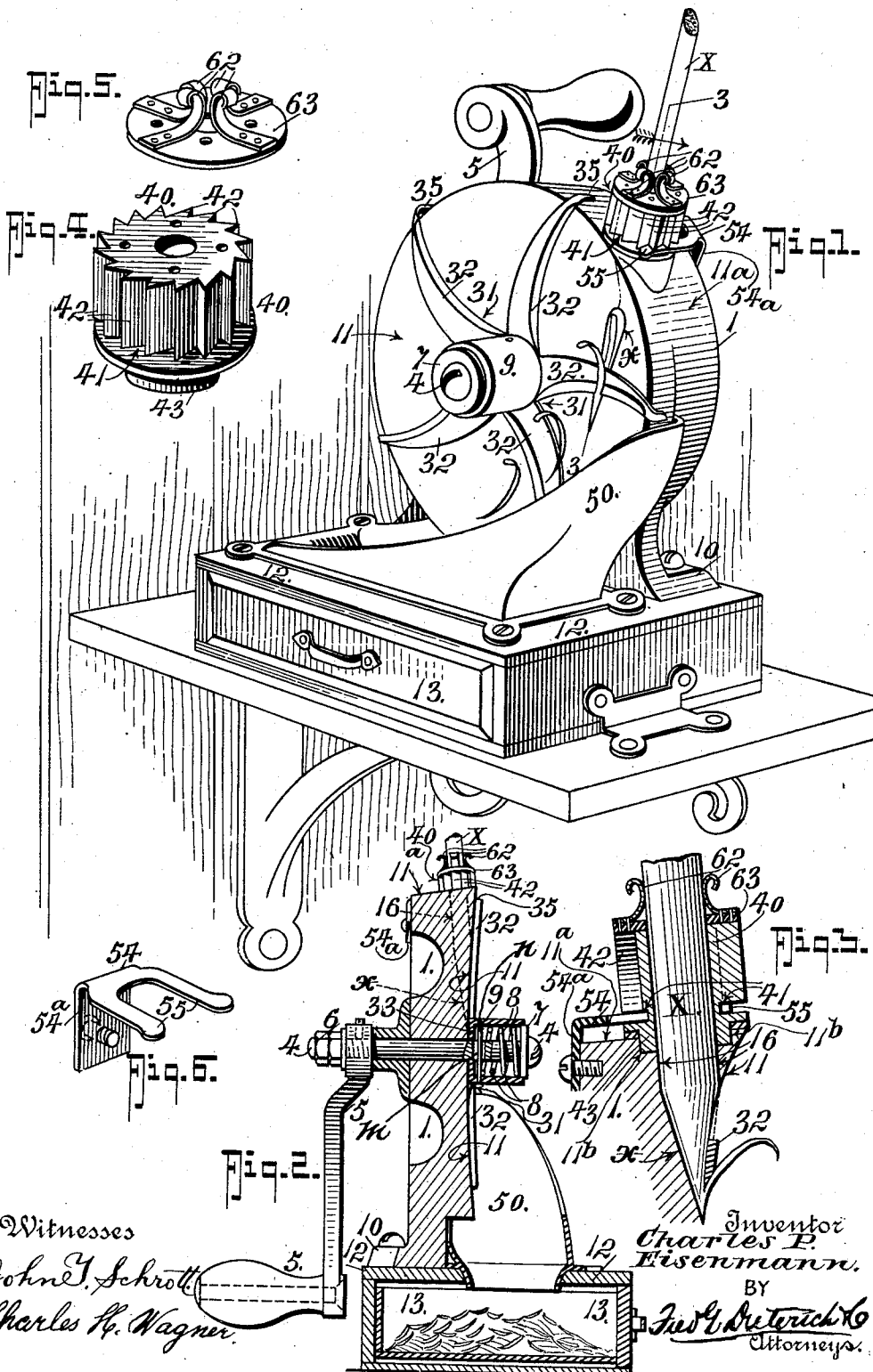


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WATCHMAKER'S PEG WOOD SHARPENER.
APPLICATION FILED DEC. 14, 1910.

992,762.

Patented May 23, 1911.



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UNITED STATES PATENT OFFICE.

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WATCHMAKER'S PEG-WOOD SHARPENER.

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To all whom it may concern:

Be it known that I, CHARLES P. EISENMANN, residing at Spencerville, in the county of Allen and State of Ohio, have invented a new and Improved Watchmaker's Peg-Wood Sharpener, of which the following is a specification.

This invention relates to that class of devices in which the element to be sharpened is supported in position to be engaged by a sharpener blade for cutting the edge engaged to a tapered point and in which the element being sharpened is automatically fed to the cutting means.

My invention has for its object to provide a device of the general character stated, of a simple and economical construction and in which the parts are more particularly designed and combined for sharpening watchmakers' peg wood.

My invention consists in the peculiar arrangement and combination of parts hereinafter fully explained, specifically pointed out in the appended claims and illustrated in the accompanying drawings, in which:—

Figure 1, is a perspective view of my invention. Fig. 2, is a vertical central section thereof. Fig. 3, is a similar view of a portion thereof on a somewhat enlarged scale, taken on the line 3—3 on Fig. 1. Fig. 4, is a detail view of the peg rotator. Fig. 5, is a similar view of the yieldable gripper for engaging the peg. Fig. 6, is a view of the spring clamp member for holding the peg rotator on the supporting frame.

In the practical construction, my invention embodies a vertically disposed supporting member 1, of any suitable material, the lower end of which terminates in a foot 10 for being firmly attached to a base 12 in which slides a drawer 13 into which the cuttings are deposited they being directed therein by the hopper like receiver 50. The front face of the member 1 is slightly concaved as at 11 and the upper edge 11^a is inclined rearwardly for the purpose presently explained. Centrally, the body 1 is horizontally apertured to receive a shaft 4, one end of which projects through the rear face of the standard or member 1 and receives a crank handle 5 and a clamping nut 6, and the front or head end of the shaft carries a washer 7 for coöperating with a tension spring 8 held in a cup-shaped barrel 9 mounted on the shaft as is best shown in Fig. 2.

31 designates a rotary cutter which is of the "spider" kind, it having a plurality of radially projected blades 32 and these are slightly convexed on the inner or rubbing side to travel closely and smoothly over the concaved face of the support 1, the shaping of the said parts serving to provide for an accurate and positive cutting action on the peg X. The cutter is formed with the barrel 9 which is apertured at 33 to receive the shaft. The shaft has an elongated slot *m* through which a pin *n* passes, the pin being mounted in the cup shaped barrel 9 so that the rotary motion of the shaft may be transmitted through the pin to the barrel and cutter while still permitting the spring 8 to press the cutter against the base face by engaging the pin and the washer 7. The tension of the spring is regulated by adjusting the clamping nuts on the shaft. To further steady the cutter in its rotary movement over the support 1, the outer edges of the cutter blades are bent inwardly to form angle fingers 35—35 that ride over the peripheral edge 11^a of the support, the said ends 35 also serving as the means for engaging the peg rotator during the operation of sharpening the peg.

At the upper end, the support 1 has a peg socket 16 of uniform diameter and disposed at an acute angle to the travel of the cutters, and its lower end opens through the front concaved face of the support 1 and forms a tapering slot *x* through which the lower edge of the peg is constantly fed into position to be shaved off by the cutters. The upper end of the socket 16 opens through the inclined upper edge of the support and it will be noticed by referring to Fig. 2 that upon the said edge which forms a solid bearing is mounted the peg rotator and gripper device, that consists of a centrally apertured disk 40 having at its edge radial projections or cog-like members 42 with the front edge portion held in the path of rotation of the angle fingers of the cutter blades and in such manner that the said fingers engage the toothed edge of the rotator 40 as they move to the cutting position.

The rotator 40 has an annular groove 41 with which engages the forked end 55 of a spring keeper 54 that has its angle arm 54^a formed to fit over the back upper edge of the support to be screwed thereon, as shown in

Fig. 2, it being obvious that by fastening the rotator in the manner stated it is firmly and solidly supported in the upper edge of the support 1 and with its peg aperture in longitudinal alinement with the socket 16.

For gripping the peg under sufficient tension to make it turn with the rotator, and yet permit it to freely move lengthwise through the said rotator, a plurality of flat curved springs or fingers 62 are secured to the flat and centrally apertured disk 63 that is screwed or riveted onto the top of the rotator 40. In order that all possibility of the member 40 slipping off may be eliminated, the member 40 is formed with a hub 43 rotatably held in a socket 11^b in the upper part of the body 1.

From the foregoing description, taken in connection with the drawings, the complete construction, the manner in which my invention operates and its advantages will be readily apparent.

I am aware that pencil sharpeners have been heretofore provided in which the pencil is fed longitudinally downward as it is rotated and cut, but so far as I know, provisions, other than the mere thrust of the cutter blades, have been necessary to feed the pencilstick down.

By having the face of the member concaved and the cutter members shaped to run in a close parallelism with the said face, a combined longitudinal and outward thrust is applied to the peg and in such manner as to effect a pull on the peg to cause it to positively feed down as it is being cut. By thus arranging the parts, a short pocket in the upper end of the support is all that is necessary for properly supporting the peg.

Another advantage in arranging the parts that constitute my invention as heretofore explained, is that the spring clamps that grip the peg being mounted externally of the rotator and with their gripping ends curved, a sufficient grip for holding the peg to turn with the rotator is provided without any appreciable danger of the peg being held under a too tight frictional gripping, while it is being cut, and which frequently prevents the pencil, when such a body is being cut, from freely feeding down to the cutting position. Again, by reason of using a rotary cutter held under tension relatively to the peg to be pointed, the cutter device can be set to suit the character of the wood from which the peg is made, and thereby provide the device for shaving the points of different

kinds of wood pegs, in an expeditious and economical manner.

What I claim is:

1. In a device of the class described, the combination of a peg holder, said holder having a concaved face and an opening through said face in which the peg is projected, a cutter rotatably mounted over the said concaved face and having a radial cutting blade curved to a plane with the curved face of the holder, and means for holding the blade against the said face under spring tension.

2. In a device of the character described, the combination with a support provided with an opening that extends at an angle from the upper edge and through the front face to form a peg receiving socket, the said support having a peripheral edge; of a holder for the peg rotatably mounted on the support in line with the said peg socket, said holder being apertured for the passage therethrough of the peg, and a spider shaped cutter rotatably mounted on the support to move over the socket opening and engage the peg, the outer ends of the cutter members being turned inwardly to project over the peripheral edge of the support, the peg holder having radial portions to be engaged by the said inturned ends of the cutter.

3. As a new article, a device for the purposes stated, comprising a vertical support, having a central transverse bore, a front face having a peripheral edge, said face being concaved; a bore that extends through the upper end of the support at an acute angle to the front face, a tubular holder for the element to be cut rotatably mounted on the support and in line with the angle bore, means carried by the holder and projected upwardly therefrom for frictionally engaging the article held, a crank shaft journaled in the central bore of the support, a spider shaped cutter mounted on the shaft to rotate on the concaved face of the support, the ends of the cutting members terminating in angle fingers for projecting over the peripheral edge of the support and to engage with and rotate the holder, and means for holding the cutters against the concaved face of the support under spring tension.

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