(No Model.)

W. R. JOHNSON.

RUBY PIN SETTER.

No. 457,492. Patented Aug. 11, 1891.

Fig 1

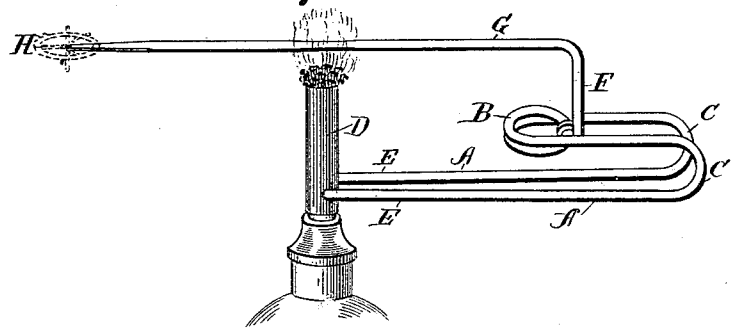


Fig 2

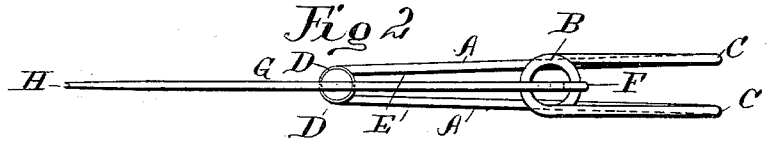
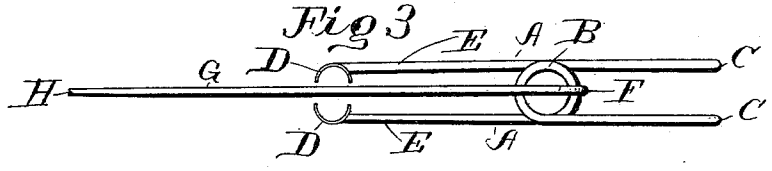


Fig 3



Witnesses
C. C. Burdine
H. P. Wilson

Inventor
Will R. Johnson
per
John G. Manahan
his Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILL RYMER JOHNSON, OF ROCK ISLAND, ILLINOIS, ASSIGNOR OF ONE-HALF TO MYLO LEE GALT, OF SAME PLACE.

RUBY-PIN SETTER.

SPECIFICATION forming part of Letters Patent No. 457,492, dated August 11, 1891.

Application filed March 17, 1891. Serial No. 385,432. (No model.)

To all whom it may concern:

Be it known that I, WILL RYMER JOHNSON, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Ruby-Pin Setters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in ruby-pin setters for setting the ruby pins in watches; and the object of my invention is to provide a convenient device for ready attachment to and removal from the ordinary heating-lamp, and which by being heated in one portion of the device will transmit such heat to a convenient point for the operation of setting said pin, which is accomplished by removably supporting in the flame of a heating-lamp a horizontal arm the end of which is provided with a notch to receive the staff of the balance-wheel, and the center of which arm is thereby adapted to receive heat from said lamp and communicate it to said notched end, where the parts are kept at a suitable temperature to effect a proper shellacking of the ruby pin within its seat in the roller surrounding said staff. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of my invention, showing the balance-wheel supported at the end of the arm, as aforesaid, and a portion of the lamp. Fig. 2 is a plan view of my invention proper. Fig. 3 shows the clamps D D separated.

Similar letters refer to similar parts throughout the several views.

A is a wire having a central coil B and projected horizontally in two substantially parallel lines from said coil and then bent downward to form the loops C C and projected thence into a horizontal position under coil B and a suitable distance beyond the latter to extend beyond the flame.

D D are vertical clamps attached, respectively, to the ends of the wire A and projected above said ends a suitable distance. The inner or concave faces of the clamps D are seated opposite each other and adapted to clamp the portion of the heating-lamp directly below the flame of the latter.

The coil B operates as a spring to hold the inner faces of the clamps D in contact when the device is not in use and press said clamps against the opposite sides of the lamp-tube when in use with sufficient force to hold the horizontal ends E E of the wire A and the loop B in a horizontal position.

F is a metallic arm suitably attached at its inner end around one side of the loop B and projected therefrom vertically to a distance slightly above the horizontal plane of the base of the flame of the lamp. The arm F is then bent into a horizontal part G and projected over and beyond the top of the clamps D, or a point midway between them, when they are mutually extended. The outer or free end of the arm G is provided with a notch H to receive the staff of the balance-wheel and hold the same for manipulation. The part G of the arm F is projected far enough beyond the vertical plane of the clamps D to permit the manipulation of the ruby pin at the end of said part G without any inconvenience from the flame of the lamp, and at the same time not so far but that the heat imparted to the horizontal portion G immediately above the lamp-flame will be transferred to the end of part G and to the parts there supported in sufficient degree to permit of the proper setting of the ruby pin.

It is well known that the setting of the ruby pin is a delicate operation, and that the efficiency of the watch depends largely upon the exactness with which such setting is accomplished. Heretofore, as far as I am advised, the high temperature which is required in the proper shellacking of said pin has been furnished by the successive heatings applied thereto during said process. The objection to this mode is twofold: The heating is not continuous or uniform from the beginning to the end of the process; second, the application of such heating required the use of one hand of the operator, thereby compelling him to accomplish his manipulation of the pin itself with one hand. In my invention, the balance-wheel being supported

in the notch H and the heat being constantly applied thereto through the medium of the horizontal portion G of the arm F from the lamp, the operator has the use of both of his hands in the manipulation required for properly setting the ruby pin.

My invention is simple, strong, cheap, and entirely efficient and satisfactory for the purpose intended.

I do not confine myself to the precise form here shown, as it is obvious that the spirit of my invention can be applied in changes therefrom.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of the spring-wire A, the clamps D D, and arm F, substantially as shown, and for the purpose described.

2. The combination of the wire A, provided with the central coil B, the clamps D, attached to the front ends of said wire, and the arm F, attached at one end to said coil and projected horizontally over and beyond the clamps D and provided with a notch H, substantially as shown, and for the purpose specified.

3. In a ruby-setting machine, the combination of the supporting spring-wire adapted to be clamped upon a heating-lamp, and a suspending wire attached at one end to said supporting-wire and projected through and beyond the flame of said lamp when said first-named wire is attached to the latter, substantially as shown, and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILL RYMER JOHNSON.

Witnesses:
JNO. G. MANAHAN,
ADDA E. WARD.