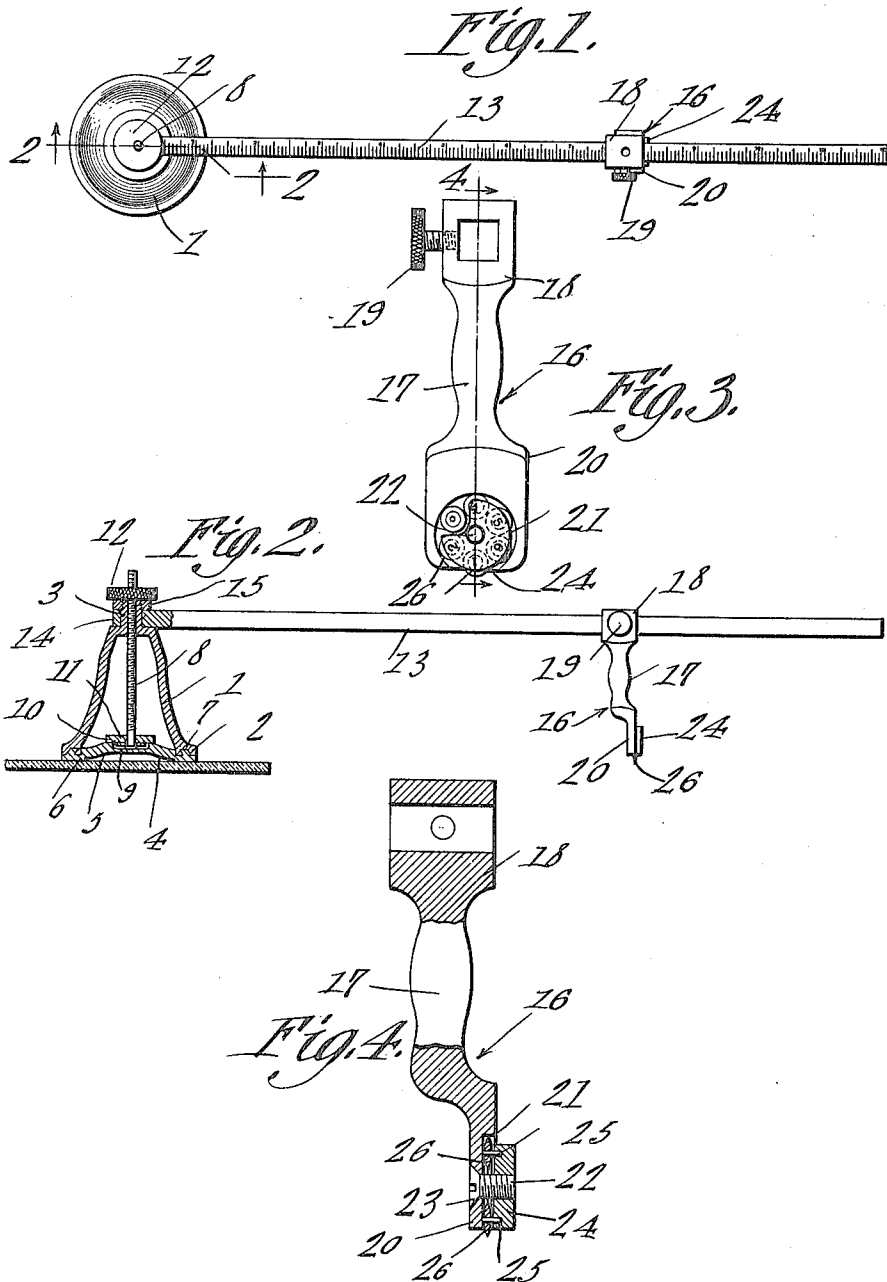


F. KLENSK.
GLASS CUTTER.
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1,141,192.

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Witnesses

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UNITED STATES PATENT OFFICE.

FRANK KLENSK, OF SCRANTON, PENNSYLVANIA.

GLASS-CUTTER.

1,141,192.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK KLENSK, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Glass-Cutter, of which the following is a specification.

The present invention appertains to glass cutters, and aims to provide a novel and improved device of that character.

One of the objects of the invention is the provision of unique means for applying an oscillatory arm carrying the cutter, to a glass or other polished surface, whereby the arm may be swung about a given center and to enable the cutter to scratch off an arcuate or circular line upon the glass or object.

Another object of the invention is to provide a glass cutting device having a plurality of cutters or cutting disks and novel means for holding them in place, whereby the cutters may be readily and effectively brought into active position, one at a time.

Another object of the invention is to provide a glass cutting device embodying a novel assemblage of the component parts, whereby the utility and efficiency of the device is enhanced.

It is also within the scope of the invention to provide a glass cutter of comparatively simple, compact, non-encumbering construction, which is convenient, serviceable, practical and reliable in use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a plan view of the improved cutting device. Fig. 2 is a side elevation thereof, partly in section, the section being taken on the line 2—2 of Fig. 1. Fig. 3 is an enlarged elevation of the slide and cutter disks carried thereby. Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

In carrying out the invention, there is employed a body or stock comprising an inverted cup 1, the lower edge or rim of which is provided with an annular inwardly inclined groove 2 which opens downwardly.

The cup-shaped body or stock 1 is provided with an upper reduced boss 3.

Disposed within the lower mouth of the body or stock 1, is a vacuum cup 4, embodying a disk or diaphragm 5 of rubber or equivalent material, which fits against the rim of the body 1, and which has a marginal or peripheral depending rim 6 to seat snugly upon the glass or polished surface, and to space the body or central portion of the disk or diaphragm 5 away from the surface. The disk or diaphragm 5 is provided adjacent its margin or periphery with an annular inwardly inclined rib 7 which engages snugly within the groove 2 of the body 1, and whereby the marginal portion of the disk 5 will be so secured to the rim of the body 1 as to resist the inward and upward tension to which the vacuum cup is subjected in use, and whereby the vacuum cup will not be liable to tear loose from the body 1 when the central portion of the vacuum cup is raised within the body.

As a means for raising the central portion of the vacuum cup, a screw 8 is slidable through the boss or reduced portion 3 of the body 1, and the lower end of the screw 8 is secured to the central portion of the vacuum cup. To this end, the central portion of the disk 5 is provided with an upper recess 9 within which a washer or metallic disk 10 is disposed, and the lower end of the screw 8 is riveted or swiveled through the washer 10. A rubber or similar disk 11 is cemented or otherwise secured to the central portion of the disk 5 over the recess 9 to retain the washer 10 within the said recess, and whereby the lower end of the screw 8 will be firmly secured to or embedded within the central portion of the vacuum cup 4. A nut 12 is threaded upon the upper or protruding end portion of the screw 8, and bears upon the boss or neck 3, whereby the nut 12 may be rotated in the proper direction for lifting or raising the screw 8 to raise the central portion of the vacuum within the body 1.

A radial arm 13, in the form of a steel or similar bar, is provided at one end with an eye 14 journaled upon the boss 3 and seating upon the shoulder of the body 1 formed by the boss, whereby the arm 13 may swing around the axis of the body 1, it being noted that the body 1, boss 3, and screw 8 are coaxial. A nut 15 is threaded upon the upper

end of the boss 3 and holds the eye or bearing 14 snugly in place upon the boss, and the nut 12 bears upon the nut 15 as well as the boss 3. A slide 16 is carried by the arm 13, and embodies an upright shank 17 which is provided at its upper end with a head 19 having a square or non-circular bore there-through receiving the arm 13 which is of square or non-circular cross section, to prevent the shank 17 from swinging out of true position. The head 18 carries a set screw 19 for clamping or binding the slide 16 at any position to which it is adjusted upon the arm 13, it being preferable to graduate the arm 13 to facilitate the quick and accurate adjustment of the slide. The lower end portion of the shank 17 which carries the cutter disks, is preferably offset away from the body 1, as at 20, and the outer side of the offset portion 20 is provided with a circular depression 21, which extends to the lower end of the portion 20. A screw 22 is engaged through an aperture provided in the portion 20 centrally of the depression 21, and is provided with a countersunk head 23 resting against that side of the portion 20 remote from the depression 21. A disk-like nut 24 is threaded upon the screw 22 adjacent the depression 21, and is provided with an annular series of pins or pintles 25 projecting toward the portion 20 and into the depression 21. A rotatable cutter disk 26 is journaled upon each of the pintles 25 so as to lie between the nut 24 and bottom of the depression 21.

Since the present device is provided with a plurality of cutter disks, which may be brought into active position, one at a time, as soon as one cutter disk becomes worn out, another may replace it. Thus, by loosening the screw 22, the nut 24 may be rotated to bring another cutter disk 26 into operative or lowermost position so that it projects downwardly from between the nut 24 and portion 20 of the slide, and then by tightening the screw 22, the pintles 25 will be clamped forcibly against the bottom of the depression 21 to hold the parts in place, and to allow the active cutter disk to rotate freely. The cutter disks preferably lie in the vertical plane of the outer end of the head 18, whereby the outer end of the head 18 will serve to indicate upon the graduations of the arm 13, the distance of the active cutter disk from the axis or center of the body 1. This enables the slide 16 to be accurately set to scratch or cut the glass upon a given arc.

In applying the present device to the glass

or other polished surface, supposing the nut 12 to be unscrewed, to allow the screw 8 to move downwardly, whereby the vacuum cup will assume a normal position, the body 1 is placed against the glass or other surface at the point desired so that the rim 6 of the vacuum cup bears snugly against the surface. Then, by pressing down upon the body to cause the rim of the vacuum cup to snugly bear against the surface, and by screwing the nut 12 properly to draw the screw 8 away from the glass or other surface, the central portion of the vacuum cup will be pulled upwardly within the body 1, to thereby create a vacuum between the vacuum cup and glass or other surface, and which will cause the vacuum cup to adhere with tenacity to the glass or polished surface, and whereupon the arm 13 may be swung upon the pivot formed by the boss 3 for enabling the cutter disk to scratch or cut an arcuate or circular line upon the glass or other object. By unscrewing the nut 12, the vacuum cup will be relieved, and will return to normal position so as to be readily disengaged from the glass or polished surface.

The present device is adapted particularly for use by glaziers, although it may be employed by other artisans for cutting or making arcuate or circular lines upon various polished surfaces, for diverse purposes.

Having thus described the invention, what is claimed as new is:—

1. In a device of the character described, a cup-shaped body, the rim of the body having an inwardly inclined annular groove, a vacuum cup having an inwardly inclined rib engaging the said groove, means carried by the body for drawing the vacuum cup thereinto, an arm pivoted to the body to swing around the axis thereof, and an implement carried by the arm.

2. In a device of the character described, a cup-shaped body, a vacuum cup attached to the rim thereof, the body having a reduced boss remote from the vacuum cup, a screw slidable through the boss and connected at one end to the central portion of the vacuum cup, a nut threaded upon the screw and bearing against the boss, an arm having a bearing journaled upon the boss, and an implement carried by the arm.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK KLENSK.

Witnesses:

FRANK PLUTNIK,
THADDEUS KLENSK.