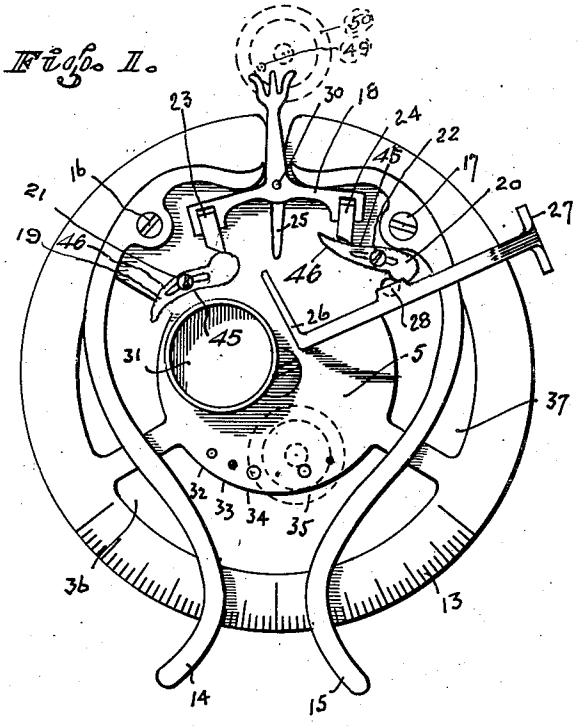
Aug. 17, 1926. 1,596,126

E. H. STRUTZ

JEWEL SETTER

Filed Feb. 10, 1925 2 Sheets-Sheet 1

Fig. 1.



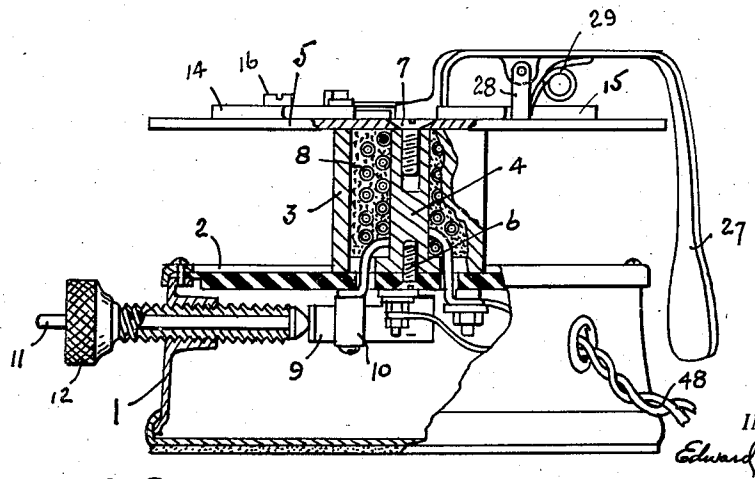


Fig. 2.

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Fig. 3.

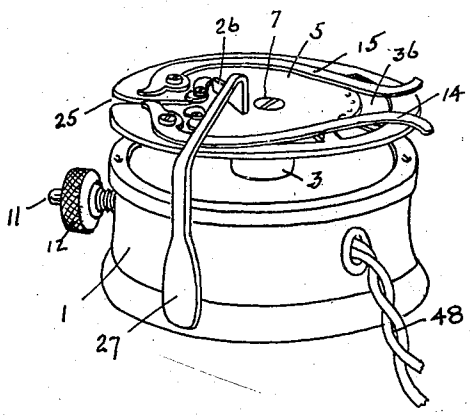


Fig. 4.

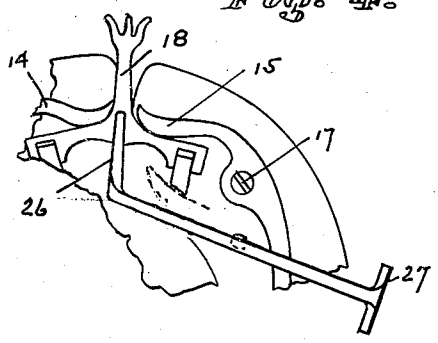


Fig. 5.

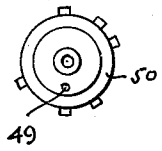
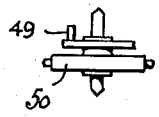


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD H. STRUTZ, OF SAN FRANCISCO, CALIFORNIA.

JEWEL SETTER.

Application filed February 10, 1925. Serial No. 8,147.

My invention has for its object a device for the purpose of facilitating the setting of jewels in pallets and balance wheels, and similar watch parts and also for facilitating other operations requiring heat.

Other objects will appear from the drawings and specifications which follow:

These objects I attain by forming in combination a relatively heavy base member and mounting thereon a pedestal having an electrical resistance suitably enclosed and insulated and thereover a table member extending laterally to a considerable distance beyond the contacting portions of the electrical resistance member.

In this way when the resistance is energized a more intense heat is provided at the center of the table member and this heat gradually diminishes towards the edges thus providing a range of temperature to suit the various requirements of the jeweler as for boiling and bluing at the center to a suitable temperature for melting shellac on the outer portions.

Within the base switch means are provided and on the table, setting and adjusting means are provided for positioning the various parts.

By referring to the accompanying drawings my invention will be made clear.

Fig. 1 is a plan view of one form of my pallet device.

Fig. 2 is a part sectional and part side view of the device of Fig. 1.

Fig. 3 is a perspective view of the device of Figs. 1 and 2.

Fig. 4 is a fragmentary detail of the device of Fig. 1, showing the pallet holding arm in a different position than that of Fig. 1.

Figs. 5 and 6 are plans and elevation respectively of balance wheel with a roller jewel set therein as accomplished by my invention.

Throughout the figures similar numerals refer to identical parts.

A base is indicated by the numeral 1 having a cover plate at 2 preferably of heat resisting material, and I have found mica well adapted to this use.

At 3 is shown a tubular member or pedestal.

At 4 is a center column from which is supported the metallic table 5, the column 4 being fixed to the cover plate 2 by the screw 6, and the table member secured to the column by the screw 7. When these screws are tightened the tubular member 3 is clamped between the cover 2 and the table 5.

At 8 is a resistance coil and at 48 energizing connections therefor with the switch plate 9 and contact 10 interposed in series therewith.

At 11 is a push button adapted to close the spring member 9 against the contact 10 to complete the circuit through the resistance member 8.

At 12 is a milled head screw by which the spring 9 may be retained against the contact 10 for prolonged heating if desired.

The table 5 extends beyond the column 3 with overhanging portions in which the temperature occasioned by the resistance coil 8 progressively decreases from the center to the outer edges.

The outer portion of the table is preferably graduated as shown at 13 and mounted thereon are a pair of double levers of the first order indicated at 14, 15 respectively, and pivoted at 16, 17 respectively.

The short ends of these levers are rounded to press against the back of pallet 18.

At 19 and 20 are a pair of dogs adjustable about the holding screws 21, 22, so that any portion of their peripheries may be presented to the pallet jewels 23, 24.

Each of these dogs are provided with peripheries having both concave and convex portions, indicated by the numerals 45 and 46 respectively, and as best shown in Fig. 1 and the holding screws pass through slots thus enabling each dog to be adjusted in any position within the plane of the table with either convex or concave portion or both i. e. one concave and one convex presented to and forming a limit or gauge for jewels as 23, 24 in the figure. When the dogs are set in the desired position each is clamped by its respective holding screw 21, 22.

A slot 25 in the table 5 is provided as clearance for the pallet arbor 30.

At 26 is a lever arm actuated from the finger member 27 and pivoting about the stem 28 from the position of Fig. 1 to the position of Fig. 4, and which is for holding the pallet 18 in place through the action of the spring 29 which causes the end 26 to lightly press upon the arbor 30, when the parts are in the position shown in Fig. 4.

At 31 is shown a warming pan and at 32, 33, 34, and 35 a plurality of slots or recesses in the overhanging portion of the table 5

which slots are provided for receiving the balance staff and roller jewel 49 of the conventional balance 50.

The outer portions of the table are cut away as shown by the slots 36, 37 respectively to reduce the temperature of the outer portions of the table.

The operation is as follows:

A pallet lever in which it is desired to set jewels is positioned with its arbor 30 in the slot 25, the dogs 21 and 22 being adjusted to suit the facing and depth of the pallet stone with respect to the arbor center 30, the jewels 23, 24 having been previously set in their respective slots in the pallet lever each with a particle of dry shellac.

The switch is now closed and the heating coil 8 energized whereby the pallet lever and its jewels are warmed to a temperature which will melt the shellac particles.

The levers 14 and 15 are now brought together to the proper point on the graduations 13 to correspond with the desired depth of the pallet stones in their respective slots.

The levers 14 and 15 are then released, the finger member 27 is actuated to remove the lever end 26 from the arbor and the pallet lever removed when the shellac will harden with the jewels firmly held in their proper position.

The roller jewel 49 is set cold in a conventional balance 50 with a particle of shellac and is then placed with its arbor in any one of the respective slots 32 to 35 whereupon the heat of the table causes the shellac to melt and set the jewel. The balance is then removed and the shellac hardens with the jewel in its proper position.

For boiling in oil or for bluing screws or small steel parts the pan 31 is employed upon the table, either at the center or in any position radially therefrom, depending upon the intensity of temperature desired.

Oil in the pan 31 will boil when placed substantially on the center of the table.

I claim:

1. A jewel setter comprising a pedestal, a resistance coil within said pedestal, a table mounted on said pedestal with a portion of said table extending beyond said pedestal and means on said table to receive and hold watch parts and comprising a plurality of adjustable dogs and a lever for each dog constructed and adapted to hold a watch part against said dogs, said dogs each provided with a periphery having both concave and convex portions and slots with fixing screws positioned through said slots, whereby said dogs may be clamped in any of a plurality of adjusted positions.

2. A jewel setter comprising a pedestal, a resistance coil within said pedestal, a table mounted on said pedestal with a portion of said table extending beyond said pedestal and means on said table to receive and hold watch parts and comprising a plurality of adjustable dogs and a lever for each dog constructed and adapted to hold a watch part against said dogs and a spring actuated member adapted to hold said watch part on said table independent of said dogs and said levers, said dogs each provided with a periphery having both concave and convex portions and slots with fixing screws positioned through said slots, whereby said dogs may be clamped in any of a plurality of adjusted positions.

EDWARD H. STRUTZ.