F. O. JAQUES, SR.

ANVIL FOR MICROMETER GAGES AND SIMILAR GAGES.

APPLICATION FILED APR. 10, 1916.

1,223,325. Patented Apr. 17, 1917.

Fig. 1.

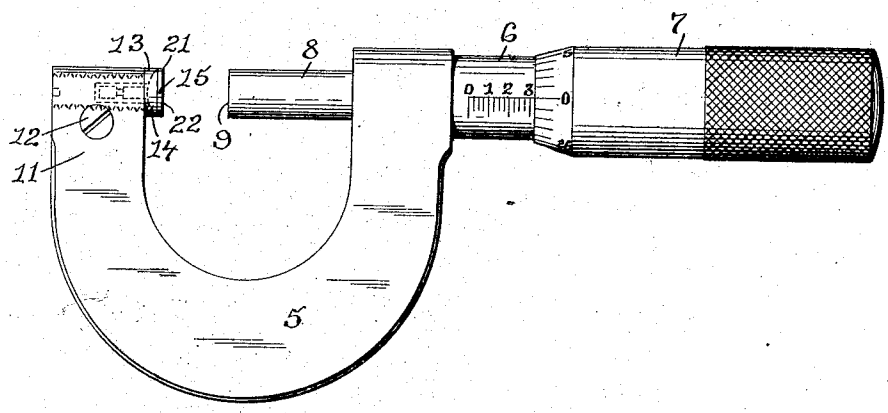


Fig. 2.

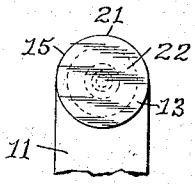


Fig. 3.

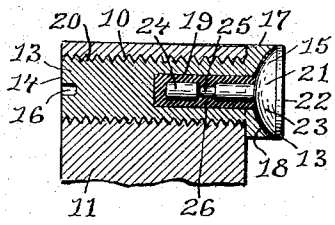
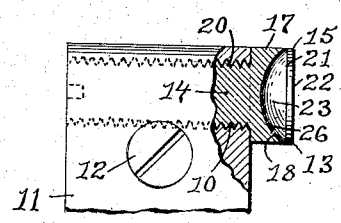


Fig. 4.



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ANVIL FOR MICROMETER-GAGES AND SIMILAR GAGES.

1,223,325. Specification of Letters Patent. Patented Apr. 17, 1917.

Application filed April 10, 1916. Serial No. 90,123.

To all whom it may concern:

Be it known that I, FERNANDO OSCAR JAQUES, Sr., a citizen of the United States, residing at Cranston, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Anvils for Micrometer-Gages and Similar Gages, of which the following is a specification.

In micrometer gages and the like, it is essential that the end face of the spindle and the face of the anvil shall be in alinement, that is to say, when the two faces are in juxtaposition every part of one face must be in actual contact with the corresponding part of the other face for accurate measurement. In the usual construction of these gages the end of the spindle is trued and faced and the coinciding end or face of the anvil is trued and faced. The spindle is screw-threaded through the frame and the anvil is separately screw-threaded through the opposite end of the frame. When first assembled the face of the anvil is usually out of true with the face end of the spindle. The anvil is then trued up with the face end of the spindle by tapping or bending the frame. This requires skilled labor, time and expense and is not always accurate, as it is necessary to depend on the skill of the mechanic.

The object of my invention is to improve the construction of anvils for micrometer gages and similar gages, whereby the above undesirable features are wholly eliminated and a more accurate measuring instrument produced than has heretofore been done.

A further object of my invention is to construct such an anvil so that the face of the anvil is self adjusting on contact with the face end of the spindle and then is rigidly secured in the adjusted accurate position.

My invention consists in the peculiar and novel construction of an anvil for micrometer gages and similar gages, said anvil having details of construction, as will be more fully set forth hereinafter and claimed.

Figure 1 is a side view of a micrometer gage provided with my improved self adjusting anvil.

Fig. 2 is an enlarged detail view of the anvil end of the frame looking at the face of the anvil.

Fig. 3 is an enlarged longitudinal sectional view through the anvil and part of the frame, and

Fig. 4 is a view similar to Fig. 3 partly in section of a modified form of anvil.

In the drawing 5 indicates the U shape frame, 6 the barrel, 7 the thimble, 8 the spindle screw-threaded through the barrel 6 and having the end face 9; 10 a screw-threaded hole through the end 11 of the frame 5 and 12 a set screw all of which is of the usual construction of a standard micrometer gage and is shown only to illustrate the use of my invention.

My improved self adjusting anvil 13 consists of a holding frame member 14 and an anvil face member 15. The holding member 14 has a screw slot 16 in its outer end, an enlarged inner head end 17 in the face of which is a saucer shaped cavity 18, a bore 19 extending centrally from the cavity 18 toward the end 14 and external screw-threads 20. This member 14 screws into the screw-threaded hole 10 in the end 11 of the frame and takes the place of the usual solid one piece anvil.

The anvil face member 15 has a round head 21 corresponding in size to the end of the spindle 8, a flat face 22, an inverted saucer shaped convex back 23 which fits in the saucer shaped cavity 18 in the holding member 14, and a central stem 24 which extends from the back 23 into the bore 19 and has a reduced portion 25. The anvil face member 15 is rigidly secured in the adjusted position to the holding member 14 by a fusible metal 26, intermediate the two members 14 and 15 in the bore 19 as shown in Fig. 3.

In the modified form as shown in Fig. 4 the bore 19 and stem 24 are eliminated and the fusible metal 26 is placed between the head end 17 of the holding member 14 and the head 21 of the anvil member 15 in the cavity 18.

The fusible metal 26, which may be any metal, which melts at a comparatively low temperature, such as solder melts at a low temperature, preferably two hundred degrees of heat. The end 11 of the frame is subjected to this temperature, preferably by immersing the same in boiling hot water and when the fusible metal fuses or melts the face end 9 of the spindle and the face 22 of the anvil are brought together, either by turning the spindle or anvil, and the anvil

member 15 being now movable, the face 22 of the anvil automatically adjusts itself to the face 9 of the end of the spindle 8. The two faces are now absolutely accurate relative to each other and when the fusible metal cools and sets the anvil member 15 is rigidly secured in the adjusted position. If through wear or other causes the faces should at any time become out of true, the above operations may be repeated and the faces again trued relative to each other.

I do not wish to confine myself to the construction shown as the same could be varied within the scope of the appended claims.

Having thus described my invention I claim as new.

1. An anvil for micrometer gages and similar gages comprising a frame member having a saucer shaped cavity in one end, an anvil face member having a convex inverted saucer shaped back in the frame member cavity, and a fusible metal intermediate the frame member and the anvil face member, said fusible metal securing the anvil face member to the frame member.

2. An anvil for micrometer gages and similar gages comprising a frame member having a saucer shaped cavity in one end, an anvil face member having a flat face and an inverted saucer shaped back in the frame member cavity, and a fusible metal intermediate the frame member and the anvil face member, said fusible metal securing the anvil face member to the frame member.

3. An anvil for micrometer gages and similar gages comprising an externally screw-threaded frame member having a saucer shaped cavity in one end and a bore extending in from the cavity, an anvil face member having a flat anvil face, an inverted saucer shaped back in the frame member cavity and a stem in the bore of the frame member, and a fusible metal intermediate the frame member and the anvil face member, said fusible metal securing the anvil face member to the frame member.

In testimony whereof, I have signed my name to this specification.

FERNANDO OSCAR JAQUES, SR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."