No. 812,489. PATENTED FEB. 13, 1906.

F. FRIEG.

KNIFE POLISHING MACHINE.

APPLICATION FILED JAN. 4, 1905.

Fig. 1.

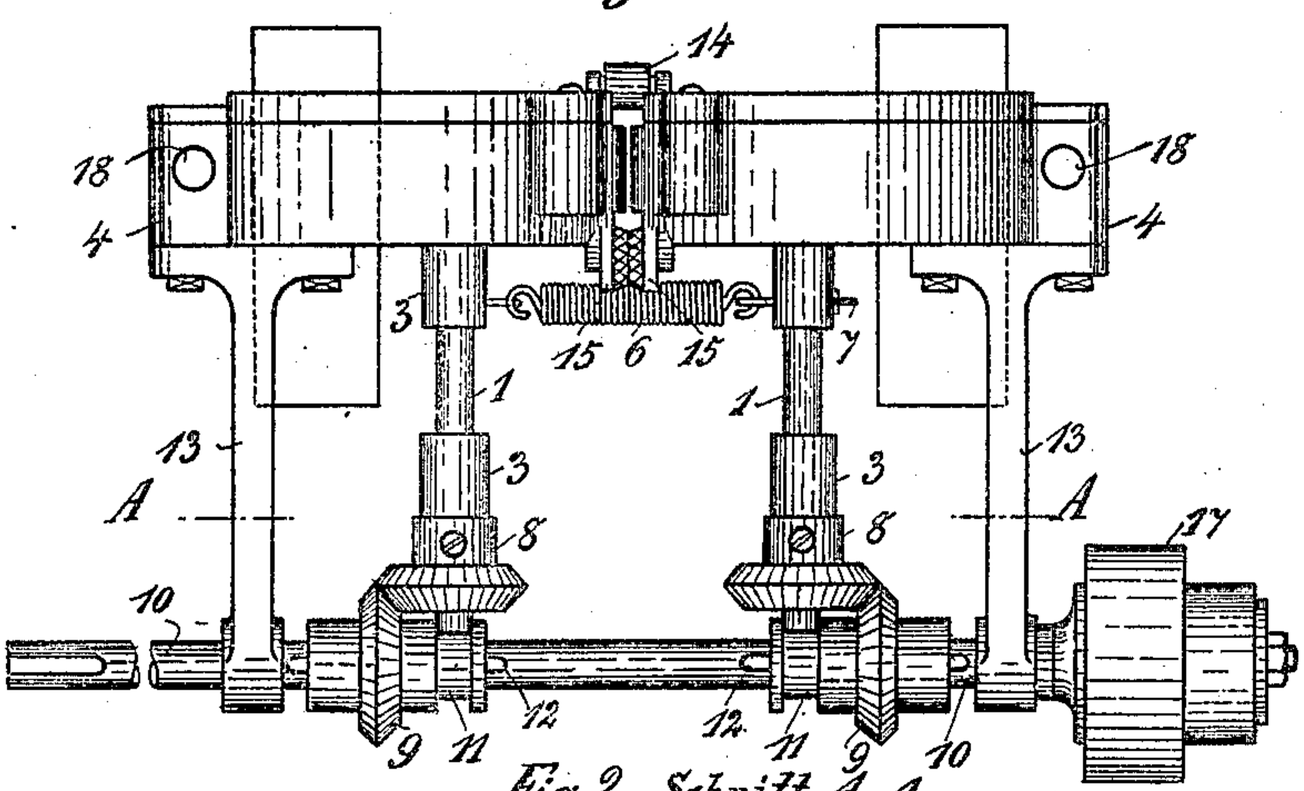


Fig. 2. Schnitt A-A.

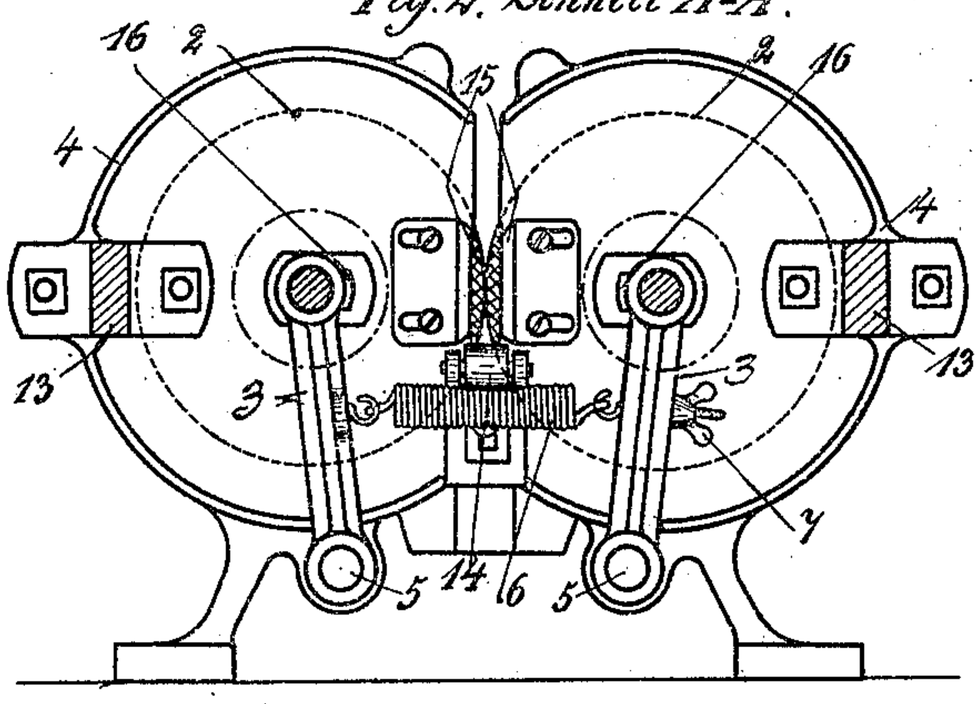
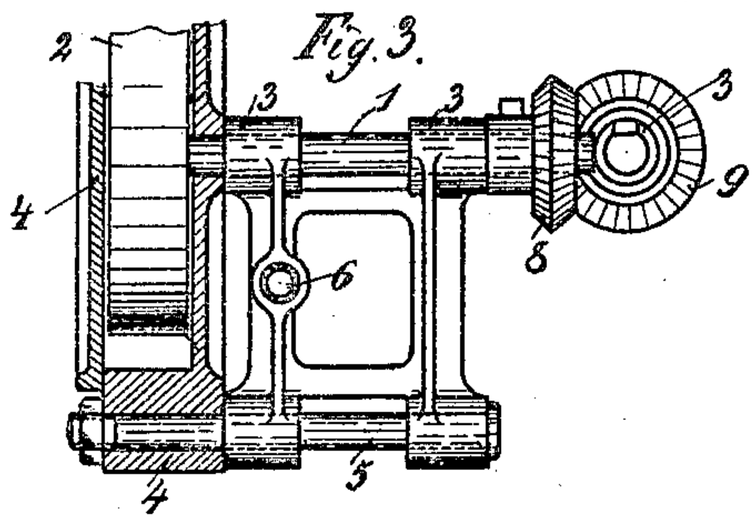


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANZ FRIEG, OF LUDWIGSBURG, GERMANY.

KNIFE-POLISHING MACHINE.

No. 812,489. Specification of Letters Patent. Patented Feb. 13, 1906.

Application filed January 4, 1905. Serial No. 239,668.

To all whom it may concern:

Be it known that I, FRANZ FRIEG, a subject of the German Emperor, and a resident of Ludwigsburg, Germany, have invented certain new and useful Improvements in Knife-Polishing Machines, of which the following is a specification.

The subject of this invention is a knife-polishing machine in which the two axles of the rollers are held by oscillating bearing-arms drawn toward each other by springs, while the knife-holding device is stationary. By this arrangement the rollers can be moved sidewise with the greatest ease, and they always adjust themselves automatically on the knife.

The subject of the invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a top view. Fig. 2 shows a vertical section on lines A A. Fig. 3 shows a vertical section.

Similar figures refer to similar parts throughout the several views.

The axles 1 of the polishing-rollers 2 are journaled in the arms 3, which turn on the pivots 5 on the frame 4 and are drawn toward each other by spiral springs 6 in a manner that the rollers exert an elastic pressure on each other. In order to be able to regulate this pressure, the spring can be adjusted at one end or point of suspension by means of a thumb-nut 7. The polishing-rollers are actuated by a pair of conical wheels 8 9, of which the wheels 9 on the common driving-axle 10 of the machine can be shifted, which is effected by the ends of the axles 1 engaging with grooves 11 of the wheels 9. In order to make these wheels 9 turn with the axle 10, a wedge 12 is affixed to the same, which engages a corresponding groove of the axle 10. The axle 10 is journaled in the bearings 13 on the frame 4.

The knife is held below on rollers 14, which can be raised and lowered, and is kept in a vertical position between the guiding-plates 15, which are lined with elastic coverings and laterally adjustable.

In the front parts of the side walls of the casing 4 are provided slits 16 for the laterally-shiftable axles 1. The machine is, moreover, provided in the usual manner with a disk 17 for polishing forks and with holes 18 for introducing the polishing material into the casing.

It is evident at once that the oscillatingly-journaled polishing-rollers can be moved sidewise uncommonly easily and that they adjust themselves with their contact-surface on the knife automatically, whereby a cutting of the knives into the rollers is safely prevented. As a result the costly rollers will last much longer.

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

1. In a knife-polishing machine the combination of two swinging frames for two polishing-rollers, an adjustable spring acting to automatically draw together one roller toward the other and movably-arranged motion-transferring gear-wheels, substantially as and for the purpose specified.

2. In a knife-polishing machine the combination of two swinging frames for two polishing-rollers, an adjustable spring acting to automatically draw together one roller toward the other, a driving-shaft, longitudinal grooves on said driving-shaft, shiftable motion-transferring gear-wheels the longitudinal movements of which are guided in said grooves, collars fastly connected to said gear-wheels and provided with grooves running around said collars, in which grooves the free ends of the roller-shafts carrying the cooperating gear-wheels are guided, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANZ FRIEG.

Witnesses:
WM. HAHN,
M. BISCHOF.