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2,254,162

GLASS CUTTING DEVICE

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Fig. 1

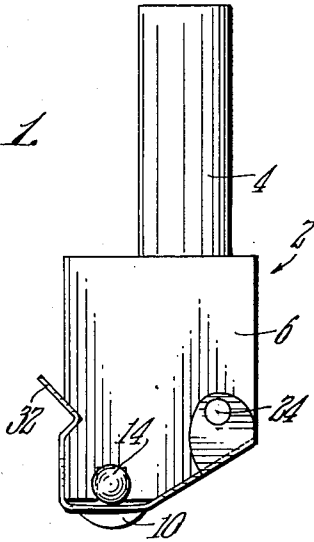


Fig. 4

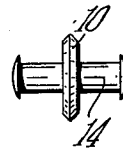


Fig. 2

Fig. 3

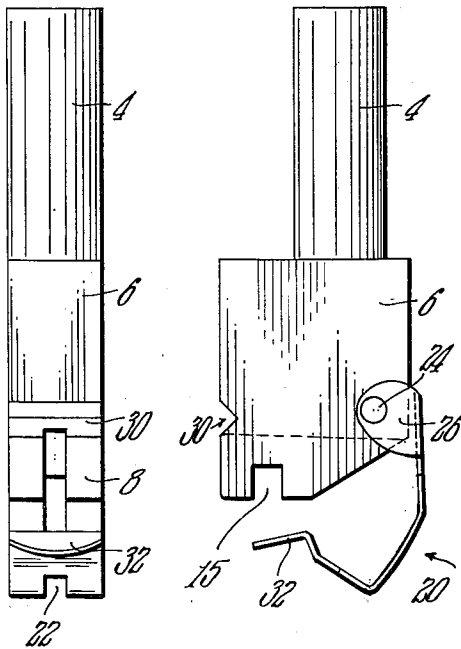
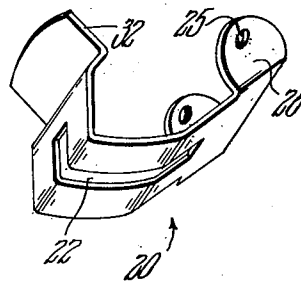


Fig. 5



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GLASS CUTTING DEVICE

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2 Claims. (Cl. 49—52)

This invention relates to improvements in glass-cutting devices and is directed more particularly to a glass-cutting device having a removable glass-cutting wheel.

One of the principal objects of this invention is the provision of a glass-cutting device including what I call a head member and having removably associated therewith a cutting wheel in such a way that the same is properly held in working position when desired but at the same time is removable for replacement. As will be clear, the wheel and axle may be removed as a unit or merely the wheel may be replaced, all without the aid of special tools.

In glass-cutting apparatus heretofore known, it has been impossible or at least difficult to remove the wheel and even when the wheels have been removable they have not been properly held in place when desired. Further, it has usually been necessary to resort to tools to effect removal of the wheel from the part which supports it.

While the features of the invention may well be incorporated in glass-cutting devices which are held in and manipulated by the hand, I have shown and will describe the invention with reference to a glass-cutting machine wherein there is a holder or post which carries the wheel, which member may or may not be removed from the machine when the wheel is to be changed. Since removal of the head may not only be inconvenient but requires time and slows up production, I have provided a construction which eliminates the need thereof, however, yet facilitates easy removal of the wheel, and also its axle if desired, from the part which holds it or them without removing the part from the machine. Thus by obviating the necessity of removing the wheel carrier from the machine, the machine is not stopped for any great length of time and production is not interfered with.

The novel features of the invention may take various forms without departing from the spirit and scope thereof and therefore the following description is to be taken as a disclosure rather than as a limitation as to the scope of the invention. In the drawing:

Fig. 1 is a side elevational view of a glass-cutting device embodying the novel features of the invention;

Fig. 2 is a front elevational view of the same;

Fig. 3 is a view similar to Fig. 1 with the parts in a different relation as will be described;

Fig. 4 is a front elevational view of certain of the parts shown in Figs. 1, 2 and 3; and

Fig. 5 is a perspective view showing what I call the clamping member of the device of the invention.

Referring now to the drawing more in detail, the invention will be fully described.

In Figs. 1 and 2 there is shown generally at 2 what is usually referred to as a carrier member for a glass-cutting wheel or it may be called a head or post member. This will have a stem of a shape as indicated by 4 or of any other desired shape or size but it is adapted to be held by a part of a glass-cutting machine or the like.

The lower part of the head 6 usually is somewhat enlarged, with respect to the stem, and, as shown, is cut away or slotted to provide spaced cheeks indicated by 8. The slot therebetween is for receiving a glass-cutting wheel indicated by 10 in Figs. 1 and 4.

The cheeks 8 are provided with an axle-slot 15 which is adapted to receive an axle 14 for the wheel. As will be seen the slot 15 extends upwardly from the lower edges of the head's cheeks so that in ordinary course, the unit might tend to fall from the post which is disposed vertically in the machine.

According to Fig. 4, the ends of axle 14 project beyond the outer sides of the wheel and may also extend beyond the cheeks 8. This will tend to facilitate the ready and easy removal of the axle and wheel from its carrier by means of the fingers but the wheel and axle may be formed as unit such as shown or otherwise.

For instance, according to what is shown, the ends of the axle may be embraced between the thumb and forefinger of the hand and the axle and wheel thereby withdrawn from the slot, special tools being unnecessary and it being unnecessary to remove the carrier from the machine in which it is used. Thereby a saving in time is effected, since the machine need not be stopped for any great length of time and the carrier or post is not disturbed.

However, it is desirable that some means be provided to prevent accidental separation of wheel and/or axle or both from the carrier. To this end I provide a clip member indicated generally by 20 which is movable into and out of a position where it releasably holds the wheel in position.

This member may vary considerable in form but preferably consists of a strip of metal cut to have a slot 22 through which the wheel may extend when the clip is in the closed position shown in Fig. 1. The same may be secured to the head in various ways but preferably is pivoted thereto as by a pin 24 extending through holes 25 in side

parts or ears 26 thereof and through the head part.

The retainer member 20 is preferably formed of somewhat spring-like material and is so arranged as to more or less snap into locking or closed position. There may be a V-shaped groove 30 in the forward side of the head and the forward end portion 32 of the clip may be formed to extend thereinto when the parts are in the closed or wheel-holding position shown in Fig. 1.

As will be appreciated, the clip member may be readily released from its holding position by manually engaging the part 32 and pressing thereon so as to cause it to spring out of groove 30. The clip may then swing down on its pivot to permit the wheel to be removed.

Manifestly the specific details of construction may be considerably varied from those herein shown and described without involving any departure from the principle of the invention or sacrificing any of the advantages inherent therein. While I have described my invention in this specification in great detail and particularly with respect to the present preferred form thereof, it is not desired to be limited thereto since many changes and modifications may be made therein without departing from the spirit and scope of the invention.

The invention may be embodied in other specific forms without departing from the essential characteristics thereof. Hence, the present embodiments are therefore to be considered in all respects merely as being illustrative and not as being restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all modifications and variations as fall within the meaning and purview and range of equivalency of the appended claims are therefore intended to be embraced therein.

What it is desired to claim and secure by Letters Patent of the United States is:

1. A glass cutter of the class described comprising in combination, a head member rectangular in cross section having a stem extending from one face thereof and provided with a cutter wheel slot and transversely disposed axle slots extending into the face of said member opposite said first mentioned face and adjacent one corner of

said member, an axle in said slots having a wheel thereon positioned in the cutter wheel slot, a clip member pivoted at one end to a face of said head intermediate the two first mentioned faces and adjacent another corner thereof for swinging movements between closed and open positions on an axis parallel to that of the axle in said axle slot and having a part overlying the second mentioned face and another part overlying the first mentioned corner and the face adjacent to and at right angles to the second mentioned face forming said corner when said clip member is in closed position, the part of the clip overlying the second mentioned face being provided with a slot for receiving the periphery of said cutter wheel, and means for releasably securing said clip in closed position associated with the clip and head members.

2. A glass cutter of the class described comprising in combination, a head member rectangular in cross section having a stem extending from one face thereof and provided with a cutter wheel slot and transversely disposed axle slots extending into the face of said member opposite said first mentioned face and adjacent one corner of said member, an axle in said slots having a wheel thereon positioned in the cutter wheel slot, a clip member pivoted at one end to a face of said head intermediate the two first mentioned faces and adjacent another corner thereof for swinging movements between closed and open positions on an axis parallel to that of the axle in said axle slot and having a part overlying the second mentioned face and another part overlying the first mentioned corner and the face adjacent to and at right angles to the second mentioned face forming said corner when said clip member is in closed position, the part of the clip overlying the second mentioned face being provided with a slot for receiving the periphery of said cutter wheel, and means for releasably securing said clip in closed position associated with the clip and head members, including a notch provided in that said face of the head member which is adjacent to and at right angles to the second-mentioned face and a projection provided on said other part of the clip member receivable in said notch.

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