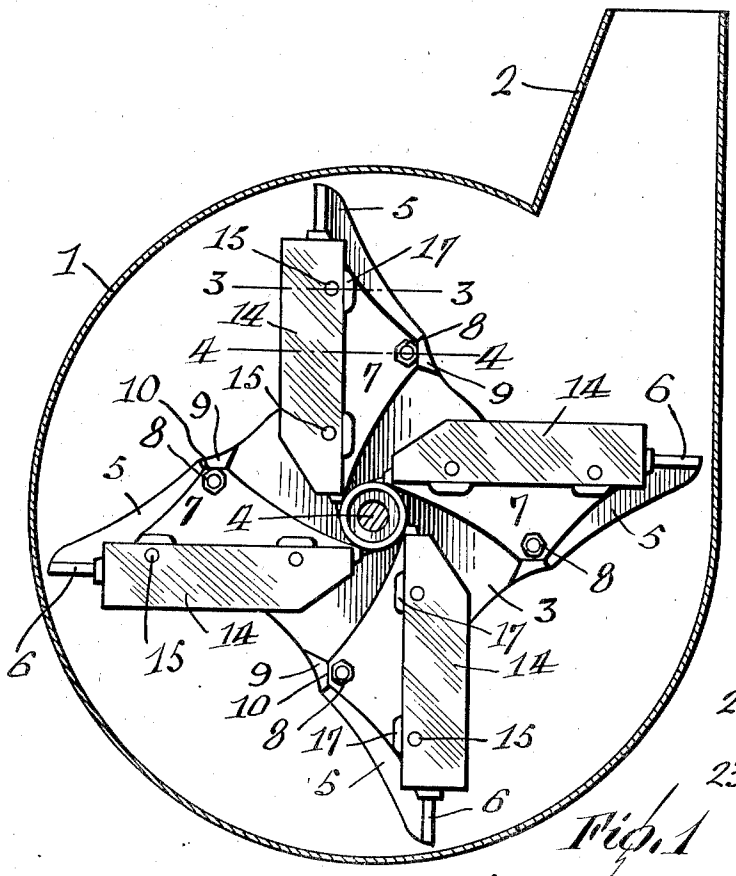


Fig. 1

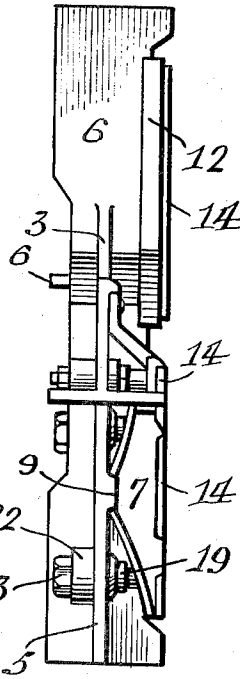


Fig. 2

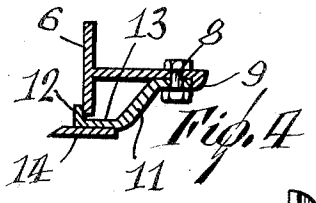


Fig. 4

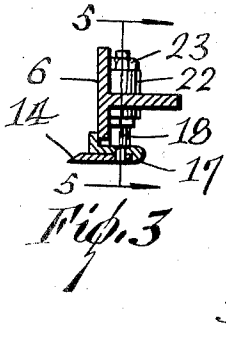


Fig. 3

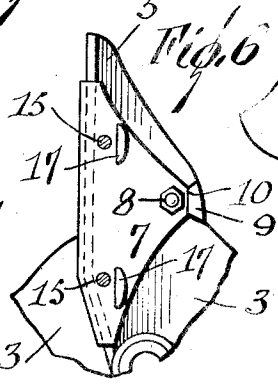


Fig. 6

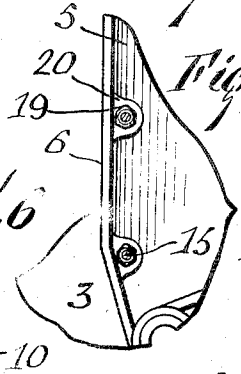


Fig. 7

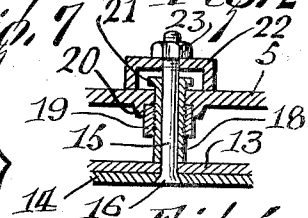


Fig. 5

Inventor:
Amédée Dion
By Albert Jaunie
Attorney

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CUTTER FOR ENSILAGE AND THE LIKE

Amedee Dion, Ste.-Therese de Blainville, Quebec, Canada

Application September 15, 1938, Serial No. 230,079
In Canada August 16, 1938

3 Claims. (Cl. 146—106)

The present invention pertains to a novel improvement in a cutter for ensilage and similar materials.

The cutter is a part of a machine in which the material is fed to be cut. The cutter consists of a rotatable body or plate carrying a number of blades. The principal object of the invention is to provide novel and improved means for mounting and adjusting the blades on the body.

Accordingly, the body is formed with a number of vanes, each having a perpendicular flange at one end. Each vane carries a detachable retaining plate and is so mounted as to have a slight swivel movement towards and from the vane. The blade is laid against the plate and is alined thereon by means of a pair of lugs on the plate. A single means is used for securing both the blade and the plate to the vane at the desired distance from the latter.

This means includes a bolt surrounded by a spacer tube which, in turn, carries an adjustable nut bearing against the vane. The position of the nut on tube determines the distance of the plate and blade from the vane. The spacer tube is so constructed as to be accessible for turning at its head, which is disposed behind the vane. The head is enclosed in a cap, and the securing bolt passes through both the vane and the cap and is fitted with a nut bearing against the cap for drawing the parts together and securing the assembly.

The invention is fully disclosed by way of example in the following description and in the accompanying drawing in which:

Figure 1 is an elevation of the device, showing the housing in section;

Figure 2 is an elevation of the device at right angles to Figure 1;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is a section on the line 4—4 of Figure 1;

Figure 5 is a section on the line 5—5 of Figure 3;

Figure 6 a a detail elevation with the blade removed, and

Figure 7 is a detail elevation with the bearing plate removed.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

The device of the invention is mounted in a housing 1 having a discharge spout 2. The material to be cut is fed to the cutting device and, after being cut, is discharged by means well known in the art and which need not be described in detail here.

The body of the device is in the nature of the plate 3 suitably mounted on a shaft 4 to rotate therewith. The plate 3 is formed with several outwardly extending vanes 5, each of which is formed along one edge with a flange or head 6 forming a T-shaped structure.

On each of these vanes is mounted a blade-retaining or bearing plate 7 of substantially triangular formation and secured at one corner to the corresponding vane by a bolt and nut 8. Adjacent to this corner, the vane is formed with a lug 9 engaging the flattened corner 10 of the plate 7, as shown more clearly in Figure 6. From the anchored corner, the plate 7 is bent outwardly as indicated by the numeral 11 in Figure 4 and has its base flanged at 12 over the edge of the corresponding head 6.

Adjacent to the flange 12, the plate 7 is bent at 13 to lie in the plane to be assumed by the cutting blade. The flattened portion provides in fact a bearing surface for the blade 14 placed against said surface as also shown in Figure 4. The blade is secured to the portion 13 by a pair of bolts 15 passed through the blade and the portion 13 and tightened against the body 1, as illustrated in Figure 5. The heads 16 of the bolts are preferably counter-sunk in the blade as shown in Figure 5. The plate 7 is formed with a pair of bearing lugs 17 engaging the rear edge of the blade and thereby holding the blade in proper alinement, as illustrated in Figures 1 and 6.

Figure 5 also illustrates the construction whereby the plate 7 and blade 14 are capable of adjustment in their distance from the vane 5 to the extent permitted by the overlapping of the flange 12 on the head 6. For this purpose, the bolt 15 is surrounded by a tube 18 extending from the back of the portion 13 through the vane 5. The tube is threaded externally to receive an adjustable nut 19 that bears against the vane and seats in a ring 20 formed on the vane. Thus, the position of the nut on the tube determines the distance of the parts 13 and 14 from the vane 5.

The end of the tube beyond the vane is formed with a head 21 adapted for engagement by a suitable turning tool. This is equivalent to turning the nut on the tube. The head 21 is enclosed in a separate cap 22 through which the bolt 15 also passes. The nut 23 on the bolt bears against the cap and thus draws the assembly together.

It will thus be seen that the invention provides a simple means of adjusting the cutting blade and its retaining plate with reference to the corre-

sponding vane 5 and that the several blades of the device may be separately and differently adjusted if necessary or desired.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim is:

1. In a cutter of the character described, a rotatable body, said body having a flange perpendicular to the plane of rotation, a plate attached to said body and bearing against one edge of said flange, a blade engaging said plate, a bolt passing through said blade, plate, and body, a tube on said bolt and passing through said body, a nut adjustable on said tube and engaging said body, and means for tightening said bolt.

2. In a cutter of the character described, a rotatable body, said body having a flange perpendicular to the plane of rotation, a plate attached to said body and bearing against one edge of said flange, a blade engaging said plate, a bolt passing through said blade, plate, and body, a tube on said bolt and passing through said body, a nut adjustable on said tube and engaging said body, said tube having a head behind said body, a cap enclosing said head and bearing on said body, said bolt passing through said cap, and a nut on said bolt and bearing on said cap.

3. In a cutter of the character described, a rotatable body, said body having a substantially radial flange perpendicular to the plane of rotation, a plate attached to said body and bearing against one edge of said flange, a blade engaging said plate and lying perpendicular to said flange, a bolt passing through said blade, plate, and body, and adjustable spacing means on said bolt between said body and plate.

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