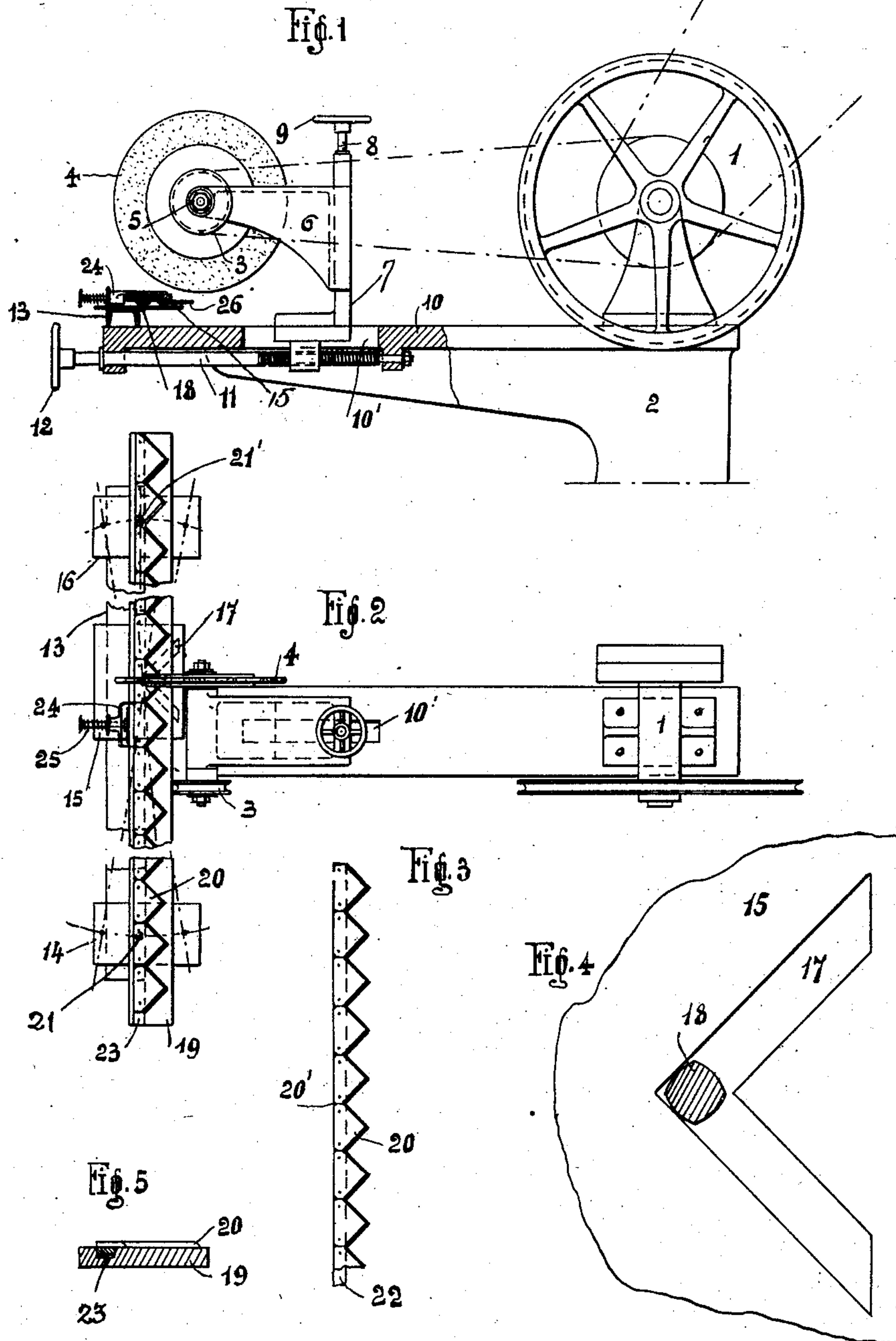


J. KNECHT.
KNIFE SHARPENER FOR MOWING MACHINES.
APPLICATION FILED AUG. 26, 1909.

974,078.

Patented Oct. 25, 1910.



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UNITED STATES PATENT OFFICE.

JAKOB KNECHT, OF ZURICH, SWITZERLAND.

KNIFE-SHARPENER FOR MOWING-MACHINES.

974,078.

Specification of Letters Patent.

Patented Oct. 25, 1910.

Application filed August 26, 1909. Serial No. 514,782.

To all whom it may concern:

Be it known that I, JAKOB KNECHT, a citizen of the Swiss Republic, residing at Zurich III, in Switzerland, have invented certain new and useful Improvements in Knife-Sharpeners for Mowing-Machines, of which the following is a specification.

The object of the present invention is to provide a device for grinding the knives of mowing machines with a zigzag shaped blade by means of a rotating grinding disk, which can be vertically and horizontally moved and fixed in its plane.

A further object is to provide a guide in which the bar carrying the knives to be ground is longitudinally displaceable, said guide being carried by a vertical pivot in an angle-slot of a rigid plate, corresponding to the angle of the edges of the cutters, and movable toward the grinding disk, as well as rotated around the pivot within predetermined limits.

The invention is shown in the annexed drawing, in which—

Figure 1 is a side view of the device in partial section. Fig. 2 a plan view. Fig. 3 shows a part of the knife of a mowing machine. Fig. 4 is a plan view of a portion of a plate, a pivoted pin being shown in section. Fig. 5 a section through the knife in its guide.

From a pulley 1, which is carried on a support 2, a belt or like transmission leads to the driving pulley 3 on the shaft 5, on which is fixed the grinding disk 4. The bracket 6, in which the shaft 5 is journaled, is displaceable on the vertical part of the angle 7 by means of a screw spindle 8 and a hand-wheel 9. The angle 7 is displaceable horizontally in a slot 10¹ of the table 10 by means of a screw 11 and a hand-wheel 12. An U-iron 13 with three plates 14, 15, 16, placed horizontally and at predetermined distances thereon is fixed on this table 10. The plate 15 has an angular slot 17, in which engages a vertical pivot 18 (Figs. 1, 2 and 4) of the guide 19 for the bar 22 of the knives 20. The guide 19 rests with the pivots 21, 21¹ on the plates 14 and 16; it can be displaced in both directions of the cutter edges and rotate within certain limits around the pivot 18, guided in the slot 17. The bar 22 (Fig. 3), on which are fixed

the single knives, the edges of which form an angle, rests in a groove 23 of the guide 19. The bar 22, which carries the knives, is rigidly held in the guide 19 by means of a fork 24, which under the action of the spring operated bolt 25 engages notches 20¹ (Fig. 3) between the knives. When the grinding is taking place the bar 22 can be displaced by the distance of a knife-length. On the guide 19 a guard plate 26 (Fig. 1) is provided above the plate 15 to prevent emery dust from falling into the guide slot for the pivot 18.

When grinding takes place the knife of the mowing machine is fixed in the guide 19 by the fork 24 and shifted toward the emery disk 4 in the direction of the knife edges, whereby on each forward movement an edge of the knife is ground. The angle of the angle-slot 17 is equal to the angle in which the knife edges lie each to the next. The motion of the guide 19 with the knife which passes along the slot 17 as well as its rotatability around the pivot 18 in the slot 17 renders it possible to deal with larger jags in the knife. In order to facilitate the partial rotation of the pivot 18 in the slot 17 its four lateral surfaces are rounded off somewhat, as shown in Fig. 4.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. A knife sharpener for mowing machine knives comprising in combination a rotary grinding wheel, a guide having means for reception of the knife bar and means for supporting said guide comprising a pin thereon and a plate having an angular slot corresponding to the angle between the knives of the knife bar.

2. A knife sharpener for mowing machine knives comprising in combination a rotary grinding wheel, a guide having means for reception of the knife bar, and means for supporting said guide comprising a pin thereon and a plate having an angular slot corresponding to the angle between the knives of the knife bar, and means permitting of partial rotation of said knife bar guide about said pin.

3. A knife sharpener for mowing machine knives comprising in combination a rotary grinding wheel, means for vertically and

horizontally adjusting said grinding wheel,
a guide having means for reception of the
knife bar, and means for supporting said
guide comprising a pin thereon and a plate
5 having an angular slot corresponding to the
angle between the knives of the knife bar.
In witness whereof I have signed this

specification in the presence of two wit-
nesses.

JAKOB KNECHT.

Witnesses:

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