

(No Model.)

J. W. MALOY.
MOUNTING DIAMONDS ON SAWS.

No. 364,835.

Patented June 14, 1887.

Fig 1.

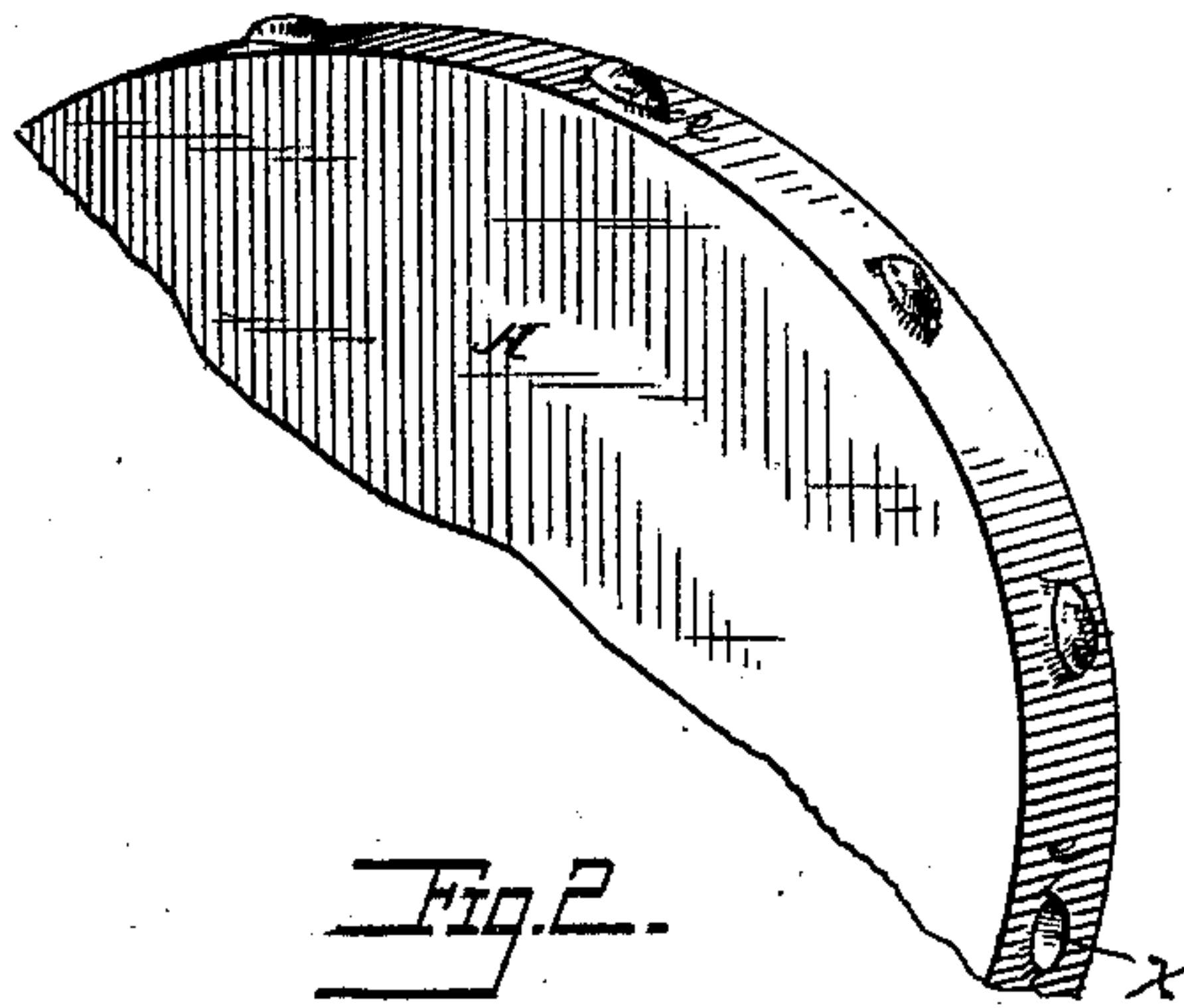


Fig 2.

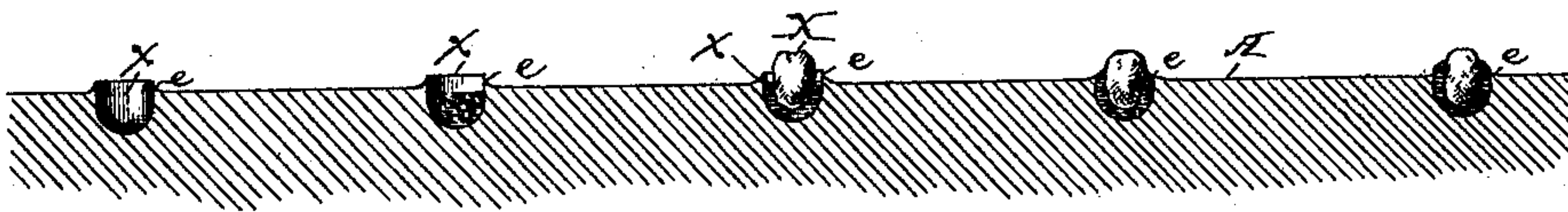
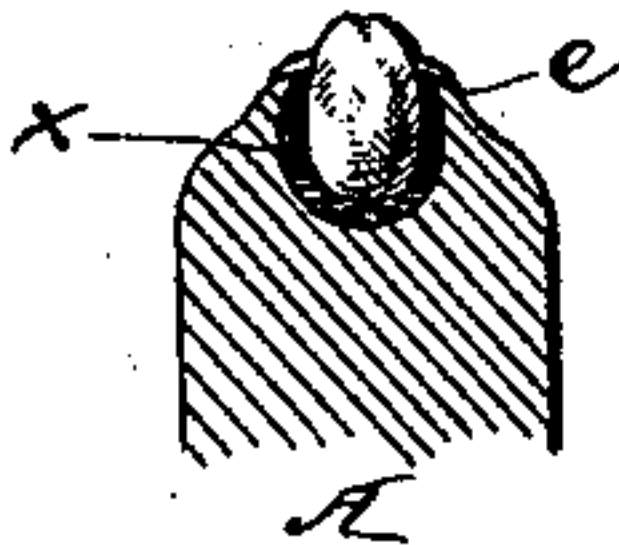


Fig 3.



Attest:

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UNITED STATES PATENT OFFICE.

JAMES W. MALOY, OF SOMERVILLE, MASSACHUSETTS.

MOUNTING DIAMONDS ON SAWS.

SPECIFICATION forming part of Letters Patent No. 364,835, dated June 14, 1887.

Application filed July 29, 1886. Serial No. 209,472. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. MALOY, a citizen of the United States, and a resident of Somerville, Middlesex county, Massachusetts, have invented certain new and useful Improvements in Mounting Diamonds on Saws, of which the following is a specification.

My invention relates to that class of cutters in which diamonds are set in holders; and it consists in supporting the diamonds in their sockets upon amalgam beds, as set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of part of a circular holder, showing a socket and a stone set in place. Fig. 2 is a view showing a socketed bar and illustrating the progressive steps in setting a stone. Fig. 3 shows a stone set in the end of a bar-holder.

The blade rod, bar, or stock A, in which the diamond or diamonds must be set, differs in shape, according to the purposes to which the cutters are to be applied, and does not necessarily differ from those in common use.

To prepare the blade or holder for the reception of the stones, sockets *x* are formed either by drilling or punching, the latter mode being preferred, as it forms a burr or fin, *e*, which may afterward be turned down on the stone, as described hereinafter. In this socket is placed amalgam while soft—for instance, an amalgam of silver and mercury—which partly fills the socket, and into which the stone is pressed, as shown at X. When the amalgam hardens, it forms a solid bed for the stone in close contact with all the surface of the same, and also with the face of the socket. To prevent any loosening of the bed, the fin *e* is then turned down close upon the amalgam and against the sides of the stone; and for further security I prefer to then braze or apply solder to the face of the fin around the edge, the sol-

der running over the fin, the edge of the amalgam, and against the stone, thus most securely fixing the latter in its place.

An amalgam of mercury and tin or mercury and bismuth, or any other amalgam suitable for the purpose described, may be substituted for the amalgam of silver and mercury.

By the use of an amalgam I avoid the danger from heating the stone arising when molten settings are employed, and of fracturing the same when the setting is packed around the diamond.

Without limiting myself to the precise construction and arrangement shown, I claim—

1. The within-described improvement in setting diamonds in metal holders, consisting in placing an amalgam in the socket of the holder and forcing the stone into the amalgam while soft, and thereby forming a bed which, when it hardens, is in contact with the entire sunken portion of the stone, substantially as described.

2. The combination of a socketed holder, a stone, and a body of amalgam surrounding the stone within the socket, substantially as described.

3. The combination of the holder having a socket, a diamond, intermediate body of amalgam, and surrounding ring of solder, substantially as described.

4. The combination of the holder having a socket, a stone, body of amalgam surrounding the stone, and a surrounding fin turned down on and toward the stone, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES W. MALOY.

Witnesses:

GEORGE R. EAGER,
JAS. P. ROBERTSON.