July 12, 1927.

1,635,562

J. SLUNICKO ET AL

PENCIL SHARPENER

Filed Oct. 23, 1925

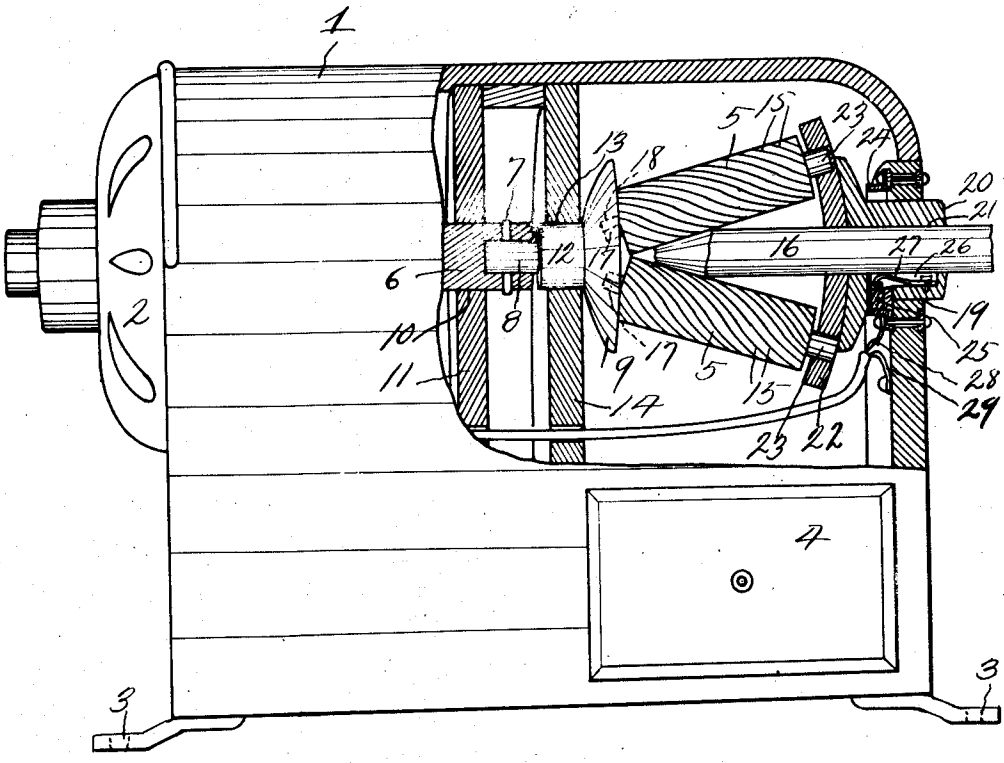


Fig. 1.

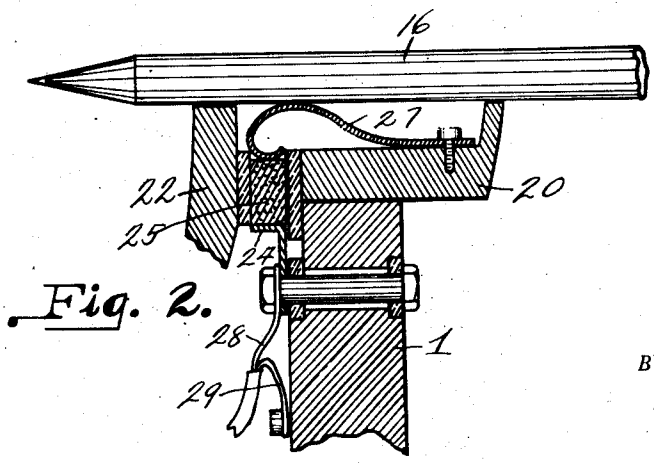


Fig. 2.

INVENTORS
J. Slunicko and
J. A. Nixon
BY
Philip A. Fennell
ATTORNEY.

Patented July 12, 1927. 1,635,562

UNITED STATES PATENT OFFICE.

JULIUS SLUNICKO AND JOHN A. NIXON, OF OMAHA, NEBRASKA.

PENCIL SHARPENER.

Application filed October 23, 1925. Serial No. 64,382.

The invention relates to pencil sharpening machines, and has for its object to provide a motor driven pencil sharpening machine comprising a casing having a motor therein, rotatable cutter rollers driven by the motor and a drawer below the rollers in the casing, into which the pencil shavings will drop and gather, thereby allowing a large collection of shavings before the dumping operation.

A further object is to provide a pencil sharpening machine comprising a casing having a motor therein and provided with a drive shaft, a rotatable disc carried by said drive shaft and in which are mounted angularly shaped pintles of cutters which diverge and are connected to a rotatable pencil receiving head having a spring contact in the pencil receiving aperture thereof, which is forced to circuit closing position upon the insertion of the pencil, and actuate the diverging rollers with spiral cutting ribs which sharpen the pencil during the rotation of the pencil receiving head.

A further object is to provide a contact ring around the bearing of the pencil receiving head and with which a contact member carried by the head engages slidably during the rotation of the head, thereby maintaining a contact until the pencil is removed from the head.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:—

Figure 1 is a side elevation of the machine with parts broken away and shown in vertical longitudinal section to better show the structure.

Figure 2 is an enlarged vertical longitudinal section through a portion of the head.

Referring to the drawing, the numeral 1 designates the casing of a machine and 2 a conventional form of motor in one end thereof. The lower side of the casing 1 is provided with brackets 3 whereby the device may be attached to a desk or other support. In pencil sharpeners as at present constructed, it is necessary to clean the shavings out of the same many times, and to obviate this difficulty a relatively large drawer 4 is disposed in the casing 1 beneath the cutting rolls 5, and into which drawer a relatively large amount of shavings may accumulate before it is necessary to dump the same. The motor 2 is provided with a drive shaft 6, which has pinned thereto by means of a pin 7 a reduced portion 8 of a rotatable disc 9. The motor shaft 6 is rotatably mounted in a bearing 10 of a brace 11, and the disc 9 is provided with a large cylindrical portion 12, which is rotatably mounted in a bearing 13 of the brace 14, therefore it will be seen that the disc as well as the shaft is accurately guided during its rotation. Rollers 5 are provided with spiral cutting edges 15, which during the rotation of the rollers by the disc 9 sharpen the end of the pencil 16. The rollers 5 are provided with rectangular shaped portions 17 disposed in similarly shaped apertures 18 of the disc, therefore it will be seen that when the disc 9 is rotated the diverging rollers 5 will rotate therewith and sharpen the pencil 16.

Rotatably mounted in a bearing 19 of the casing 1 is the reduced portion 20 of the pencil receiving head, and which head is provided with an aperture 21, in which the pencil 16 is inserted. The inner end of the head is provided with an arcuate plate 22, in which are mounted the pintles 23 of the rollers 5, therefore it will be seen that during the rotation of the cutter rollers, the pencil receiving head will rotate therewith. Surrounding the reduced portion 20 of the pencil receiving head is a conductor plate 24, with which a brush 25 carried by the head engages during the rotation of the head. Disposed in the recess 26 in the reduced portion 21 of the head is a spring contact arm 27, which is engaged by the pencil for closing the circuit through the casing 1, reduced portion 20 of the head, the spring contact arm 27, conductor member 25, and conductor ring 24, and wire 28, to the motor and then the wire 29, however it is to be understood the wiring may vary as desired. When the pencil 16 is removed from the pencil receiving head, the spring arm 27 is allowed to move inwardly thereby breaking the circuit, however it will be seen that during the rotation of the cutter head that a constant contact will be maintained at all times.

From the above it will be seen that a

motor driven pencil sharpening machine is provided which is simple in construction and one which is particularly adapted for use in large offices where a great many pencils are sharpened in the course of a day. It will also be seen that the machine is automatically started when the pencil is inserted therein and automatically stopped when the sharpened pencil is removed therefrom, thereby conserving power.

The invention having been set forth what is claimed as new and useful is:—

1. A pencil sharpener comprising a casing, a motor disposed in said casing, a drive shaft carried by said motor, a disc detachably connected to the drive shaft, diverging cutter rollers carried by said disc, an apertured pencil receiving head rotatably mounted in a bearing of the casing axially in relation to the motor shaft and to which the diverging rollers are connected, a conductor ring disposed within the casing and surrounding the pencil receiving head, a spring contact member within the pencil receiving aperture of the head and positioned whereby when a pencil is inserted in the head the circuit will be closed through said contact member and the conductor ring.

2. The combination with a pencil sharpening machine comprising a motor, diverging cutter rollers driven by said motor, a rotatable pencil receiving head having a pencil receiving aperture therein and rotatably mounted in a bearing of the casing, of a conductor ring surrounding the head and carried by the casing and a spring contact arm disposed in the head and forming means whereby a circuit will be closed through the spring arm and ring when a pencil is inserted in the head and broken when the pencil is removed from the head.

In testimony whereof we affix our signatures.

JULIUS SLUNICKO.
JOHN A. NIXON.