May 4, 1926. 1,583,167

O. PEHRSON

MOWING MACHINE

Filed Dec. 26, 1924 2 Sheets-Sheet 1

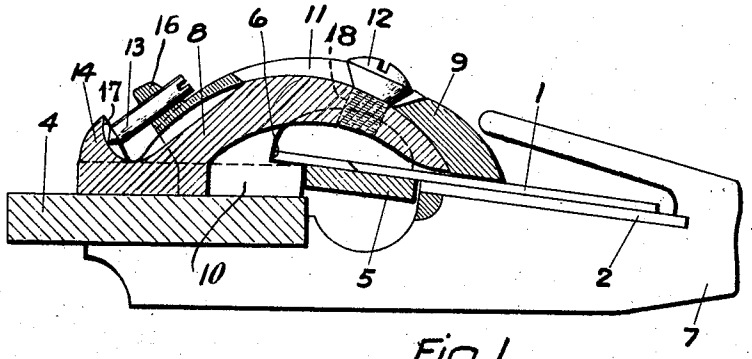


Fig. 1

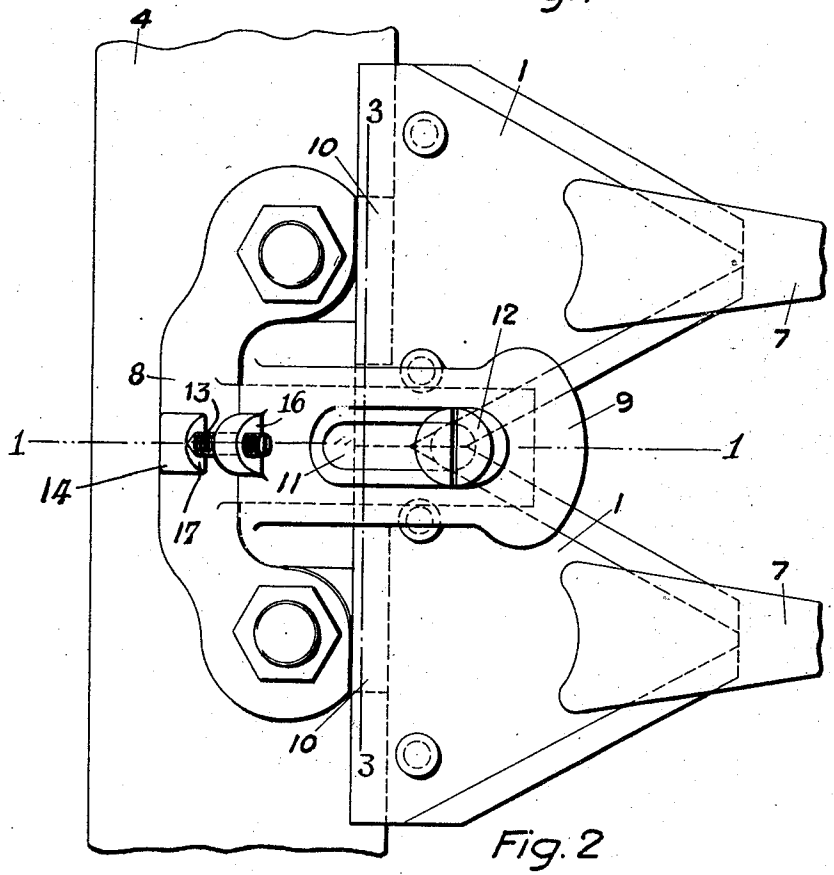


Fig. 2

Inventor:

Olof Pehrson

By Louis Pamely Jr

Attorney.

May 4, 1926. 1,583,167

O. PEHRSON

MOWING MACHINE

Filed Dec. 26, 1924 2 Sheets-Sheet 2

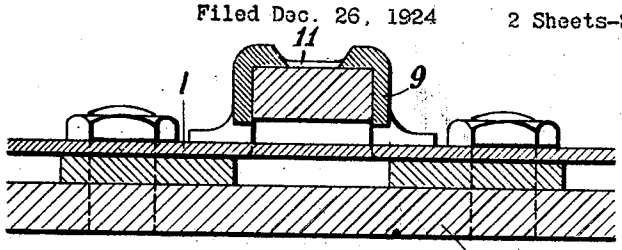


Fig. 3

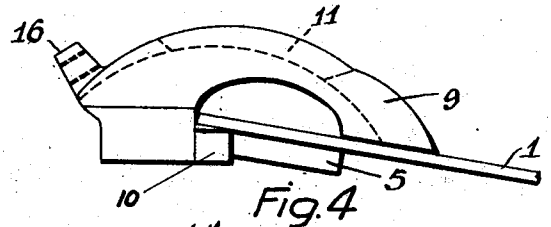


Fig. 4

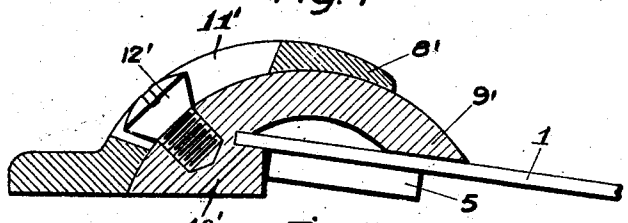
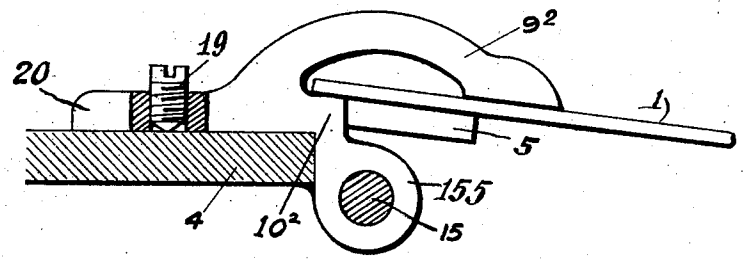


Fig. 5



Inventor

Olof Pehrson.

By Lino Pomeyke

Attorney.

Patented May 4, 1926. 1,583,167

UNITED STATES PATENT OFFICE.

OLOF PEHRSON, OF FALUN, SWEDEN.

MOWING MACHINE.

Application filed December 26, 1924. Serial No. 758,227.

To all whom it may concern:

Be it known that I, OLOF PEHRSON, a subject of the King of Sweden, and resident of Falun, in the county of Dalarna and State of Sweden, have invented certain new and useful Improvements in Mowing Machines, of which the following is a specification.

The present invention relates to improvements in mowing machines, and more particularly in the means or devices employed to exert pressure on the knives and thereby avoid the objectionable play between the latter and the stationary cutter plate which would ordinarily occur as a result of wear.

According to the invention, a specially-constructed presser or bearing device is provided, which bears at its front end upon the upper face of the knives and is equipped at its rear end with a projection which engages not only the under face of the knives but also the adjacent edge face of the knife-bar, thus supporting the knives firmly at the three points where they are most liable to become worn; the aforesaid device being so mounted as to be capable of an adjusting movement to vary its position in a manner to compensate for the wear as it occurs.

In the accompanying drawings:

Figure 1 is a transverse vertical sectional view showing one embodiment of the invention, the section being taken on line 1—1 of Fig. 2;

Fig. 2 is a plan view;

Fig. 3 is a longitudinal section taken on line 3—3, Fig. 2;

Fig. 4 is a side elevation of the improved presser member and associated knife;

Fig. 5 is a longitudinal section of a slightly modified form of presser member;

Fig. 6 is a side elevation of a further modified presser member.

Referring to Figs. 1–4, 1 indicates the knives of the machine, which are fixed to the reciprocating knife-bar 5, and 2 the stationary cutter plate or sole for cooperation therewith. The plate or sole 2 is secured, as usual, to the fingers 7 which, in turn, are fastened to the finger-bar 4; the parts thus far described being of any suitable construction.

To exert the desired pressure on the knives, and to adjust such pressure to compensate for wear, I provide a device which, in the form represented in the figures mentioned, comprises a fixed part 8 and a movable part 9. Both parts, as shown, are substantially of convexo-concave or dished construction and overlie each other; the fixed part 8 being bolted or otherwise rigidly attached to the finger-bar 4 (Fig. 2). The part 9 fits over the fixed part 8 and is slidable upon the same in an endwise or longitudinal direction, its front end bearing upon the upper surface of the knife or knives. As will be understood, any suitable number of these presser devices may be provided, arranged at intervals along the finger-bar; and they are so positioned that the front end of the upper or movable part 9 of each device presses either upon the faces of two adjacent knives, as in the construction illustrated, or upon the face of one knife only, in which latter event there will be a presser device individual to each knife. The curvatures of the surfaces of the two parts are such that the imaginary centers of curvature lie below the knives, as will be apparent from Fig. 1.

The rear end of the movable part 9 of the device is widened and forms a pair of spaced projections at opposite sides thereof which are indicated at 10. These projections 10 extend immediately beneath the rear portions 6 of the knives 1, the under faces of which rest thereon and are thus supported, while the front edge faces of said projections bear directly against the rear edge face of the knife-bar 5, as shown in Fig. 1. Due to this arrangement and to the usual slight forward and downward inclination of the knife-bar and the knives, it will be apparent, therefore, that a forward movement of the adjustable part 9 will result in an increased pressure being exerted upon the bar and knives at the three points where said part or member 9 engages the same, viz: the upper surface of the knives intermediate their ends, the under surface of the rear portions thereof, and the rear edge face of the bar; and such pressure will thus compensate for any wear and will prevent the play which would otherwise be caused.

To effect this adjustment, there is provided, in the construction illustrated, a screw 13 which is rotatably engaged in a threaded hole or passage formed through a lug 16 on the rear end of part 9, the pointed end of the screw engaging the concave surface 17 of a coacting lug 14 on the rear end of the fixed part or member 8, so that when said screw is rotated in the proper direction, the part 9 will be forced forward. The latter

is preferably guided in its movement by a pin 12 which is threaded into a socket 18 formed in the forward portion of the fixed part 8, the head of the pin projecting through a longitudinal slot 11 in the part 9.

In the construction above described, the movable part or member of the presser device overlies the fixed part; but such arrangement may be reversed, if desired, and the movable part positioned beneath the fixed part, as represented in Fig. 5, the construction and operation otherwise being the same. In Fig. 5, the fixed and movable members are respectively designated 8′ and 9′, the projections on the latter part at 10′ (only one appears), and the guide slot and pin at 11′ and 12′.

While the presser device preferably embodies two co-acting parts or members, as above explained, it may consist solely of the movable part, according to the further modification represented in Fig. 6. In this form of the invention, the single member 9^2 is provided intermediate its ends with a depending eye 155 which is loosely mounted on an axle or pivot 15, suitably connected to the finger-bar 4, so that said member is thus enabled to swing or rock about such pivot as an axis. A set-screw 19 passes through an apertured lug 20 on the rear portion of member 9^2 and bears against the finger-bar to effect the required adjustment. A pair of bearing projections 10^2, which act in the same manner as the projections 10 and 10′ previously described, is provided, only one projection 10^2 appearing.

I claim as my invention:—

1. In a mowing machine, the combination of a finger-bar, fingers secured thereto, a knife-bar, knife means carried by the latter bar, and means for imposing pressure upon the knife means and the knife-bar; said presser means embodying a movable member supported by the finger-bar and bearing at its front end directly upon the upper face of the knife means, a projection on said member bearing directly against the under face of the rear portion of the knife means and also directly against the rear edge face of the knife bar, and adjusting means for varying the position of said member and thereby the pressure exerted by its said front end and projection.

2. In a mowing machine, the combination of a finger-bar, fingers secured thereto, a knife-bar, knife means carried by the latter bar, and means for imposing pressure upon the knife means and the knife bar; said presser means embodying a movable member supported by the finger bar and directly engaging said bar and knife means at three different points, viz: against the upper face of the knife means, against the under face of the rear portion of said knife means, and against the rear edge face of the knife-bar, and also embodying adjusting means for varying the position of said member and thereby the pressure exerted by it at such points.

3. In a mowing machine, the combination of a finger-bar, fingers secured thereto, a knife-bar, knife means carried by the latter bar, and means for imposing pressure upon the knife means and the knife-bar; said presser means embodying a movable member supported by the finger-bar and bearing at its front end directly upon the upper face of the knife means, a pair of depending, spaced projections on said member at opposite sides thereof bearing directly against the under face of the rear portion of said knife means, and also directly against the rear edge face of the knife-bar, and adjusting means for varying the position of said member and thereby the pressure exerted by its said front end and projections.

4. In a mowing machine, the combination of a finger-bar; fingers secured thereto; a knife-bar; knife means carried by the latter bar; and a device for imposing pressure upon the knife means and its bar, comprising a fixed member; a movable member slidably engaged with the fixed member and bearing directly against the knife-bar and knife means at three different points, viz: against the upper face of the knife means, against the lower face of said knife means, and against the knife-bar, and means for adjusting the position of the movable member relative to the fixed member and thereby the pressure which said movable member exerts at said three points.

5. A mowing machine, according to claim 4, in which the movable member exerts pressure at its front end upon the upper face of the knife means, and at its rear portion against the under face of the rear portion of the knife means and the rear edge face of the knife-bar.

6. A mowing machine, according to claim 4, in which the fixed and movable members are of convexo-concave form and are interfitted.

7. A mowing machine, according to claim 4, in which the fixed and movable members are of convexo-concave form and are interfitted, the imaginary centers of curvature of said members being located below the knife-bar and knife means.

8. A mowing machine, according to claim 4, in which the fixed and movable members are of convexo-concave form and are interfitted; and in which the movable member bears at its front end upon the upper face of the knife means and is provided with a projection that engages both the under face of the rear portion of the knife means and the rear edge face of the knife-bar.

9. A mowing machine, according to claim 4, in which the adjusting means comprises

a set-screw rotatably mounted in a lug on one of the two members and bearing at one end against a lug on the other member.

10. A mowing machine, according to claim 4, in which the fixed and movable members are of convexo-concave form and are interfitted; and in which the adjusting means comprises a set-screw rotatably mounted in a lug on one of the two members and bearing at one end against a lug on the other member.

11. A mowing machine, according to claim 4, in which the fixed and movable members are of convexo-concave form and are interfitted; and in which the movable member bears at its front end upon the upper face of the knife means and is provided with a projection that engages both the under face of the rear portion of the knife means and the rear edge face of the knife-bar; the adjusting means comprising a set-screw rotatably mounted in a lug on one of the two members and bearing at one end against a lug on the other member.

In testimony whereof I have hereunto set my name at Falun this eighteenth day of November, 1924.

OLOF PEHRSON.