C. C. SPENGLER.

PENCIL SHARPENER.

APPLICATION FILED JUNE 15, 1914.

1,197,157.

Patented Sept. 5, 1916.

2 SHEETS—SHEET 1.

Fig. 1

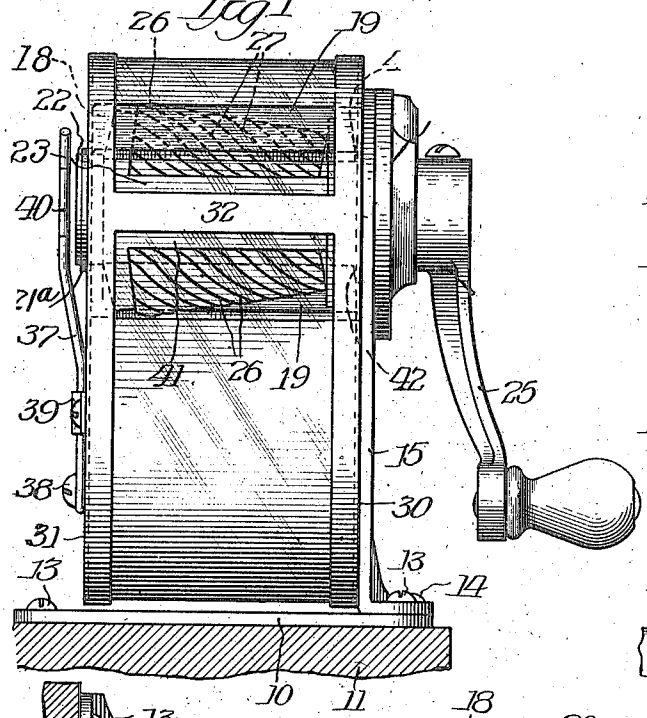
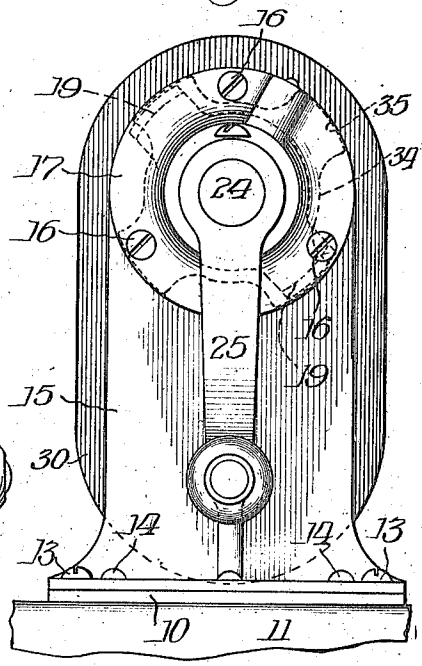


Fig. 2.



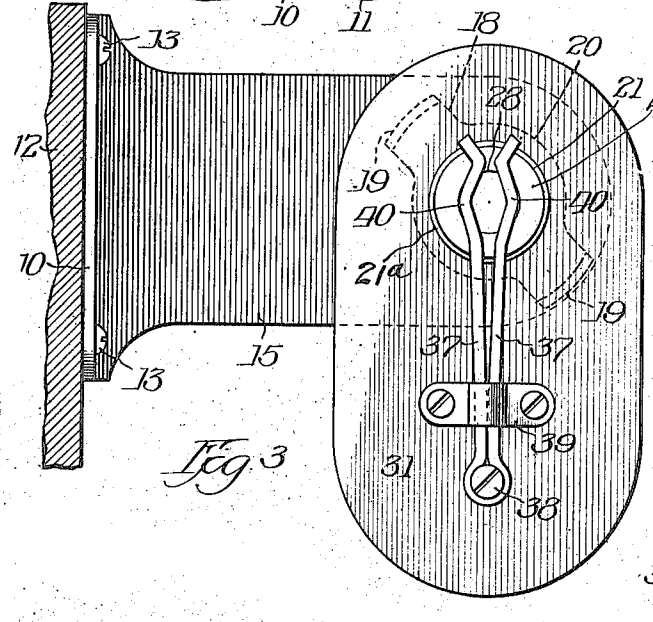
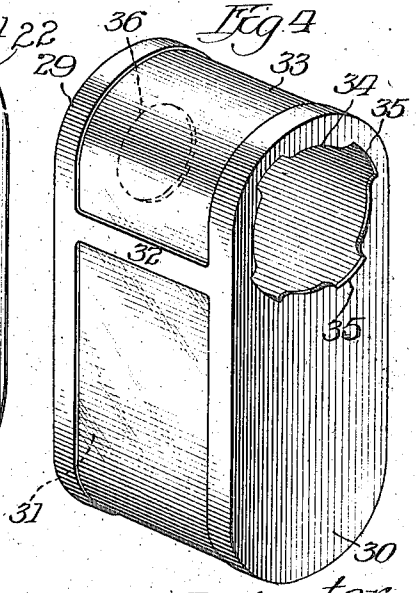


Fig. 3

Fig 4



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2 SHEETS—SHEET 2.

Fig. 5.

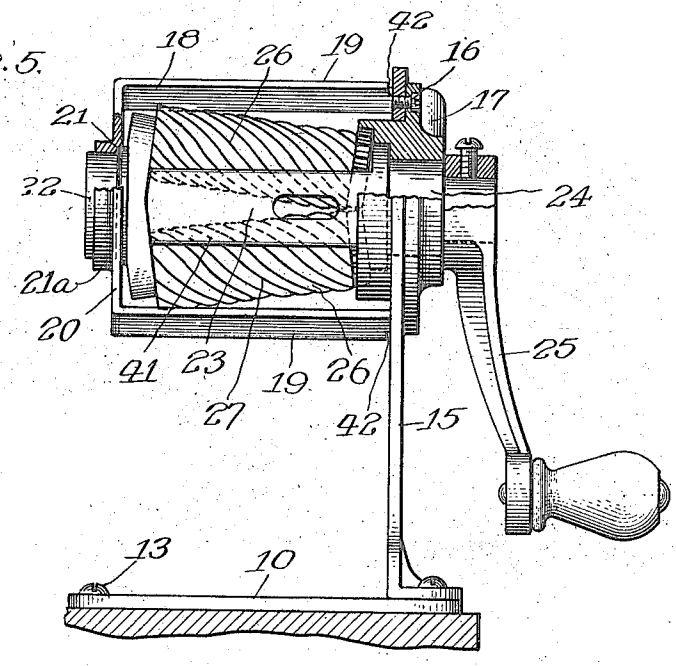
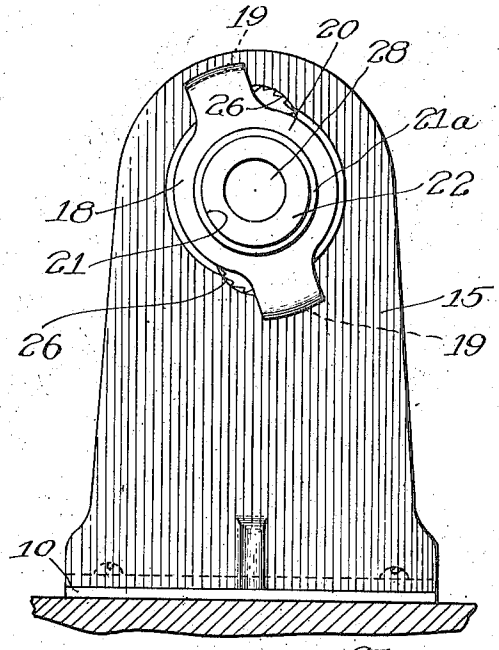


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES C. SPENGLER, OF ROCKFORD, ILLINOIS, ASSIGNOR TO SPENGLER BROTHERS COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PENCIL-SHARPENER.

1,197,157. Specification of Letters Patent. Patented Sept. 5, 1916.

Application filed June 15, 1914. Serial No. 845,050.

To all whom it may concern:

Be it known that I, CHARLES C. SPENGLER, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a specification.

My invention refers to pencil sharpeners, and is concerned particularly with that type of pencil sharpeners in which the sharpening operation is performed by means of rolls provided with spirally-disposed cutting edges thereon.

It is the object of my invention to provide a pencil sharpener which is simple and cheap in construction and efficient in operation.

It is a further object of my invention to employ a chip receptacle which may be adjusted and locked in the desired position irrespective of whether the pencil sharpener is fastened to a horizontal surface, like a table, or to a vertical surface, such as a wall.

It is a further object of my invention to provide simple and efficient means for affording bearing surfaces to each end of the cutter frame containing the cutting rolls in such manner that the chip receptacle may be quickly and easily applied to or removed from the sharpener in a lateral direction.

These and other advantages of my invention will be more readily understood by reference to the accompanying drawings which illustrate preferred embodiments of my invention, and in which—

Figure 1 is a front elevation of one form of my improved pencil sharpener, the latter being shown as fastened to a horizontal surface; Fig. 2 is a side elevation of the sharpener shown in Fig. 1; Fig. 3 is a side elevation of the sharpener shown in Fig. 1, the sharpener being shown as applied to a vertical wall and showing the opposite side of the device from that shown in Fig. 2; Fig. 4 is a perspective of the chip or shaving receptacle; Fig. 5 is a front elevation of the pencil sharpener, parts being broken away, and the chip receptacle being removed; Fig. 6 is a side elevation of the parts shown in Fig. 5.

The pencil sharpener which is shown consists of a base 10, which may be applied to a horizontal surface 11, as shown in Fig. 1, or to a vertical surface 12, as shown in Fig. 3, by means of the screws 13. Suitably fastened to the base 10 by means of screws, rivets or the like 14, is the support 15, which consists of a flat piece of metal, such as steel. Fastened to the support 15 by the screws 16 is the bearing member 17. Also fastened to the support 15 is the bearing frame 18, which consists of one or more connecting members 19 extending from the support 15 to the circular apertured end portion 20, the aperture 21 in the end member 20 having a flange 21^a and forming a bearing which supports the circular end 22 of the cutter frame 23, the opposite end 24 of the cutter frame 23 being in the form of a shaft extending through the bearing member 17 and having fastened thereto the crank 25 by means of which the cutter frame 23 is rotated.

The cutter frame 23 has mounted therein a pair of cutter rolls 26, each of which has thereon spirally-disposed cutting edges 27, according to the well-known system. Each of the cutter rolls 26 is provided with the usual and well-known mechanism by which, on rotation of the cutter frame 23 as a whole, each cutter roll 26 is rotated on its own axis. This construction forms no part of my present invention.

The cutter frame 23 is provided with a pencil-receiving aperture 28 which extends inwardly from the circular end member 22. When the pencil is to be sharpened it is inserted into the aperture 28 and thus brought into engagement with the cutter rolls 26 in the well-known manner.

The chip or shaving receptacle which is used in connection with the parts which I have just described is represented as a whole by 29, and consists of the metal side members 30 and 31, which are connected by the connecting members 32. Except for the connecting members 32, the portions of the shaving receptacle between the side members 30 and 31 preferably consist of some transparent material 33, such as mica or the like.

The side wall 30 is provided with a substantially circular-shaped aperture 34, in which at intervals of substantially 90° are the notches 35, the object of which will be presently explained. The side wall 31 is provided with the circular aperture 36. Fastened to the side wall 31 of the shaving receptacle 29 is a pair of spring members 37, preferably made in one piece, as clearly

indicated in Fig. 3. These spring members 37 are fastened to the wall 31 by a screw 38 and also by the strap 39 by which the spring members 37 are kept in substantially parallel alinement with each other. At their free ends each of the spring members 37 is formed with a pencil-gripping jaw 40 so that when a pencil is inserted between these jaws it will be automatically positioned in the center of the pencil-receiving aperture 28 irrespective of the size of the pencil.

In applying the shaving receptacle 29 to the pencil sharpener, the aperture 34 is first passed over the end 20 of the bearing frame 18, the connecting members 19 being in such position that they are received in the notches 35 of the aperture 34. The cutter frame 23 is moved into such position that its connecting members 41 are received in notches 35, which are located at an angle of substantially 90° to the notches which receive the connecting members 19 of the bearing frame 18. The shaving receptacle 29 may thus be laterally moved into position until the wall 30 is brought into engagement with the support 15. The shaving receptacle 29 is then slightly rotated and the portions of the wall 30 which are peripherally between the notches 35 are moved into the locking spaces 42, which are between the connecting members 19 of the bearing frame 18 and the support 15. In this way the chip receptacle is securely locked in position. As clearly shown in Figs. 1 and 3, the aperture 36 of the wall 31 of the shaving receptacle 29 engages the flange 21^a of the bearing frame 18, and the jaws 40 of the centering device are thus brought into the proper position.

In order to remove the shaving receptacle for the purpose of removing shavings and lead which have accumulated as a result of the pencil-sharpening operation, the shaving receptacle is rotated slightly to unlock it from its engagement with the locking spaces 42, and it is then laterally removed from the machine.

If the pencil sharpener is placed in position on a vertical wall, as indicated in Fig. 3, when the shaving receptacle 29 is placed in position the connecting members 19 of the bearing frame 18 and the connecting members 41 of the cutter frame 23 engage the notches 35 which are located at an angle of 90° to the notches which were engaged by these parts when the pencil sharpener was attached to a horizontal surface. In this way the shaving receptacle may always be maintained in a vertical position, as indicated in Fig. 3.

It will be apparent to those skilled in the art that many changes could be made in the detailed construction of the various parts which I have described without departing from the spirit or scope of my invention, as defined in the appended claims.

What I claim is:

1. In a pencil sharpener, the combination of a support, a laterally extending bearing member on said support, a bearing frame carried by said support and having a bearing therein at its outer end, a cutter frame extending between the bearing member of said support and the bearing of said bearing frame, means for rotating said cutter frame, and a chip receptacle having apertured sides for the reception of said bearing frame when said receptacle is laterally applied thereto.

2. In a pencil sharpener, the combination of a support a laterally extending bearing member on said support, a bearing frame carried by said support and having a bearing at its outer end, a locking space being provided between said bearing frame and said support, a cutter frame extending between the bearing member of said support and the bearing of said bearing frame, means for rotating said cutter frame, and a chip receptacle having apertured sides whereby said receptacle may be laterally applied to said bearing frame and supported thereon, the side of said receptacle adjacent to said support having a portion adjacent to the aperture therein adapted to be moved into the locking space between said bearing frame and said support upon rotation of said receptacle, whereby the latter is locked in position.

3. In a pencil sharpener, the combination of a vertical support, a bearing member on said support, a bearing frame carried by said support, said bearing frame comprising a laterally extending connecting member leading from said support and a bearing carried at the outer end of said connecting member, a cutter frame extending between the bearing member of said support and the bearing of said bearing frame, means for rotating said cutter frame, and a chip receptacle having apertured sides, the aperture of one side being provided with a pair of notches adapted to be engaged by said connecting member, said notches being located at an angle of substantially 90° from each other, whereby said receptacle may be laterally applied to said bearing frame in either one of a pair of positions at an angle of substantially 90° from each other.

In witness whereof, I hereunto subscribe my name this 11th day of June, A. D. 1914.

CHARLES C. SPENGLER.

Witnesses:
HENRY M. HUXLEY,
H. C. JACOBS.