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C. G. MARSDEN

2,170,535

MOVEMENT REST FOR WATCHES

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Fig. 1.

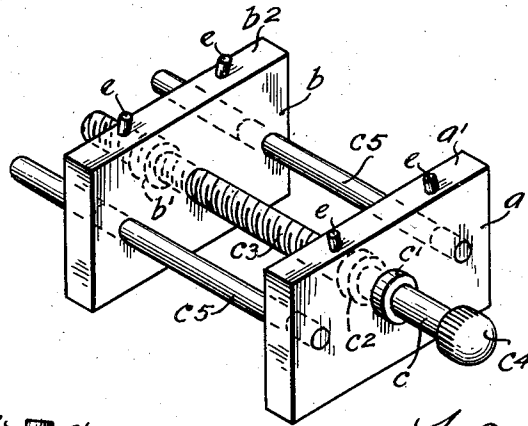
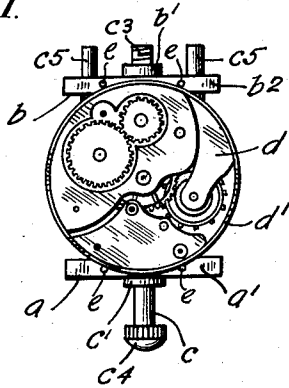


Fig. 2.

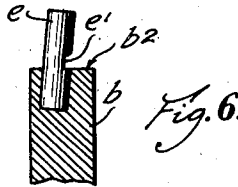


Fig. 6.

Fig. 3.

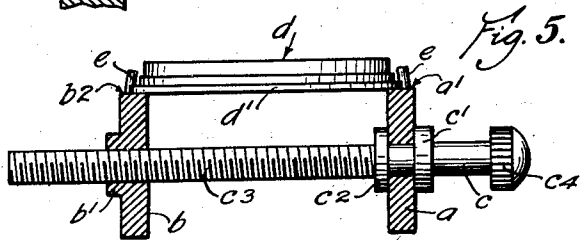
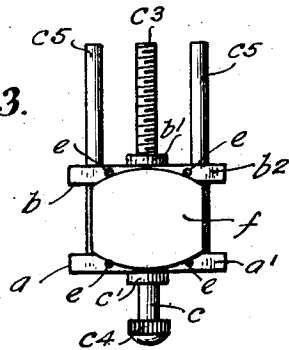


Fig. 5.

Fig. 4.

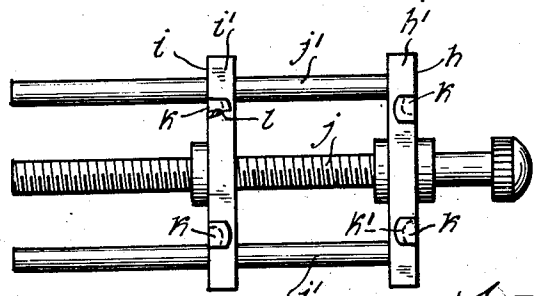
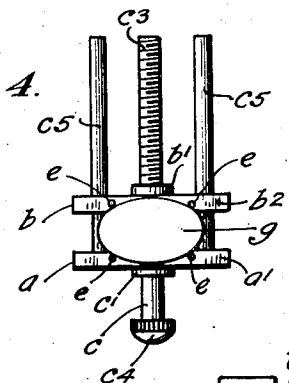


Fig. 7.

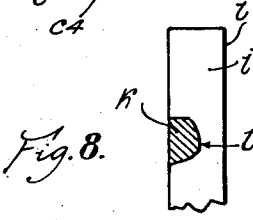


Fig. 8.

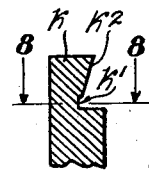


Fig. 9.

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UNITED STATES PATENT OFFICE

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MOVEMENT REST FOR WATCHES

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Application October 4, 1937, Serial No. 167,206

2 Claims. (Cl. 81-6)

The object of my invention is to provide a movement rest for watch repair work which is substantially universal in its application to various sizes and shapes of watch movements. A further and more particular object of my invention is to provide a movement rest of this character which is adjustable so as to engage securely and hold a movement therein with the parts of said movement rest arranged to be clear of the operating parts of said watch movement, and to permit said parts to be readily accessible for repair and replacement.

One of the difficulties in watch repair work at the present time is that watches are made in a large number of sizes and shapes, and great difficulty is experienced, particularly in the smaller sizes and the irregular shapes, in providing some means for holding said movement securely and conveniently so that the moving parts thereof can be operated upon conveniently. Various types of spring-actuated clamps have been devised which accommodate several sizes of watch movements, and they are secured to such watch movements by yielding pressure. They are impractical, however, in that the means for holding the watch movement does not securely hold the movement so that work can be done thereon. The greatest difficulty, however, is that it has been deemed necessary to provide a number of movement rests comparable to the number of sizes and shapes of watches operated upon. Such large number of movement rests thus involves a problem of storage, selection and maintenance, as well as initial cost.

By providing a movement rest which is universal in accommodating various sizes and shapes of watches and which holds all of them securely and conveniently, a great advantage is secured.

Further details and features of my invention are hereinafter described, with reference to the accompanying drawing in which:

Fig. 1 is a plan view of a movement rest embodying my invention, shown supporting and engaging a relatively large-sized round movement;

Fig. 2 is a larger scale perspective view of a movement rest embodying my invention;

Fig. 3 is a view of a movement rest embodying my invention, supporting and engaging a movement of irregular shape;

Fig. 4 is a view of said movement rest engaging a relatively small elliptical movement, and illustrates the manner in which said movement rest is adjustable to accommodate said various sizes and shapes of movements;

Fig. 5 is a longitudinal section taken along the

center line of a movement rest embodying my invention and thru the lead screw for adjusting the heads thereof to accommodate watches of various sizes and shapes, and illustrates further the manner in which the projecting pin portions engage and overlie the flanged rim in which a watch movement is housed;

Fig. 6 is a fragmentary detail view of one of the engaging pins to show its inclination with respect to the work supporting surface of said movement rest, and its notched engaging face;

Fig. 7 is a plan view of a modification of my invention in which the work engaging members are cast or formed integrally with the work engaging head, a portion of one member being shown broken away in this figure to illustrate details of construction;

Fig. 8 is a fragmentary section taken on the line 8-8 in Fig. 9; and

Fig. 9 is a longitudinal view thru one of the engaging members.

A movement rest embodying my invention comprises a pair of head elements *a* and *b* which are adjustable towards and from each other by a lead screw *c*. Said lead screw is provided with two set collars *c'*—*c2*, which lie at opposite sides of the head element *a*. The set collar *c'* is preferably formed as an integral portion of said screw, while the set collar *c2* is threaded upon the threaded stem *c3* of said screw. A boss *b'* is formed upon the head element *b*, and thru said boss, tapping extends which engages with the threaded portion *c3* of said lead screw. Said boss provides an additional length of threading than could otherwise be secured if the head was of uniform thickness. The end of said lead screw is provided with a knurled cap *c4* for rotating the lead screw and moving the heads toward and from each other along guide rods *c5*.

The upper surfaces *a'* and *b2* of the heads constitute supporting surfaces for a watch movement *d*. Referring to Fig. 1, it can be noted that if the movement rest is arranged in a horizontal plane that a watch movement can be arranged so that diametrically opposite portions lie upon said work supporting surfaces of the head elements, respectively. Extending upwardly from said work supporting surfaces are two pairs of pins *e*. Said pins constitute work engaging elements and are adapted to engage the lowermost lateral flange *d'* with which watch movements are substantially uniformly provided.

Said pins are arranged in pairs, one pair being arranged on each head element, and said pins are more or less aligned with each other and the

pairs are likewise aligned. Said pins on each head are arranged so that they lie on opposite sides of a longitudinal center line extending thru said movement rest, and are adapted to accommodate various types of watch movements, as is illustrated in Figs. 1, 3 and 4. In Fig. 3, a relatively small watch movement *f* is provided with a periphery comprising two opposite curved portions and two opposed plane portions. The pins are arranged to grip the watch movement between them, and said movement rest can be adjusted so as to accommodate a watch movement *g* as small as is shown in Fig. 4.

As is shown in Figs. 5 and 6, said pins are arranged so as to be inclined obliquely to the surfaces *a'* and *b2*, and the inclination of said pins is toward the space lying between said head elements *a* and *b*, so as to overlie the lateral flange of a watch movement held therein. Said pins preferably are under-cut and notched, as at *e'*, so that the flange will be inserted in said notches, and the unnotched portion will overlie the flange and tend to prevent the watch movement from being lifted upwardly from the pins when the movement is arranged, substantially as is shown in Fig. 5. Said lateral flanges on watch movements vary slightly in thickness, but the difference in the gauge of metal used is only a variance in extremely small fractions of an inch and thus said pins are notched to receive the thickest gauge metals and said notch does not interpose much play when smaller movements, with thinner flanges, are gripped in said movement rest.

Because of the fact that four upstanding pins are provided to engage the movement rest, said gripping elements are adapted to accommodate almost any shape of movement. Said movements are possibly more frequently round but they are also of irregular shapes, square, hexagonal, octagonal, elliptical, and many other variations from said standard geometric figures.

In Figs. 1 to 6, inclusive, I illustrate how said upstanding pins *e* can be made as separate pieces from the head. Said pins can be press-fitted into said heads or may be screw fitted or otherwise mounted therein. In Figs. 7 to 9, inclusive, I illustrate how projecting pins or studs can be cast or otherwise formed directly upon the head. In Fig. 7, two heads *h* and *i* are mounted for relative movement upon a lead screw *j*. Guide rods *j'*, functioning similarly to guide rods *c5* in the previous embodiment, tend to hold the heads in substantial parallelism with each other. Upon the work supporting surfaces *h'* and *i'*, upstanding bosses *k* are formed. Said bosses can either be formed by relieving the remainder of the heads surrounding said bosses to cause said bosses to project above said relieved portions, or said bosses can be formed by casting said bosses integrally with said head.

Said bosses are illustrated in Figs. 8 and 9 to show a notched portion *k'* and under-cut inclined portions *k2* overlying said notched portion. The

inclined portions *k2* extend obliquely to the plane of the surfaces *h'* and *i'*, somewhat to the same degree as the inclination of the pins *e*, and for the same purpose. Because it is desirable to make said bosses substantially of larger cross-section than the pins *e* in the previous modification, I preferably arrange the inner face of the notched portion *k'* as well as the face of the under-cut inclined portions *k2* so as to be substantially rounded as at *l* in Fig. 8. Thus, the bosses are adapted to accommodate plane or curved surfaces with equal facility.

When a movement is held in said rest and is gripped between the pins or bosses, it is securely held by the tightening of the lead screw. Said movement can be shifted readily over a work bench and will be spaced above the surface of said bench. The movement does not become loosened relatively, and when engaged, is held against displacement therefrom. When thus held, substantial pressure can be exerted against the movement, as when moving a corroded screw, and substantially the entire face of the movement is available to be operated upon without restriction.

I claim:

1. A movement rest for watch repair work, said device comprising a pair of clamping heads adapted for holding a watch movement, means for moving said heads towards and from each other, said means including a threaded stem, guide means for maintaining said heads in substantial parallelism with each other, one face of each of said heads constituting a work supporting surface, and a pair of aligned projecting work engaging pins extending upwardly from each of said surfaces, said pins being spaced apart and lying at opposite sides of the center line of each head, said pins having work engaging notches formed upon their inner ends flush with said work supporting faces.

2. A movement rest for watch repair work, said device comprising a pair of clamping heads adapted for holding a watch movement, positively actuated means for moving said heads towards and from each other, said means including a threaded stem journaled in one of said heads and screw threaded in the other, guide means for maintaining said heads in substantial parallelism with each other, one face of each of said heads constituting a work supporting surface, and a pair of aligned projecting work engaging pins extending upwardly from each of said surfaces, said pins being spaced apart and lying at opposite sides of the center line of each head, said pairs of pins also being in substantial alignment with each other, said pairs of pins extending obliquely from said surfaces, the outermost ends of each pair of pins being inclined towards the other pair of pins, said pins having work engaging notches formed upon their inner ends adjacent said work supporting faces.

CLEVE G. MARSDEN.