No. 717,259. Patented Dec. 30, 1902.

H. L. NOTTER.

GLASS CUTTER AND MARKER.

(Application filed Feb. 24, 1902.)

(No Model.)

Fig. 1

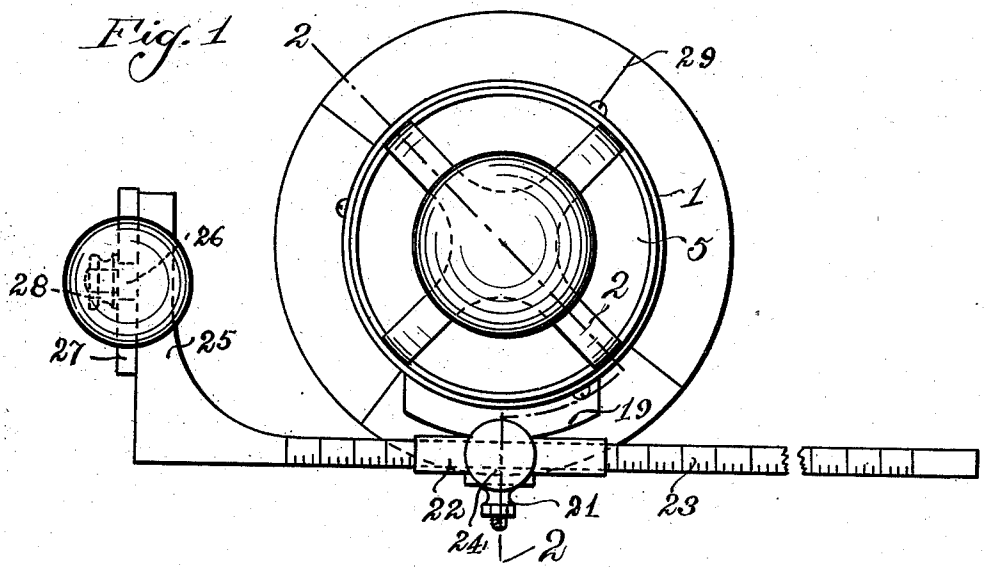
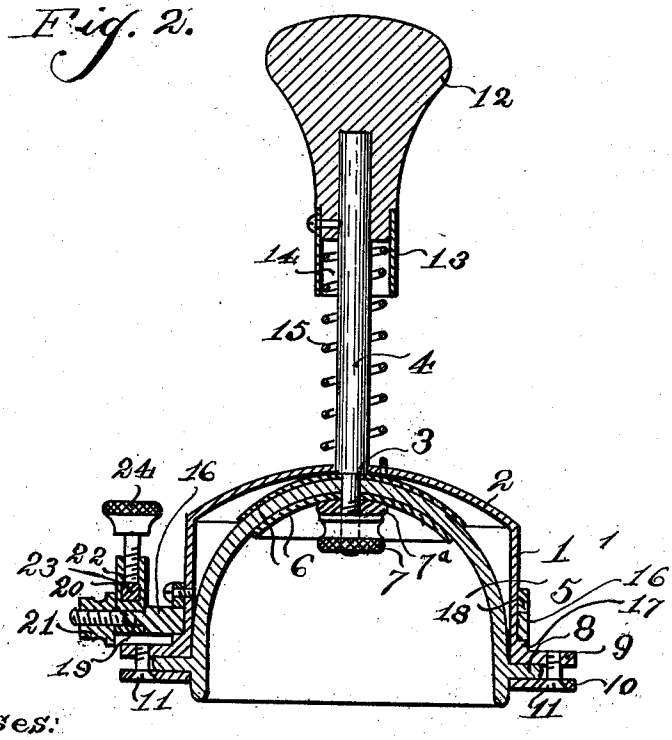


Fig. 2.



Witnesses:

C. F. Wilson

John Snowhook

Inventor:

Harry L. Notter

By Rudolph Kuhn Fox

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HARRY L. NOTTER, OF CHICAGO, ILLINOIS.

GLASS CUTTER AND MARKER.

SPECIFICATION forming part of Letters Patent No. 717,259, dated December 30, 1902.

Application filed February 24, 1902. Serial No. 95,388. (No model.)

To all whom it may concern:

Be it known that I, HARRY L. NOTTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Glass Cutters and Markers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel construction in a glass cutter or marker, the object being to provide a device by means of which the cutting or marking tool may be firmly centered on the pane of glass without marring the latter, and, further, by means of which a circle or an arc thereof of any desired radius may be accurately cut or marked thereon; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a top plan view of an apparatus constructed in accordance with my invention. Fig. 2 is a section of same on the line 2 2 of Fig. 1.

My device comprises a cylinder 1, on which is mounted a spider 2, having a central opening or bearing 3, in which a rod 4 is longitudinally movable. The lower end of said rod 4 is annularly reduced and passes through an inverted rubber cup 5 and carries two concavo-convex washers 6, between which the rubber is clamped to form an air-tight joint. The said lower end of said rod 4 is screw-threaded to receive a nut 7, by means of which said washers 6 are clamped on the cup, a packing-washer 7^a being interposed between the nut and the inner washer 6 to make an air-tight joint. The said cup 5 snugly fits the cylinder 1 at its lower end and is provided with an annular flange 8, which rests against an annular flange 9 on the lower end of said cylinder 1 and is tightly clamped against the latter by means of a ring or washer 10, bearing on the lower face of the flange 8 and connected with the flange 9 by means of the screws 11.

The rod 4 carries a handle or knob 12 at its upper end, and on the lower end of said knob or handle a sleeve 13 is mounted, which is concentric with said rod 4 and forms an annular pocket 14 at the lower end of said knob or handle. A spiral spring 15 is trained around said rod 4, bearing at its upper end against said knob or handle and at its lower end against the said spider 2, thereby normally holding said handle at the upper limit of its movement, whereby the cup 5 is maintained in its expanded position. By placing said device on a pane of glass and depressing the rod 4 the cup 5 will obviously be contracted, thereby forcing out part of the contained air, while at the same time the pressure will cause the lower edge of the cup to spread. By then releasing said rod the natural tendency of the cup to assume its normal shape in addition to the pressure of said spring 15 will form a partial vacuum in said cup, which will hold it firmly in place upon the pane.

A sleeve 16 is revolubly mounted upon the cylinder 1 and rests upon an annular raised shoulder 17 thereon immediately above said flange 9. Said sleeve 16 is further held against longitudinal movement on said cylinder 1 by means of a collar 18, removably mounted on said cylinder between the ends thereof. Said sleeve 16 is provided with an outwardly-extending radial trunnion 19, on which a member 20 is pivotally mounted, said trunnion 19 being threaded at its outer end to receive a nut 21, by means of which the member 20 is held in position thereon. Said member 20 is provided with a sleeve 22, having a rectangular opening extending transversely to said trunnion 19 and through which a graduated rod 23 is adapted to pass, said rod being secured at any desired point therein by means of a set-screw 24. The said rod 23 is provided with an arm 25 at one end, extending at a right angle to said rod. The said arm 25 is also provided with a trunnion 26, adapted to receive a glass-cutter 27, the latter being held in place thereon by means of a thumb-nut 28. The graduated scale on said rod 23 is so made that any mark thereon when flush with that end of the sleeve 22 which is nearest the cutter will indicate the exact distance of the cutting member of the cutter from the center of the instrument,

thereby enabling the operator to readily adjust the instrument to cut or mark an arc or circle of any desired radius.

Glass is frequently cut in odd shapes, and to guide the operator a diagram is laid under the pane. By drawing diameters through the centers of arcs to be cut my device can be readily centered by so placing it as to cause the marks 29 on the flange 9 to register with said diameters.

My device is very simple and efficient.

I claim as my invention—

1. In a device of the kind specified, the combination with a cylinder, and a vacuum device adapted to fix the same to a pane of glass or the like, of a sleeve revolubly mounted on said cylinder, an arm on said sleeve, and a marking device adjustably mounted on said arm.

2. In a device of the kind specified, the combination with a cylinder, and a vacuum device adapted to fix the same to a pane of glass or the like, of a sleeve revolubly mounted on said cylinder, an arm on said sleeve, a member pivotally mounted on said arm, a sleeve on said member adapted to receive a graduated arm, and devices at one end of said arm adapted to receive a cutting or marking instrument.

3. In a device of the kind specified, the combination with a cylinder, a member revolubly mounted thereon, and a cutting or marking device carried by said member, of a device on said cylinder adapted to fix it upon a flat surface, comprising an inverted cup of flexible material, means for contracting the same to force out part of the contained air, said cup being adapted to resume its normal shape by self-contained resiliency, whereby a partial vacuum will be formed therein to hold same upon such flat surface.

4. In a device of the kind specified, the combination with a cylinder, a member revolubly mounted thereon, and a cutting or marking device carried by said member, of devices on said cylinder adapted to fix it upon a flat surface, comprising an inverted cup of flexible material, a plunger secured to the inverted bottom of said cup by means of which said bottom may be depressed to force out part of the air contained in said cup, and a spring engaging said rod and a part of said cylinder adapted to normally hold said rod and said bottom of said cup at the upper limit of their movement, said spring determining the degree of vacuum formed in said cup, to hold the latter firmly upon said flat surface.

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

HARRY L. NOTTER.

Witnesses:

RUDOLPH WM. LOTZ,

JOHN SNOWHOOK.