

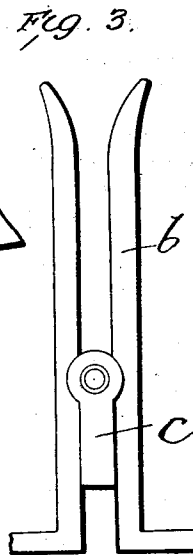
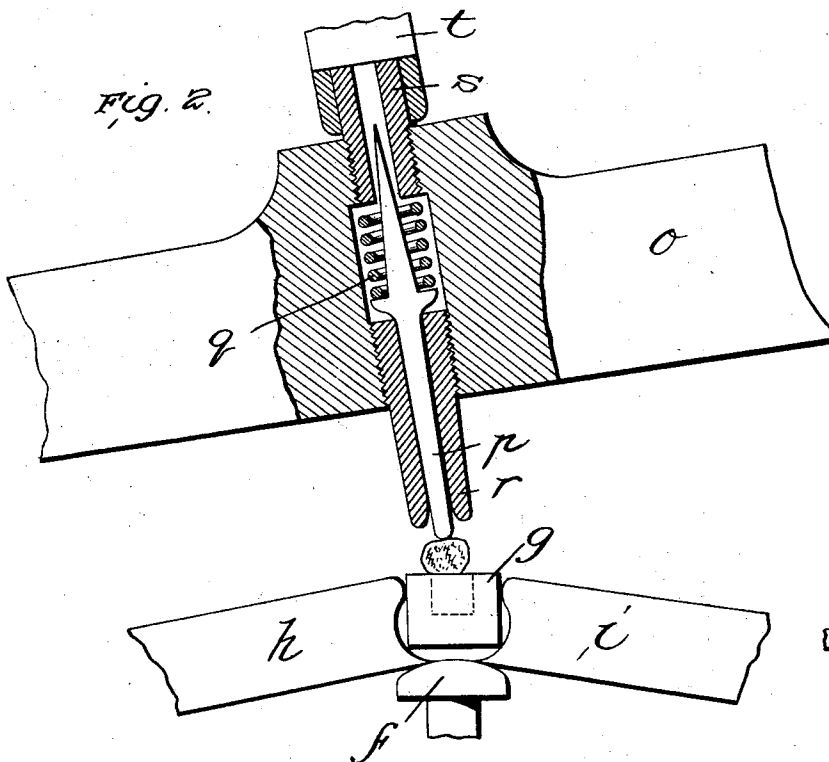
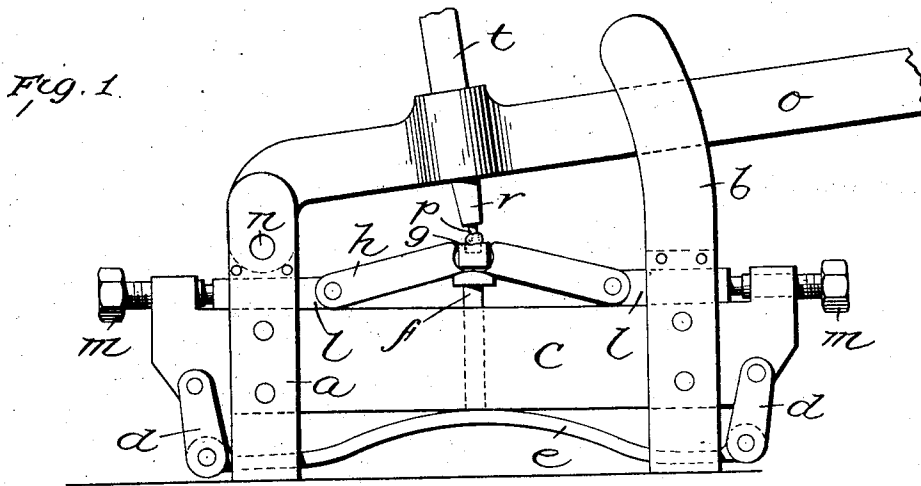
No. 700,132.

Patented May 13, 1902.

J. BREJCHA.
MACHINE FOR SETTING DIAMONDS IN METAL.

(Application filed Feb. 14, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOSEF BREJCHA, OF STRASBURG-NEUDORF, GERMANY.

MACHINE FOR SETTING DIAMONDS IN METAL.

SPECIFICATION forming part of Letters Patent No. 700,132, dated May 13, 1902.

Application filed February 14, 1902. Serial No. 94,129. (No model.)

To all whom it may concern:

Be it known that I, JOSEF BREJCHA, a subject of the Emperor of Germany, and a resident of Strasburg-Neudorf, Alsace-Lorraine, Germany, have invented certain new and useful Improvements in Machines for Setting Diamonds in Metal, of which the following is a specification.

My invention relates to a machine for setting diamonds and other hard substances in metal. Hitherto such substances were placed in a cold or warm setting, which, if cold, did not quite inclose the stone, which thus could easily be forced out, while by setting in heated material the stone was liable to be injured and its durability to be much impaired. In the present invention the substance to be set is pressed into a hot setting in such a manner that a cooling liquid immediately flows over the setting and prevents the substance from becoming overheated.

A form of construction of the invention is illustrated in the accompanying drawings, in which—

Figure 1 shows the machine in side elevation. Fig. 2 is a detail thereof. Fig. 3 is an end view of the machine.

Between the frames *a* and *b* rests a plate *c*, which by means of links *d* supports a spring *e*. On this spring rests a counter support *f*, on which the setting material *g* is placed. Two press-heads *h* and *i* can be adjusted by means of sliding pieces *l* and screws *m*. A lever *o*, pivoted on a bolt *n*, rests in the frame *a*. In this lever there is a valve *p*, which is controlled by a spring *q* and is movable in the holder *r*. Liquid can penetrate into the valve through the tube *s*, connected with a rubber tube *t*.

For setting the stone the metal is made red-hot and the stone inserted by pressing on the lever *o*. As soon as the stone is in place in the metal setting the valve *p* is pressed upward and cooling liquid pours through the tube *t* onto the setting. By moving the lever

o farther the holder presses on the metal *g*, whereby the counter support *f* is forced down and the pressers *h* and *i* firmly press the metal against the stone.

By setting according to the present invention the pressure can be adjusted according to the strength of the stone, thereby preventing injury thereto. The substance to be set—stone, &c.—is brought quite to the bottom of the setting metal before the stone is firmly pressed and cooled, whereby if the proper strength of spring is used no excessive pressure is applied to the stone, because the spring *q* easily yields, and only when the valve-casing *r* presses the setting metal *g* is the spring pressed down and the metal compressed.

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

1. In a machine for setting hard substances in metal, the combination of a support for the metal piece, a lever having means for pressing the said substance into the metal, a tube connected with the lever, a port leading through the lever for directing a cooling liquid to the metal piece and a valve carried by the lever and controlling said port, substantially as described.

2. In combination, a yielding support for a metal piece, clamping heads or links having pivoted outer ends, said links being inclined toward each other and having their inner ends resting upon the yielding support with a space between for the metal piece, and means for pressing the stone downwardly into the metal piece, said support yielding to permit the links to move downwardly to compress the metal piece between their adjacent ends and upon the stone, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOSEF BREJCHA.

Witnesses:

SIEGFRIED HEMSER,
MAX ADLER.