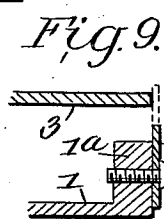
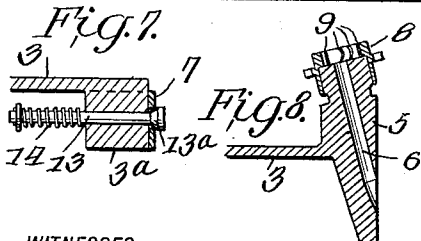
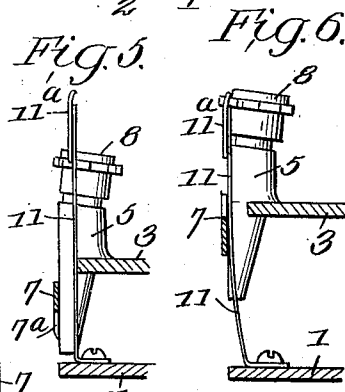
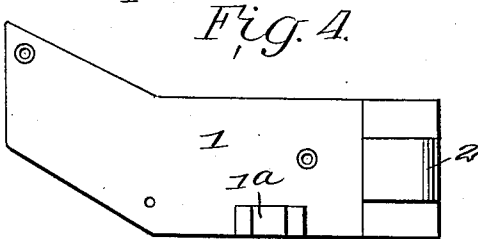
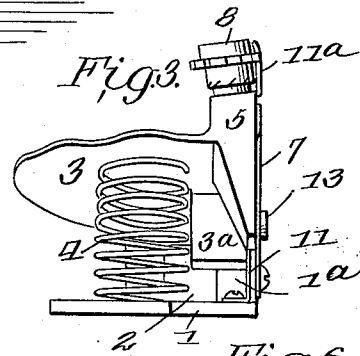
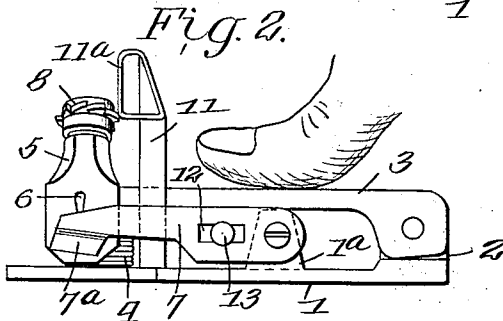
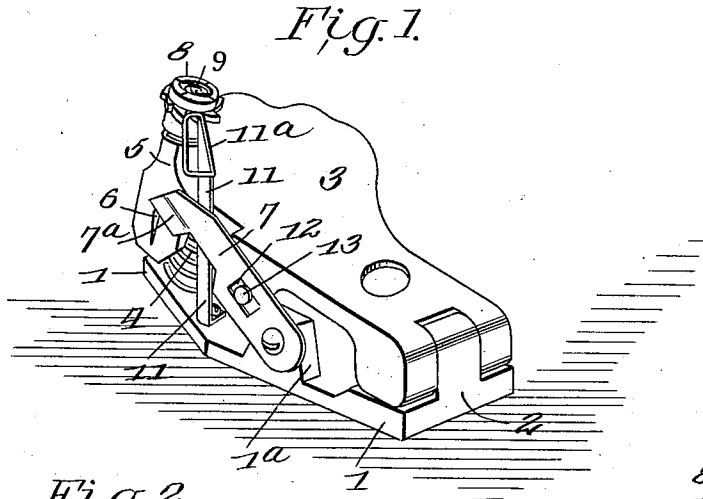


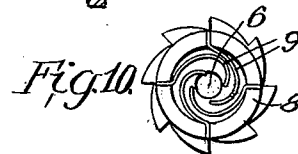
A. C. FISHER.
 PEGWOOD SHARPENER.
 APPLICATION FILED APR. 22, 1911.

1,016,132.

Patented Jan. 30, 1912.



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ADOLPH CLARENCE FISHER, OF CEDAR RAPIDS, IOWA.

PEGWOOD-SHARPENER.

1,016,132.

Specification of Letters Patent.

Patented Jan. 30, 1912.

Application filed April 22, 1911. Serial No. 622,661.

To all whom it may concern:

Be it known that I, ADOLPH CLARENCE FISHER, a citizen of the United States, and a resident of Cedar Rapids, in the county of Linn and State of Iowa, have invented an Improvement in Pegwood-Sharpener, of which the following is a specification.

My invention is a device or apparatus for pointing or sharpening pegwood which is used by watch-makers in watch-repairing; but the invention is also applicable for pointing pencils.

The features embodied in the novel construction and combination of parts are as hereinafter described, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the device or apparatus with the parts adjusted in position for use. Fig. 2 is a side view of the same, showing the parts in the position occupied when the lever and knife connected therewith are depressed. Fig. 3 is a front end view of the apparatus. Fig. 4 is a plan view of the base or foundation. Figs. 5 and 6 are sectional views illustrating the operation of the automatic attachment for rotating the pegwood. Fig. 7 is a cross section of the hinged lever and pivoted knife or cutter. Figs. 8 and 9 are additional section views further illustrating certain details of construction. Fig. 10 is a top view of the tubular rotatable ratchet provided interiorly with spring dogs which engage the pegwood when duly inserted.

The base 1 of the device or apparatus is a flat plate having the form represented in Fig. 4, and to it is hinged, at the end 2, a broad lever 3, which is normally supported in a raised and inclined position by means of a spiral spring 4, that is compressed when pressure is applied to the lever 3 as indicated in Fig. 2. The lever 3 is provided at its free end and on one side thereof with a tubular guide 5, for the pegwood or pencil which it is desired to sharpen. As shown in Figs. 1, 2 and 8, the outer side of this guide is flat and vertical, and the passage or hole 6 for reception of the pegwood or pencil is inclined inward at a slight angle thereto, so that when the pegwood or pencil is inserted, its point will project more or less from the scarfed mouth of the passage.

It is requisite that the pegwood shall be not only held in the guide 5 but rotated between each two cuts effected by the knife or cutter, 7, as hereinafter described, and to

this end what may be termed a ratchet clutch 8 is applied rotatably to the circular upper end of the guide 5. This device is thus in the nature of a circular hub having exterior or lateral ratchet teeth, and interiorly a series of spring dogs 9, as shown in Fig. 10. The dogs are formed of springs which are curved inward to a degree adapting them for engagement with a pegwood when inserted in the passage 6 of the guide 5 to which the ratchet is applied. The elasticity of the dogs enables them to accommodate themselves to different sizes or diameters of pegwood and their free ends grip the latter to the degree required to rotate it with the ratchet.

The means for effecting rotation automatically will now be described. A plate spring 11 is secured in vertical position to the base 1, at a point just in rear of the pegwood guide 5 and adjacent to the left side of the lever 3, as seen in Figs. 1 and 2. The upper end of this spring is provided with a wire loop 11^a which is suitably constructed to adapt it for sliding engagement with the teeth of the ratchet 8. Thus, when the lever 3 is depressed and the pegwood guide carried down with it, as shown in Figs. 2 and 5, the engagement of the loop 11^a with the ratchet rotates the latter the distance of one tooth, and, owing to the engagement of the ratchet with the pegwood, by means of the dogs 9, the pegwood is rotated in the same degree, so that the point which projects through the scarfed mouth of the passage 6 is turned to expose an uncut portion to the action of the knife. When manual pressure on the lever 3 is removed, the spring 4 raises the lever, together with the attached pegwood guide 5, to the normal position shown in Figs. 1, 3, and 6, and in this operation the loop 11^a of the spring 11 reengages the ratchet and is pressed slightly outward, or laterally, as shown in Fig. 6, so that the loop is in readiness to act again on the ratchet and rotate the same as before, when the lever 3 shall be again depressed. When the lever 3 is raised, the loop 11^a of the spring is pressed outward, so that the spring is curved, as shown in Fig. 6; but, when the lever 3 is depressed, the spring stands vertically, it being then in contact with the adjacent notched edge of the lever.

The cutter employed with the lever 3 and guide 5 for shaving and thus pointing a pegwood or pencil is constructed, attached,

and operated as will now be described. The body or shank of the cutter is a flat plate pivoted at its inner end to a lug 1^a formed on the base 1, and its free end is provided with a short blade 7^a which works in sliding contact with the flat face of the pegwood guide 5. The knife or cutter 7 is operated automatically by its engagement with the lever 3, the latter having at its adjacent edge a pendent lug 3^a through which and through a slot 12 in the knife shank 7 passes a pin 13—see Figs. 1, 2, and 7. The enlarged head 13^a of the pin is chamfered or tapered on its inner side, which works in frictional engagement with the edges of the slot 12.

A spiral spring 14 encircles the inner end of the pin and by its tension tends to constantly draw and hold the knife shank in contact with the lug 3^a of the lever 3. The same action also holds the knife blade 7^a in close contact with the smooth flat face of the pegwood guide 5. In its normal position, the knife is inclined upward at an angle of about 45°, as shown in Fig. 1; but, when the lever 3 is depressed, the knife is forced down and the blade passes over the entire length of the scarfed mouth of the pegwood passage 6 in the guide 5. It will be seen that the knife thus makes not only a downward but a sliding movement, or, in other words, effects a draw-cut, whereby the portion of the pegwood projecting from the passage 6 is more easily and smoothly severed.

It will be seen that the operator, having placed a pegwood or pencil in the guide 5 and pressed it downward so that its point projects more or less from the scarfed mouth of the passage 6, then depresses the lever 3, whereby the ratchet is rotated to effect corresponding rotation of the pegwood or pencil, and the knife or cutter is carried down into contact with the projecting portion of the article and cuts the same off smoothly. The entire operation may be effected by the simple application of pressure and release of pressure on the lever 3, and this is done by one hand or without the necessity of employing both hands as required in the ordinary operation of sharpening pegwood.

What I claim is:—

1. The improved device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and provided at its free end with a hollow guide for the article to be sharpened, and a cutter pivoted to the base and having a pivotal connection with the aforesaid lever at a point between its pivot and the guide, whereby when the

lever is depressed, the cutter is forced down and makes a downward and longitudinal cut, as described.

2. The improved device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and provided at its free end with a hollow guide, a circular ratchet applied to the head of the guide and provided interiorly with means for engaging the article to be sharpened, a device adapted for contact with the ratchet for rotating it when the lever is depressed, and a knife arranged for acting on the face of the guide, substantially as described.

3. The improved device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and having at its free end a hollow guide for the article to be sharpened, a rotatable circular ratchet applied to the head of the guide and provided interiorly with dogs adapted to engage the said article, a device for rotating the ratchet automatically when the lever is actuated, and a knife adapted to act on the face of the guide, substantially as described.

4. A device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and having at its free end a hollow guide for the article to be sharpened, a rotatable ratchet applied to the head of the guide and provided interiorly with spring dogs for engaging said article, a device for rotating the ratchet automatically, and a knife pivoted and adapted to act on the face of the guide, substantially as described.

5. A device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and provided at its free end with a hollow guide for the article to be sharpened, a rotatable ratchet applied to the head of the guide, a spring attached to the base and its upper end arranged in contact with the ratchet for effecting rotation of the same, and a knife pivoted and adapted for automatic operation by the lever, substantially as described.

6. A device for the purpose specified, comprising a base, a spring-supported lever hinged thereto and provided at its free end with a hollow guide for the article to be sharpened, a knife or cutter pivoted to the base and provided with a lengthwise slot in its shank, a headed pin passing through the slot of the knife and through a lug of the lever, and a spring applied to the inner end of the pin for holding the knife pressed against the guide, substantially as described.

ADOLPH CLARENCE FISHER.

Witnesses:

WM. CHAMBERLAIN,
FRANK C. AYERS.