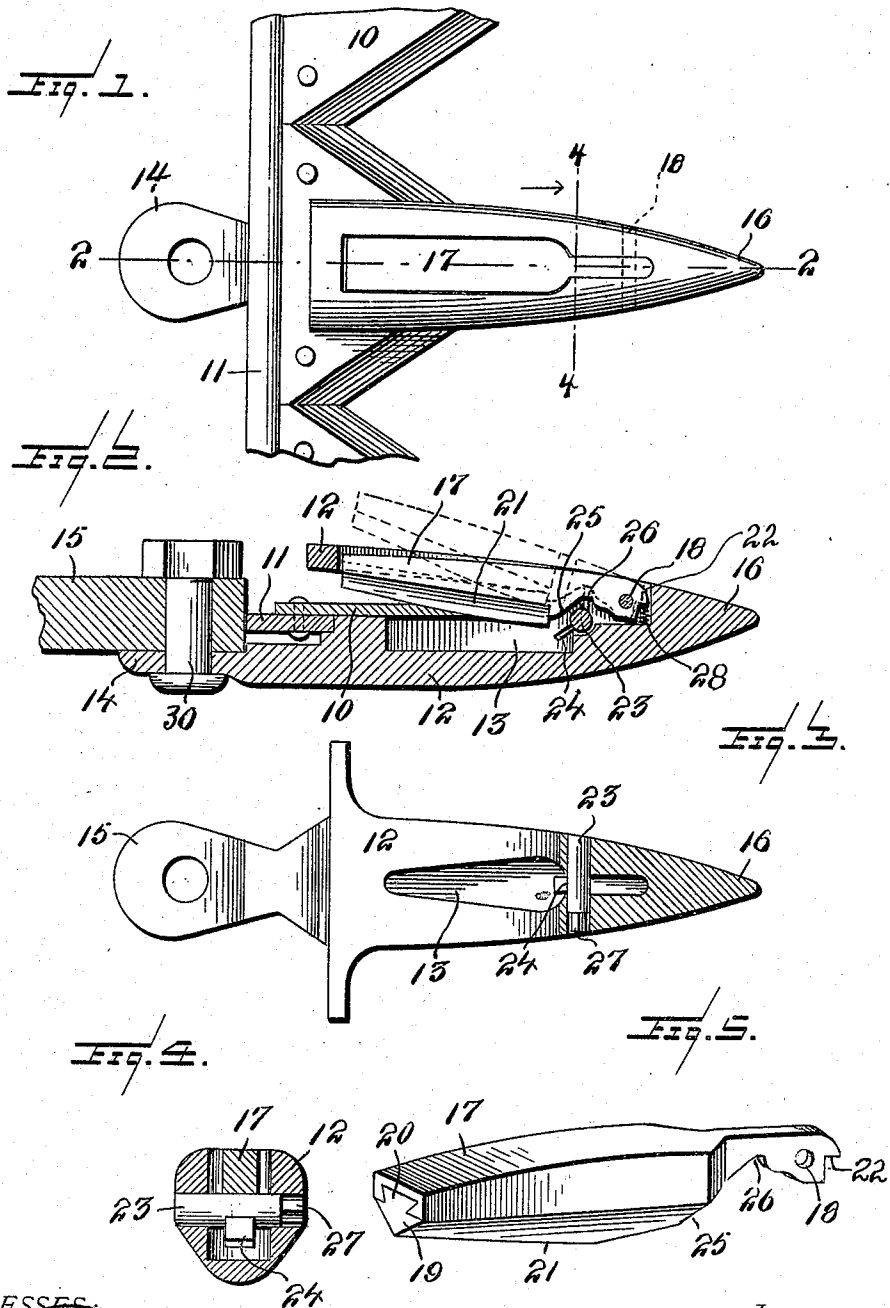


A. M. BEECHER,
MOWER KNIFE SHARPENER.
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930,924.

Patented Aug. 10, 1909.



WITNESSES:

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ALFRED M. BEECHER, OF MAKANDA, ILLINOIS.

MOWER-KNIFE SHARPENER.

No. 930,924.

Specification of Letters Patent.

Patented Aug. 10, 1909.

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To all whom it may concern:

Be it known that I, ALFRED M. BEECHER, a citizen of the United States, residing at Makanda, county of Jackson, and State of Illinois, have invented certain new and useful Improvements in Mower-Knife Sharpeners, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to a mower knife sharpener, and particularly to means mounted in the knife guard for that purpose.

15 The invention has for an object to provide a pivoted member having a surface of sharpening material adapted to rest by gravity upon the upper surface of the cutter blade and provided with means by which it may be held in an elevated position out of contact with said blade.

20 Other and further objects and advantages of the invention will be hereinafter fully set forth and the novel features thereof defined by the appended claims.

25 In the drawing:—Figure 1 is a plan of the invention applied to a cutter blade; Fig. 2 is a section on line 2—2, Fig. 1; Fig. 3 is a central horizontal section through the cutter guard; Fig. 4 is a vertical section on line 4—4, Fig. 1; Fig. 5 is a detail perspective

30 of the arm carrying the sharpening material. The numeral 10 designates the cutter blade which may be of any desired construction or configuration and adapted to be reciprocated by the slide plate 11 mounted in the guard 12 for the blade. This guard is provided with a recess 13 beneath the blade and with an attaching lug 14 by which it may be secured to the machine 15 by any desired means, such as a bolt 30, as shown in Fig. 2.

40 The outer end of the guard 12 is tapered at 16 in the usual manner and mounted at its end is the arm 17 pivoted at 18 and provided with a surface 19 of grinding material, such as emery, to rest upon the upper surface of the cutter 10 and to contact with such surface in the reciprocation of the cutter in the usual manner. The grinding surface 19 is secured to the arm 17 preferably by means of the dove tail connection 20 and this material is provided with an inclined face 21 extending downwardly toward the pivot of the arm so as to be disposed between the outer points of the teeth upon the cutter 10.

50 For the purpose of raising the arm and retaining it in this position a rock shaft 23 is

provided and formed with the projection 24 which contacts with the face 25 of the arm and raises the same until it reaches the seat 26 thereon where it supports the arm in its raised position out of contact with the cutter blade. This shaft 23 is provided at one end with a connection 27 to which any desired device may be applied for its operation. If desired a spring 28 may be disposed to engage a shoulder 22 to retain the arm in contact with a blade.

In the operation of the invention it will be seen that when the arm and grinding material are lowered into contact with the reciprocating cutter blade, the inclined faces of this material are brought into contact with those of the cutter blade and quickly effect a sharpening thereof without the necessity of removing the blade or of separately grinding these surfaces. When the sharpening has been effected the arm may be elevated and held in its raised position by the projection upon the shaft so that it does not contact with the cutter blade and permits the operation thereof without interference in its cutting action. It will therefore be seen that the invention presents a simple, economically constructed and very efficient device for automatically sharpening a mower or other cutter blade without removal from the machine. The sharpening material carried by the arm can be readily removed and replaced as necessary, while the downward feed of this by gravity permits it to contact with the blade and effect the sharpening operation.

Having described my invention and set forth its merits, what I claim and desire to secure by Letters Patent is:—

1. A mower knife sharpener comprising a knife guard, a pivoted arm thereon provided with grinding material upon its under surface, and means beneath said arm for raising and retaining it out of contact with the knife blade.

2. A mower knife sharpener comprising a knife guard, a pivoted arm thereon provided with grinding material upon its under surface, and a rock shaft disposed in said guard beneath said arm and provided with a projection to contact therewith.

3. In a mower knife sharpener, a guard having a recess in its lower portion, an arm pivotally mounted in the upper portion of said guard and provided with an inclined

surface disposed above said recess, and means for retaining said arm in elevated position.

4. In a mower knife sharpener, a guard
5 having a recess in its lower portion, an arm
pivotaly mounted in the upper portion of
said guard and provided with an inclined
surface disposed above said recess, means for
retaining said arm in elevated position, and
10 a rock shaft mounted in said guard and pro-
vided with a lateral projection adapted to
travel into contact with a seat upon the un-
der surface of said arm.

5. In a mower knife sharpener, a knife
15 guard, a reciprocating knife blade therein an
arm pivoted to the outer portion of said

guard oppositely inclined grinding faces se-
cured to said arm and means for retaining
said faces in contact with said blade.

6. In a mower knife sharpener, a knife 20
guard, an arm pivoted to the outer portion
thereof, and a grinding block having a dove-
tailed connection with said arm and inclined
longitudinally thereto and laterally in oppo-
site directions from the center of the arm. 25

In testimony whereof I affix my signature
in presence of two witnesses.

ALFRED M. BEECHER.

Witnesses:

WILLARD F. ELLIS,
DAVID B. LEVY.