No. 674,487. Patented May 21, 1901.

M. VASSAR.

LEATHER GAGE.

(Application filed Nov. 3, 1900.)

(No Model.)

Fig. 1

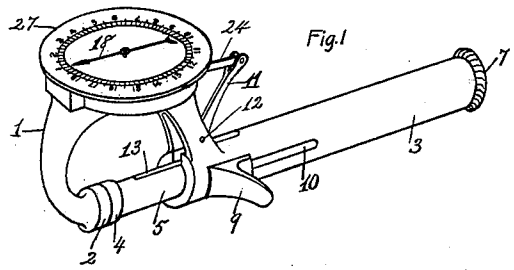


Fig. 2

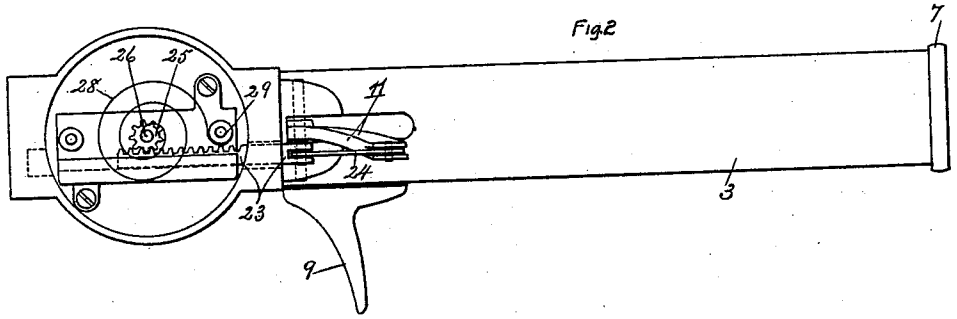
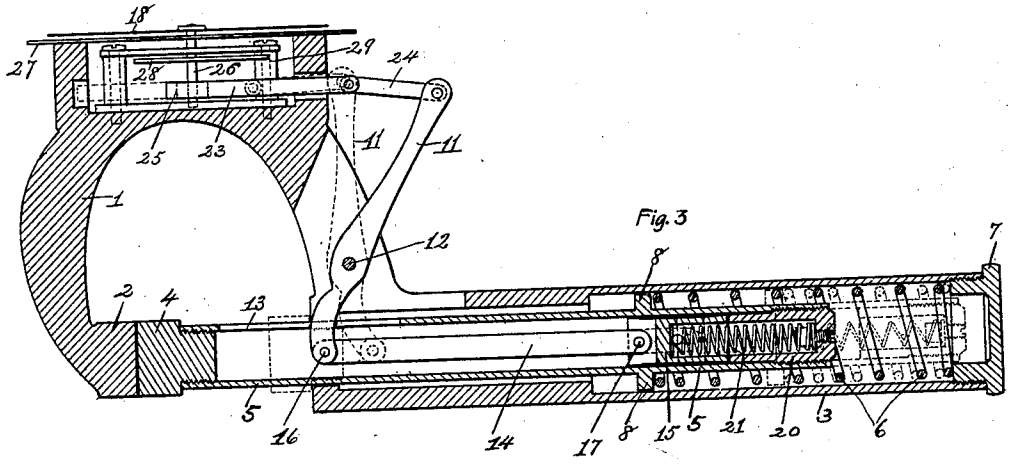


Fig. 3



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UNITED STATES PATENT OFFICE.

MATTHEW VASSAR, OF BALLSTON, NEW YORK.

LEATHER-GAGE.

SPECIFICATION forming part of Letters Patent No. 674,487, dated May 21, 1901.

Application filed November 3, 1900. Serial No. 35,355. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW VASSAR, a citizen of the United States, residing at Ballston, county of Saratoga, and State of New York, have invented certain new and useful Improvements in Leather-Gages, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures.

Figure 1 of the drawings is a view in perspective of my improved leather-gage. Fig. 2 is a top plan view of the same with the indicator and dial-plate removed. Fig. 3 is a central vertical longitudinal section of the same. Fig. 1 is drawn on a smaller scale than the other figures.

My invention relates to improvements in the leather-gage shown and described in United States Letters Patent No. 212,288, granted to me February 11, 1879, to which patent reference may be had, in connection with the present specification, for a full understanding of my invention.

The object of my invention is to render the operation of the device more positive and accurate and to do away with lost motion between the several moving parts.

Referring to the drawings, 1 is the fixed-jaw member, which forms the body of the gage and is provided with the fixed jaw 2 and the tubular handle 3 opposite said fixed jaw. The movable jaw 4 is fixed upon the outer end of the tubular jaw-carrier 5, which is adapted to telescope within the tubular handle. The coil-spring 6, located within the tubular handle and bearing at one end upon the end cap 7 of the handle and at the other end upon the exterior flange 8 on the tubular jaw-carrier, serves to yieldingly force the movable jaw toward the fixed jaw of the gage, while the thumb-piece 9, connected with the jaw-carrier 5 through the slideway-slot 10 in the handle, affords means for moving the jaw-carrier against the force of the spring to open the gage for the reception of a piece of leather between its jaws. The lever 11 is fulcrumed at 12 upon the fixed member in a slot formed therein, and the inner end of said lever projects through the slot 13 in the tubular wall of the movable-jaw carrier and is connected by a link 14 with a slide-piece 15, formed to closely fit the interior of the movable-jaw carrier, which is adapted to form a slideway for the same. The link 14 is pivotally connected at 16 with the lower end of the lever 11 and at the other end at 17 to the slide-piece. The upper end of the lever 11 is provided with actuating connections with the index 18, whereby the movements of said lever are communicated to the index. A plug 20, secured in the inner end of the movable-jaw carrier, forms a stop adapted to positively engage the slide-piece 15 to move the same as the movable jaw approaches the fixed jaw of the gage. The spring 21, connected at one end to said plug and at the other end to said slide-piece, forms a yielding connection between the jaw-carrier and said slide-piece which tends to cause the slide-piece to accompany the jaw-carrier as the same is moved to separate the jaws of the gate. The parts are so arranged, however, that a limited movement only can be imparted to said slide-piece in the direction last referred to by reason of the engagement of the lever 11 with the wall of the fixed member, as indicated by dotted lines in Fig. 3, said fixed member forming a stop which prevents the further movement of the lever and its connected parts. The continued movement of the jaw-carrier to further separate the jaws after the lever 11 has engaged its stop will cause the end plug of the jaw-carrier to be separated from the slide-piece 15, the spring 21 yielding to permit such movement, as indicated by dotted lines in Fig. 3.

As a means for causing the movements of the lever 11 to be imparted to the index I provide a gear-rack 23, connected by link 24 with the upper end of said lever and adapted to engage and operate the pinion 25, fixed on the spindle 26, which projects through the dial-plate 27 and is provided on its projecting end with the index 18.

The coil-spring 28 is connected at one end with the index-spindle and at the other end with a suitable support 29 and tends to in-

duce a rotary movement of the pinion such as to hold its teeth closely in mesh with the teeth of the gear-rack to prevent lost motion therebetween in the operation of the device.

The operation of the device is as follows: The operator grasps the handle of the gage in one hand and by the pressure of his thumb upon the thumb-piece separates the jaws sufficiently to permit of the easy insertion therebetween of a piece of leather whose thickness is to be determined, which causes a movement of the parts to approximately the positions indicated by dotted lines in Fig. 3, a reverse movement being imparted to the index until the lever 11 engages the wall of the fixed member, as above described. A piece of leather having been inserted between the jaws of the gage, the thumb-piece is released and the leather is clamped between the jaws by the force of the spring 6, which actuates the movable-jaw carrier. The slide-piece 15, index 18, and interconnecting parts do not partake of the closing movement of the jaw-carrier until the plug 20 engages the slide-piece, whereupon the slide-piece is carried along with the movable-jaw carrier and its movement is imparted to the index in the manner above described, causing the index to travel in a direction to correctly indicate the thickness of the inserted piece of leather.

The device is easily operated and is simple, positive, and accurate in its operation.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a leather-gage, the combination with a fixed-jaw member; a movable jaw, and a spring-actuated carrier for said movable jaw; of an index; an index-operating lever fulcrumed on the fixed-jaw member; operating connections between one end of said lever and the index; a slide-piece reciprocatory in a slideway in said movable-jaw carrier; a link pivotally connected at one end to the other end of said index-operating lever and at the other end to said slide-piece; and a stop on said jaw-carrier adapted to engage and actuate said slide-piece, substantially as described.

2. In a leather-gage, the combination with a fixed-jaw member; a movable jaw and a spring-actuated carrier for said movable jaw; of an index; an index-operating lever fulcrumed upon the fixed-jaw member; operating connections between one end of said lever and the index; a slide-piece reciprocatory in a slideway in said movable-jaw carrier; a link pivotally connected at one end to the other end of said index-operating lever, and at the other end to said slide-piece; a stop on said jaw-carrier adapted to engage and actuate said slide-piece in one direction; a spring connection between said jaw-carrier and slide-piece adapted to move said slide-piece in the opposite direction; and means for limiting the spring-induced movement of said slide-piece, substantially as described.

In testimony whereof I have hereunto set my hand this 31st day of October, 1900.

MATTHEW VASSAR.

Witnesses:

HORACE J. MEDBERY,

CHARLES E. FITCHAM.