No. 680,304. Patented Aug. 13, 1901.

F. W. WIGHTMAN.

SOLDERING CLAMP.

(Application filed Apr. 26, 1901.)

(No Model.)

Fig. 1.

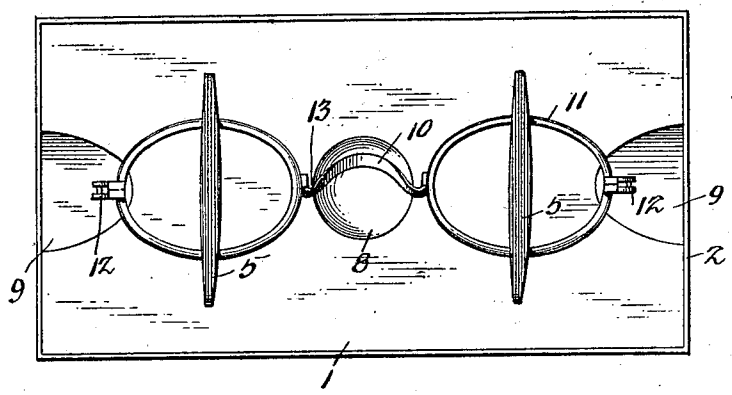


Fig. 2.

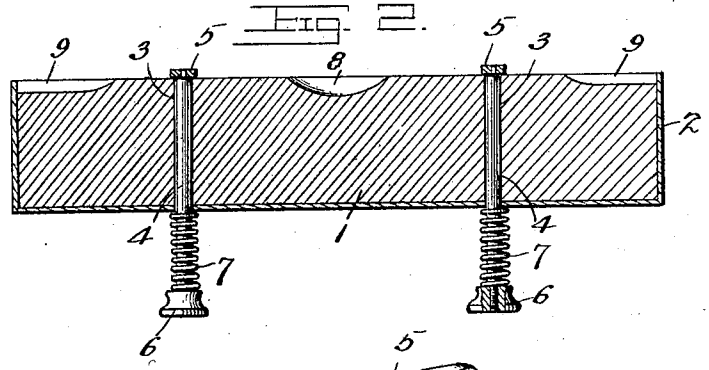
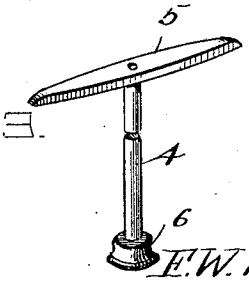


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANKLIN WM. WIGHTMAN, OF VASSAR, MICHIGAN.

SOLDERING-CLAMP.

SPECIFICATION forming part of Letters Patent No. 680,304, dated August 13, 1901.

Application filed April 26, 1901. Serial No. 57,604. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN WM. WIGHTMAN, a citizen of the United States, residing at Vassar, in the county of Tuscola and State of Michigan, have invented a new and useful Soldering-Clamp, of which the following is a specification.

This invention relates to soldering-clamps, and has for its object to provide an improved device of this character which is especially designed for jewelers' use in soldering broken articles—as, for instance, spectacle-frames—and is arranged for tightly clamping the frame portions in their normal positions, so that they may be conveniently soldered. It is furthermore designed to have the device fireproof and also to arrange for facilitating the application and removal of the parts to be soldered and to have the entire device in such shape as to be readily handled.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a top plan view of a soldering-clamp embodying the present invention. Fig. 2 is a central longitudinal sectional view thereof. Fig. 3 is a detail perspective view of one of the spring-actuated clamp members.

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

In carrying out the present invention there is provided a body 1 of desired size and shape, shown in the drawings as rectangular, and formed of fireproof material or such material as will not flare up into a flame by contact with a heated soldering-iron—as, for instance, a body of charcoal—which is light for convenience in handling and has the desired quality of being practically non-combustible. This block or body is snugly inclosed within a metallic box or casing 2, which incloses all but the top surface of the block, said surface being exposed for the support of the articles to be soldered.

A pair of perforations 3 are formed vertically through the body, and the bottom of the casing has corresponding perforations for the slidable reception of the stems or shanks 4 of the respective spring-actuated clamp members. Each stem is thrust downwardly through its corresponding opening in the body and is provided at its upper end with a transverse cross-bar or clamping-head 5, that projects equally in opposite directions from the stem. The length of the stem is such as to project for a suitable distance below the bottom of the casing and is provided with a removable nut or head 6. A helical spring 7 embraces the projected end portion of the stem and bears in opposite directions against the under side of the body and the removable head formed by the nut, whereby the cross-head 5 is snugly held against the top of the body to clamp against the latter such articles as are to be soldered.

It will be understood that the charcoal block is removable, so as to be replaced when worn and also for the substitution of blocks having their upper exposed faces constructed for coöperation with different articles—as, for instance, the block shown in the drawings, which is provided with a central depression or socket 8 and the opposite terminal sockets 9, whereby the block is particularly adapted for soldering spectacles, as the central depression is for the reception of the nose-bridge 10 of a spectacle-frame 11, while the terminal depressions are for the reception of the temple-joints 12.

In explanation of the manner of using the device suppose the nose-bridge is broken from the lens-frame at the point indicated by the numeral 13. The spring-actuated clamps are raised by pressing upwardly upon the lower ends of the stems, the heads 6 forming convenient finger-pieces whereby the clamp-heads are elevated above the top of the block, and the lens-frames, from which the lenses have been removed, are then hooked over the respective heads, so that the latter may lie transversely across the same, after which the stems are released to permit of the heads being drawn downwardly by the springs, and thereby clamp the frame-sections against the

top of the body. It will of course be understood that the frame-sections are first adjusted so that the broken parts are properly fitted so as to be in position for soldering. When the frame has thus been applied to the body, the latter is placed in a vise or otherwise held rigidly, and the broken parts are then soldered in the usual manner.

The spring-actuated clamp members are rotatably adjustable as well as longitudinally adjustable, so as to accommodate the clamps to articles of different shapes and sizes, and it is also designed to vary the shape of the clamp-heads, so as to accommodate the device to particular kinds of work.

What is claimed is—

1. A soldering-block, consisting of a non-combustible and heat-non-conducting body, an endwise-movable stem projected in opposite directions through a perforation formed in the body, a removable head fitted to one end of the stem, a tension-spring bearing in opposite directions against the head and the adjacent side of the body, and a laterally-projected clamping-head carried by the opposite end of the stem and held in elastically-yieldable engagement with the adjacent side of the body by the spring.

2. A soldering-block, comprising a metallic casing having an open top, a charcoal block held within the casing, the bottom of the latter and the block having a pair of corresponding perforations, a pair of endwise-movable and rotatable clamping-stems mounted in the respective perforations, each stem having a clamping cross-head at its upper end and co-operating with the exposed face of the charcoal block, a removable head carried by the opposite end of the stem, and a coiled spring embracing the projected lower end of the stem and bearing in opposite directions against the casing and the finger-piece.

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

FRANKLIN WM. WIGHTMAN.

Witnesses:
G. R. BUCK,
C. C. CURTIS.