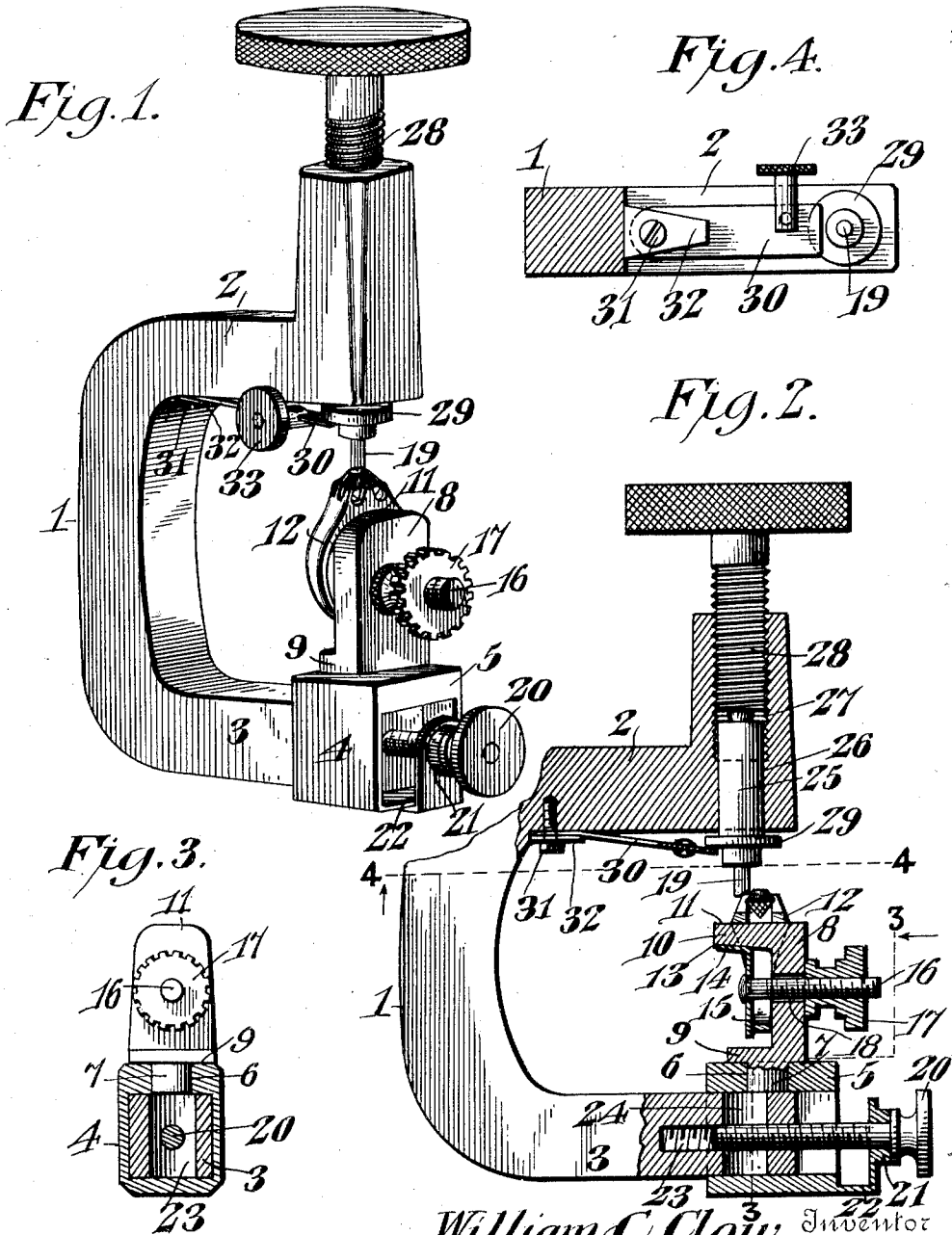


1,009,895.

Patented Nov. 28, 1911.

2 SHEETS—SHEET 1.



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JEWELER'S CLAMP.
APPLICATION FILED JULY 20, 1909.

1,009,895.

Patented Nov. 28, 1911.

2 SHEETS—SHEET 2.

Fig. 5.

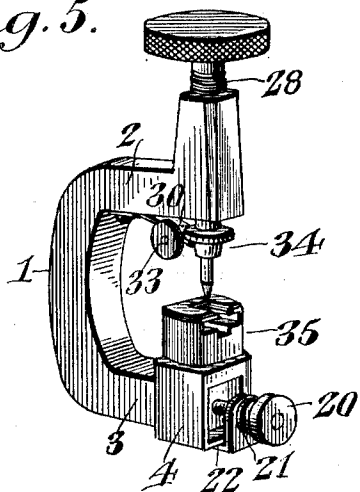


Fig. 6.

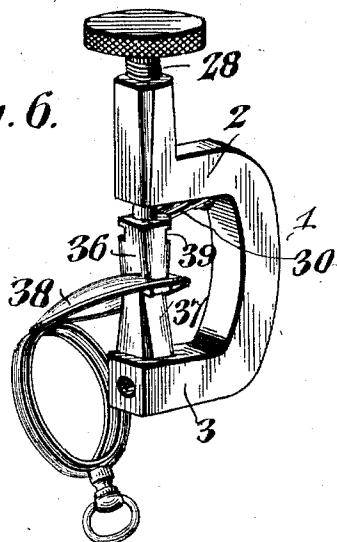


Fig. 7.

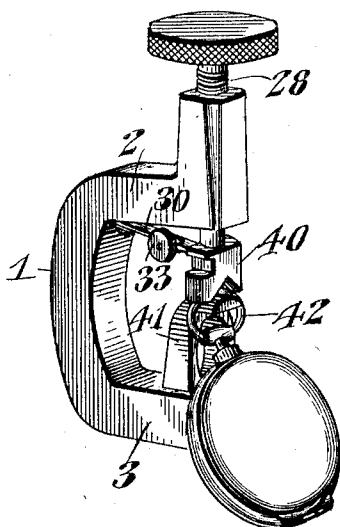
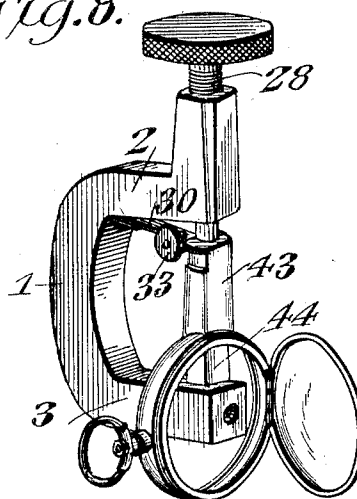


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM C. CLOW, OF PORTLAND, OREGON, ASSIGNOR OF ONE-FOURTH TO CHARLES W. CLOW AND ONE-FOURTH TO JAMES H. CLOW, BOTH OF PORTLAND, OREGON.

JEWELER'S CLAMP.

1,009,895.

Specification of Letters Patent.

Patented Nov. 28, 1911.

Application filed July 20, 1909. Serial No. 508,579.

To all whom it may concern:

Be it known that I, WILLIAM C. CLOW, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Jeweler's Clamp, of which the following is a specification.

The invention relates to a jeweler's clamp.

The object of the present invention is to provide a simple, inexpensive and efficient device, designed for setting gems in rings, and equipped with means for securely holding a ring and of enabling the same to be turned and adjusted inward and outward to present the prongs or claws of a setting to a die for bending the same into engagement with the stone.

A further object of the invention is to provide a device of this character, adapted to receive and operate various forms of dies for enabling the dents to be removed from watch cases, for re-shaping the rings of the pendants, for removing rollers from balance staffs and for replacing them thereon and for the performance of analogous operations, where an annular holding die and a movable die are essential.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of a jeweler's clamp, constructed in accordance with this invention, and arranged for setting a stone in a ring. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a transverse sectional view, taken substantially on the line 3—3 of Fig. 2. Fig. 4 is a detail sectional view, taken substantially on the line 4—4 of Fig. 2. Fig. 5 is a perspective view of the clamp, equipped with dies for removing rollers from balance staffs and for replacing them thereon. Fig. 6 is a similar view, the device being provided with dies for removing dents from the lid of a watch case. Fig.

7 is a perspective view, the device being provided with dies for re-shaping the ring of the pendant of the watch. Fig. 8 is a similar view, showing dies for removing dents from the body of a watch case.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

The jeweler's clamp comprises in its construction a substantially C-shaped frame 1, composed of upper and lower arms or portions 2 and 3, and a rear upright connecting portion. The lower portion or arm 3, which constitutes the base of the frame, receives a slidable die carrier 4, consisting of a rectangular casing fitting over the base of the frame and movable inward and outward along the same. The die carrier, which has a relatively thick upper horizontal portion 5, is provided therein with a circular opening 6 for the reception of a round shank 7 of a lower work support or anvil 8. The work support 8 consists of a horizontal base 9, an upright body portion, and a horizontal head 10, extending inwardly or rearwardly from the upper end of the body portion, as clearly illustrated in Fig. 2 of the drawings. The head has a transversely rounded upper face 11 to conform to the configuration of the interior of a ring 12, and its lower face 13 is inclined being extended upwardly and rearwardly from the rear face of the body portion of the work support, and adapted to be engaged by a correspondingly inclined arm 14 of a resilient clamping member 15. The resilient clamping member 15, which is substantially L-shaped, consists of a spring located in rear of the body portion of the work support 8 and beneath the head thereof and connected with a screw 16, which is adjusted by a nut 17. The screw extends through a horizontal opening 18 of the body portion of the lower work support 8, and the nut, which is preferably provided with a milled head, bears against the work support 8, and it is adapted to draw the screw outward, whereby the clamping member is forced into engagement with the lower portion of the ring and also into engagement with the inclined lower face of the head of the work support 8, whereby the ring is tightly held on the head of the work support 8.

The lower work support 8 is adapted to

be rotated on the carrier 4 to arrange the different prongs or claws of the setting beneath an upper vertically movable die 19, and it is also movable inwardly and outwardly with respect to the upper die, whereby any one of the prongs or claws of a setting may be properly positioned beneath the upper die. The inward and outward movement of the carrier is effected through the medium of a horizontal adjusting screw 20, swiveled in an upstanding portion 21 of a substantially L-shaped arm 22 and engaging a threaded bore 23, extending longitudinally of the base of the frame. The screw 20 is provided at its outer end with a head and is adapted to be rotated to slide the carrier forwardly or rearwardly. The carrier in the embodiment of the invention illustrated in Figs. 1 to 3 of the drawings is arranged exteriorly of the base, but it may be slidably mounted thereon in various other ways, as will be readily understood. The base of the frame is also provided with a vertical opening 24, adapted to receive the shanks of various other forms of lower work supports or dies, as hereinafter more fully described. The upper die 19 is provided with an upper smooth round shank 25, which is arranged in a lower smooth portion 26 of a vertical opening, which also has a threaded upper portion 27. The upper portion or arm of the frame is provided at the front with a vertical extension, and the opening for the reception of the shank of the upper die, and a die actuating screw 28 is formed in the said extension. The upper die 19, which has a reduced lower portion for engaging the prongs or claws of a setting, is provided at an intermediate point with an annular flange 29, forming a shoulder, which is engaged by a spring 30, pivoted at its inner or rear end to the lower face of the top of the frame by a screw 31, or other suitable fastening device and adapted to retain the die in the upper opening of the frame and capable also of moving the die 19 upwardly when the actuating screw is moved upwardly. The spring maintains the upper end of the shank of the upper die in engagement with the lower end of the screw, which is adapted to be rotated to force the upper die into engagement with the setting for bending the claws or prongs thereof against the stone. The spring 30 is reinforced by a fixed leaf 32, tapered forwardly and having its rear edge engaged with the rear upright portion of the frame in the angle formed by the same and the top of the frame. The pivoted spring 30 is adapted to be swung horizontally out of engagement with the upper die to permit the removal of the latter, and is provided at one side with a suitable head 33, connected with the spring by a shank and adapted to be readily grasped by the op-

erator to swing the spring inward and outward with respect to the upper die to engage and release the same. The rotary and slidable adjustment of the lower work support or anvil will enable any form of ring setting to be operated on.

In Fig. 5 of the drawings the clamp is equipped with an upper die 34 and a lower work support 35, adapted for removing rollers from balance staffs and for replacing them thereon. The upper die 34 is provided at an intermediate point with an annular flange, and the lower shoulder or face thereof is engaged by the pivoted spring. The lower work support 35 is detachably mounted on the carrier by a depending stem similar to that heretofore described.

The upper and lower dies 36 and 37, illustrated in Fig. 6, have engaging faces shaped to remove dents from the lid 38 of a watch case. The upper die 36 is provided with a recess 39 forming a shoulder, which is engaged by the pivoted spring 30. The lower work support or die has a shank for engaging the vertical opening 24 of the base of the frame, the horizontal adjusting screw and the carrier 4 being removed. The upper and lower dies 40 and 41, shown in Fig. 7, are mounted in the frame similar to the dies 36 and 37 and are provided with engaging faces for re-shaping the ring 42 of the pendant of a watch. The upper and lower dies 43 and 44 are mounted similarly to the dies shown in Figs. 6 and 7.

Various other forms of dies may be employed for performing different operations, and when the lower die requires no adjustment, it may be mounted directly on the frame and when adjustment relative to the upper die is necessary or desirable, the lower die may be mounted on the carrier, which with its pivotal connection with the same will afford both a rotary and sliding movement.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A device of the class described including a frame having an opening, a die guided in the opening of the frame and provided with a shoulder, a spring pivoted to the frame and engaging the shoulder of the die and adapted to be swung on its pivot to release the die, and a fixed leaf secured to the frame by the pivot of the spring and having one end engaged with the frame, whereby it is held against movement on the pivot, the other end of the leaf being free and bearing against the spring at a point intermediate of the ends thereof when the spring is in position for engaging the die.

2. In a device of the class described, the combination of a frame having spaced upper and lower arms, an upper die mounted in the upper arm, a carrier slidably mounted on

the lower arm and movable along the same, and a lower work support detachably mounted in the top of the carrier and removable therefrom without disturbing the said carrier, said work support having ring clamping means mounted thereon and located between the top and bottom of the work support so as to remain in adjusted relation when replacing and removing the work support from the carrier.

3. A device of the class described including a work support having a laterally projecting head to extend through a ring and provided with a curved upper face to fit the inside of the ring, a clamping plate located beneath the head and adapted to hold that portion of the ring below the head against the side of the work support, and an adjusting screw leading from the plate and passing through the side of the work support.

4. A device of the class described including a work support consisting of a laterally projecting head having a curved upper face, a horizontal base, and an upright body portion, a pivot depending from the base, a carrier consisting of a rectangular casing having an opening in its top wall to receive the pivot, and ring clamping means mounted on the work support in the space between the base and the head and having an operating device exposed at the outside of the upright body portion of the work support.

5. In a device of the class described, the combination of a frame having spaced upper and lower arms, an upper die mounted in the upper arm, a carrier consisting of a rectangular casing surrounding the lower arm and movable along the same and having an opening extending only through the top of the carrier, and a work support provided with a depending pivot fitting in the said opening and terminating short of the said lower arm so that the carrier may be moved back and forth with the work support thereon and the work support removed from the carrier without disturbing the latter.

6. A device of the class described including a work support having a projecting head arranged to extend through a ring and having an inclined lower face, a clamping member located beneath the head and arranged to engage the inclined face thereof and the lower portion of the ring, and

adjustable means for connecting the member with the work support.

7. A device of the class described including a work support having a projecting head arranged to extend through a ring and provided with an inclined lower face, and a substantially L-shaped clamping member located beneath the head and arranged to engage the inclined face thereof and the lower portion of the ring, and means for adjustably connecting the member with the work support.

8. A device of the class described including a work support having a projecting ring receiving head, a resilient clamping member located beneath the head and arranged to engage the lower face of the same and the lower portion of the ring, and means for adjusting the clamping member.

9. A device of the class described including a frame having a vertical opening and provided with a horizontal threaded opening, a carrier mounted on the lower portion of the frame and provided with an opening and having a screw engaging the threaded opening of the frame, and a work support having a shank adapted to engage either the vertical opening of the frame or the opening of the carrier.

10. In a device of the class described, the combination of a frame having spaced upper and lower arms, the lower arm being provided with an opening, an upper die mounted in the upper arm, a carrier slidably mounted on the lower arm and movable along the same and also provided with an opening extending only through the top of the carrier, and a lower work support having a pivot fitted in the opening of the carrier and terminating short of the lower arm so that the carrier may be moved back and forth with the work support thereon, said work support being removable from the carrier without disturbing the latter, and the said pivot being adapted to also fit in the opening of the lower arm of the frame when the carrier is removed therefrom.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM C. CLOW.

Witnesses:

A. D. WRIGHT,

A. O. WRIGHT.