F. STUPPILLO.

GAGE.

APPLICATION FILED MAY 20, 1916.

1,216,879. Patented Feb. 20, 1917.

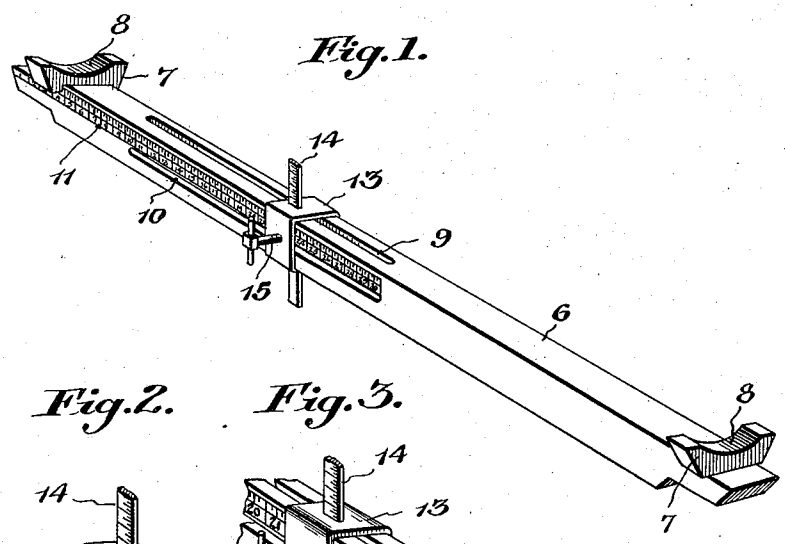


Fig. 1.

Fig. 2.

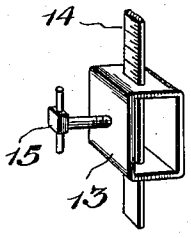
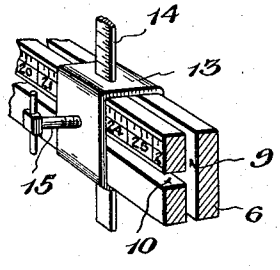


Fig. 3.



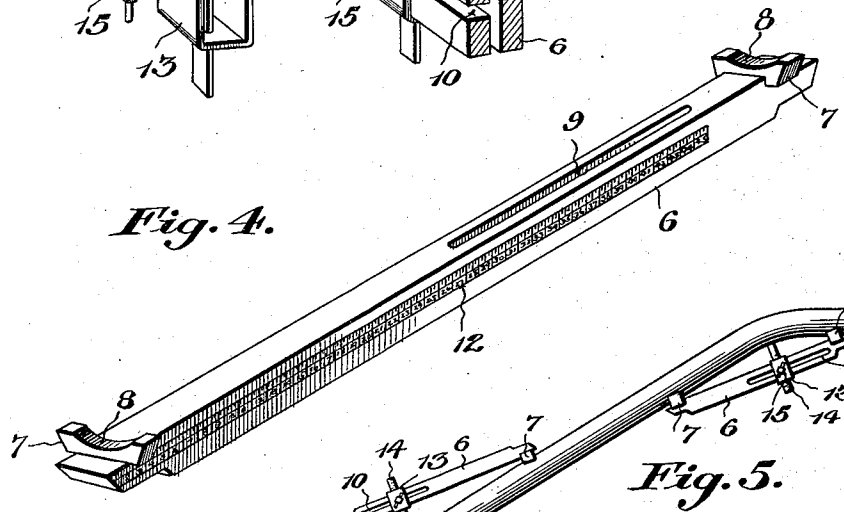


Fig. 4.

Fig. 5.

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GAGE.

1,216,879. Specification of Letters Patent. Patented Feb. 20, 1917.

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To all whom it may concern:

Be it known that I, FRANCESCO STUPPILLO, a subject of the King of Italy, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Gages, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention provides a conveniently-adjustable device adapted to be used to gage or measure bends and angles of tubes, bars, and the like, and the device also is susceptible of use on other articles.

Among the objects of the invention is to provide in such a device an arrangement whereby a single means serves both to maintain an indicator-carrying slide on the gage-bar and the indicator on the slide reliably in adjusted positions.

When read in connection with the description herein, the details of construction and arrangement of parts contemplated by the invention will be apparent from the accompanying drawing, forming part hereof, wherein an embodiment of the invention is disclosed, for purposes of illustration.

While the disclosures herein exemplify a preferable form of the invention, it is to be understood that it is not the intention to be limited necessarily thereto in interpretation of the claims, as changes can be made within the limits of the claims without departing from the nature and spirit of the invention.

Like reference-characters refer to corresponding parts in the views of the drawing, of which—

Figure 1 is a perspective view of the gage;

Fig. 2 is a perspective view of the slide and indicator-bar;

Fig. 3 is a view of the slide and indicator-bar in place on the gage-bar, the latter being shown in cross-section;

Fig. 4 is a perspective view of the gage-bar; and

Fig. 5 is a view illustrative of the use of the gage at bends of a pipe, tube, or bar.

Having more particular reference to the drawing, 6 designates a gage-bar, which is a straight length of metal, wood, or other suitable material, but preferably metal and rectangular in cross-section. A saddle or seat 7 is secured near each end of the bar or made integral therewith, and each of the saddles or seats is concave, as shown at 8, so that it is adapted to contact with, and in a measure to conform to, the curved surface of a tube or bar without being readily displaced therefrom while the gage is in use. From the face on the same side as the saddles or seats the bar is formed with a slot 9 opening therethrough to the opposite face and extending for a part of the length of the bar. A slot 10 extends from one of the other faces of the bar to and opens into the slot 9 at a place about midway of the thickness of the bar. The slots 9 and 10 are disposed substantially at right angles to each other. The bar has a graduated scale 11 on the face to which the slot 10 opens and a similar scale 12 on the opposite face.

A slide 13, of a shape corresponding to the cross-section of the gage-bar 6 and in the form of a sleeve envelops and is slidable on the gage-bar. A graduated indicator-bar 14 extends through the sleeve and is accommodated by the slot 9 of the gage-bar. A screw 15 is carried by the slide substantially at right angles to the indicator-bar, and it extends into slot 10 so that its inner end is capable of engaging the indicator-bar.

When it is desired to move the slide to a particular position on the gage-bar, to move the indicator-bar to cause its contact end to extend more or less beyond the plane of the contact surfaces of the saddles or seats 7, or to adjust both the slide and indicator bar, the screw 15 is turned to relieve its end from pressure against the indicator-bar thereupon the parts are moved to the adjustment desired, and then the screw is turned to cause its inner end to press against the indicator-bar. This action of the screw operates to clamp and hold the indicator-bar against the wall of the slot 9 opposite to the end of the screw and thus maintain the indicator-bar in position, and it also serves to pull the opposite side of the sleeve against the corresponding face of the gage-bar and thereby maintain the sleeve against movement longitudinally of the bar.

It will be seen that by this arrangement one screw operates efficiently and reliably to maintain both parts against displacement and that the necessity of employing a separate screw for each of the adjustable parts is obviated.

Preferably the indicator-bar has a fairly

tight fit in the slide at the place it extends therethrough, so that it will not fall out when the screw is loosened and so that it requires pressure of a thumb or finger or a tap of the hammer or the like to move it longitudinally; and the slide fits the gage-bar fairly tightly so that it is not too easily moved when the screw is loosened. Thus either the slide or the indicator-bar, when the screw is loosened, may be moved to a new adjustment without necessarily disturbing the adjustment of the other. However, while it is preferable that the parts fit as just described, that is not absolutely necessary, as they normally are held securely against displacement by the screw when tightened; and, when an adjustment is to be made, the screw may be turned only sufficiently to permit movement of the parts without entirely loosening them.

After the parts are brought to the adjusted positions required for the use to which the gage is to be put, the device then is ready to measure or gage at the position of the indicator-bar the deflection from the plane of the contact surfaces of the saddles or seats, or the relative position of a surface or point with respect to that plane. Thus, as illustrated by Fig. 5, the device is adapted to gage the bends or angles of a pipe, tube, or bar, so that a plurality of them can be made with practically identical bends or angles. The device is placed with its saddles or seats against the article to be measured so that it will straddle or span the bend, and thus the indicator-bar shows whether the bend is correct.

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

1. A gage comprising a bar formed with a slot extending therethrough from one face to the opposite face and with another slot opening into the first mentioned slot and to another face of the bar, a slide movable longitudinally on said bar, an adjustable indicator-bar carried by said slide and extending through said first-mentioned slot, and a screw carried by said slide and extending into said second-mentioned slot and arranged to engage said indicator-bar and to hold both that bar and said slide in adjusted positions.

2. A gage comprising a bar formed with a slot extending therethrough from one face to the opposite face and with another slot opening into the first-mentioned slot and to another face of the bar, a contact-seat at each end of said bar, a slide movable longitudinally on said bar, an adjustable indicator-bar carried by said slide and extending through said first-mentioned slot, and a screw carried by said slide and extending into said second-mentioned slot and arranged to engage said indicator-bar and to hold both that bar and said slide in adjusted positions.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCESCO (his ×) STUPPILLO.
mark

Witnesses:
NICHOLAS MARFRED,
C. B. MARTIN.

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