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H. CURTIS

WATCH JEWEL SETTING POLISHER

Filed March 25, 1927

*Fig. 1.*

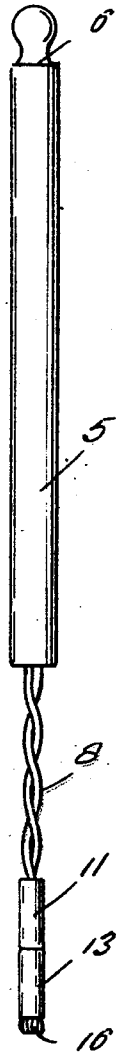


*Fig. 2.*

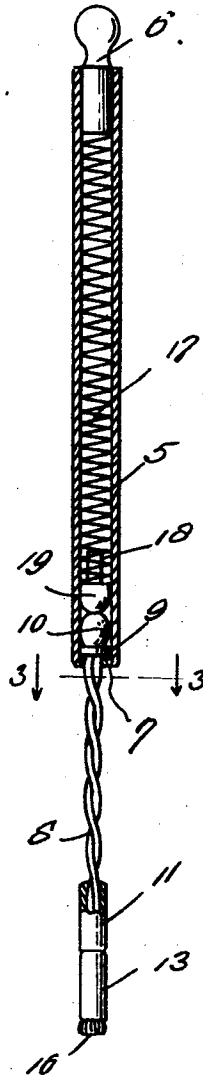
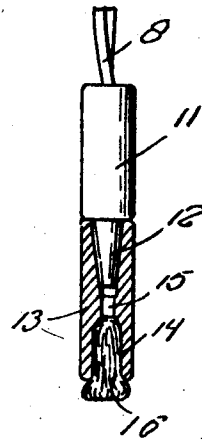


*Fig. 3.*



*Fig. 4.*



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## UNITED STATES PATENT OFFICE.

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WATCH-JEWEL-SETTING POLISHER.

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This invention relates to new and useful improvements in polishing tools and aims to provide a tool that is primarily adapted for use in the polishing of watch jewel settings.

5 In carrying out the present invention there is provided a tool consisting generally of a handle and a polishing head, said head being so associated with the handle as to be normally projected therefrom and wherein  
10 means is provided so that when the head is arranged within a jewel setting, a pressure upon the handle will cause the rotation of the head in one direction, whereas a releasing of the pressure will cause the outward move-  
15 ment of the handle and a simultaneous reverse rotation of the head.

The accomplishment of the foregoing operation of this tool is provided through the medium of extremely simplified construction, enabling the tool to be manufactured at nominal cost, the structural elements of the tool being so related as to permit the same to be disassembled and at the same time to reduce to a minimum, the liability of accidental displacement of the several elements.

25 In the drawing; forming a part of this application:

Figure 1 is a side elevation of my improved tool.

30 Figure 2 is a detail longitudinal section.

Figure 3 is a transverse enlarged section, taken substantially on the line 3—3 of Figure 2, and

35 Figure 4 is an enlarged detail view of the polishing head detachably associated with the revolving shank.

Now having particular reference to the drawing, my invention consists of a tubular handle 5, of predetermined length open at its  
40 opposite ends, one end thereof being equipped with a removable plug 6, while the opposite end thereof is slightly flanged inwardly to provide a circular abutment 7. The tool further consists of a polishing head receiving  
45 stem or shank 8, preferably formed of a pair of twisted wires so that said stem or shank will be of spiral formation. Upon the inner end of the stem is a circular plate 9, freely movable within the tubular handle 5, and  
50 upon the inner face of which is formed or disposed a rounded metallic head 10. Upon the opposite end of the stem 8 there is arranged a somewhat elongated sleeve 11, the outer end of which is formed or provided with a tapered pin 12. For frictional engagement  
55 upon this tapered pin 12 there is provided a

polishing head that consists of a metallic sleeve 13, the inner end of the bore thereof being tapered for frictionally receiving the tapered pin 12 of the sleeve 11. The bore at  
60 the opposite end of this sleeve 13 is of enlarged diameter to provide a pocket 14, which pocket communicates with the tapered end of the sleeve bore through a restricted opening  
65 15. This pocket 14 is provided for receiving threads or strips of chamois or other polishing material, a plurality of which is preferably provided, the preferred manner of disposing the same within the pocket being to  
70 provide a length of thin wire that may be bent intermediate its ends around the threads or strips of chamois between the ends thereof, after which the wire is passed through the  
75 sleeve 13 and then pulled so as to force the material into the pocket, the length of the threads or strips of material being such that when turned over and pulled into the pocket, the bight portions will be against the bottom  
80 of the pocket, while the ends thereof will project therefrom as clearly disclosed in Figures 1, 2, and 4 to provide a polishing nose 16.

Arranged within the tubular handle 5 is an elongated expansible coil spring 17, that bears against the plug 6, at one end, and within the opposite end of which is arranged a  
85 pin 18 formed at its lower end with a metallic ball shaped head 19 for engaging the head 10, upon the inner end of the spiral stem or shank 8 previously described. It will be thus seen that the polishing head carrying  
90 stem 8 will be normally projected from the tubular handle 5 by reason of the coil spring 17. However, by placing the polishing nose 16 of the tool head within a watch jewel setting and then forcing the handle 5 down-  
95 wardly, such an action will cause the movement of the handle over the stem 8 and the rotation of the stem and consequently a rotation of the polishing head. As pressure is released from the handle 5, the spring 17  
100 will serve to project the stem therefrom and during such projection a reversal of rotation of the stem and the polishing head will be brought about. The tool may be used either before the jewel is set or after the jewel has  
105 been removed. The tool may furthermore be used to polish the jewel while the same is secured in the setting or where the jewel is held in any suitable vise or other supporting means independent of the setting of the  
110 watch case.

It will thus be seen that I have provided

a highly novel, efficiently operating watch jewel setting polisher that is well adapted for all of the purposes heretofore designated, and even though I have herein shown and described the invention as consisting of certain details of structure, it is nevertheless to be understood that some changes may be made therein without affecting the spirit and scope of the appended claims.

10 Having thus described my invention, what I claim as new is:

1. In a polisher of the class described, a stem, a handle on one end of the stem, a sleeve secured on the other end of the stem, a tapered pin formed on the outer end of the sleeve, an additional sleeve, the inner end of the bore thereof being tapered for frictionally receiving the tapered pin, and a polishing member carried by the outer end of the  
20 last mentioned sleeve.

2. In a polisher of the class described, a stem, a handle on one end of the stem, a sleeve secured on the other end of the stem, a tapered pin formed on the outer end of the sleeve, an additional sleeve, the inner end of the bore thereof being tapered for frictionally receiving the tapered pin, the outer end of the bore of the last mentioned sleeve being

enlarged to provide a pocket, and a polishing member secured within the pocket, the outer end of the polishing member projecting beyond the outer end of said sleeve.

3. In a tool of the class described, a spiral stem, a polishing head carried by the lower end of said stem, a tubular handle, the lower end of the handle being formed with an inwardly directed flange for cooperation with the spiral stem to effect the rotation of the stem when the tubular handle is moved downwardly on the stem, a normally expansible coil spring arranged in the tubular handle, the upper end of said spring engaging the closed upper end of the tubular handle, a pin secured in the lower end of said expansible coil spring, a ball shaped head formed on the lower end of said pin, a plate carried by the upper end of the stem and operable within the tubular handle, a ball shaped head arranged on the upper face of the plate for engagement with the aforesaid ball shaped head, said expansible coil spring normally urging the tubular handle to its uppermost position with respect to the stem.

In testimony whereof I affix my signature.

HARRY CURTIS.