United States Patent

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Continuation of application Ser. No. 640,285, May 22, 1967, now abandoned.

[54] **RESILIENT CUTTER**
2 Claims, 3 Drawing Figs.

[52] **U.S. Cl.** **30/164.95,** 83/12
[51] **Int. Cl.** **B26b 3/00,** B26d 3/08
[50] **Field of Search** 30/164.95, 164.9; 83/6.8, 12; 33/18; 225/96.5

[56] **References Cited**

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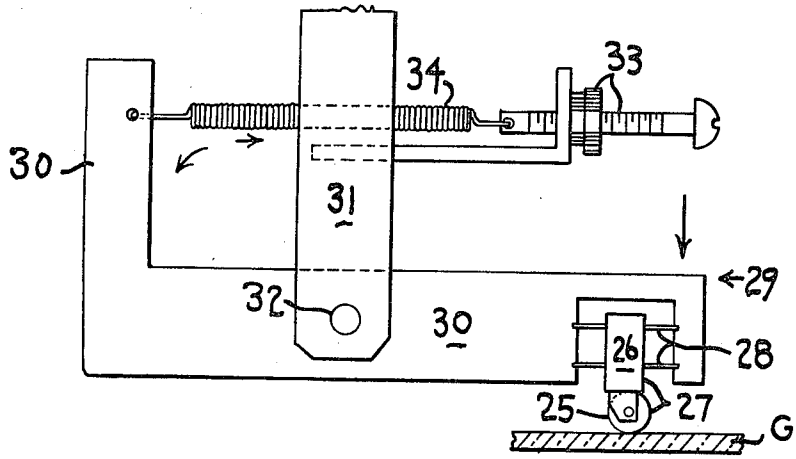
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ABSTRACT: A scoring device with a resilient connection between a support and a scoring head to provide a uniform scoring pressure on a glass surface resulting in a uniform severing line.



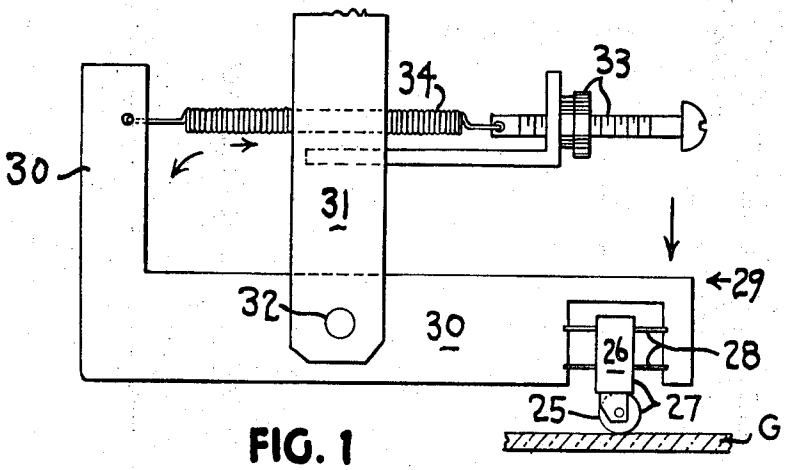


FIG. 1

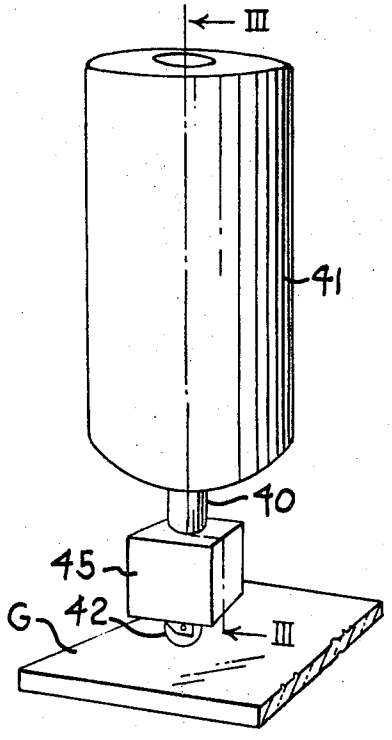


FIG. 2

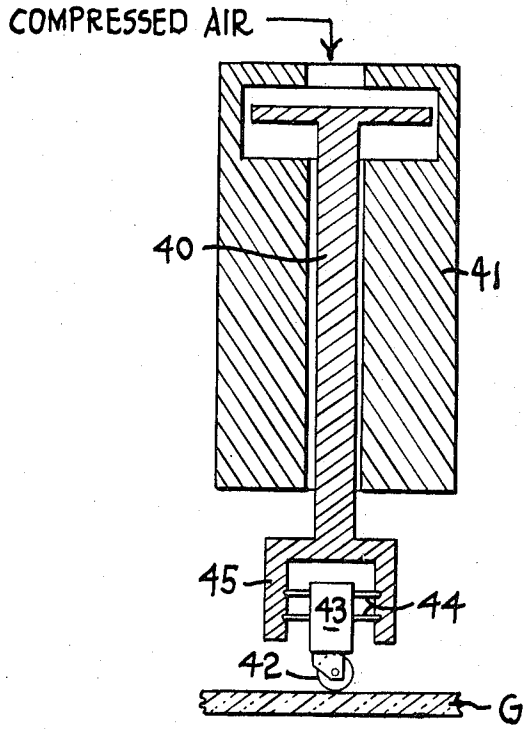


FIG. 3

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RESILIENT CUTTER

This application is a continuation of application Ser. No. 640,285 now abandoned, filed May 22, 1967.

This invention is a flexible mounting for a scoring device for use with a glass scoring apparatus used in the severing of ribbons of glass into smaller sized sheets. The scoring device exerts a uniform pressure on the glass as it passes beneath the device.

A clear explanation of the invention may be gained by referring to the drawing wherein:

FIG. 1 is one embodiment of the device for exerting uniform scoring pressure on a glass surface;

FIG. 2 is a perspective view of another embodiment of the device for exerting uniform scoring pressure on a glass surface;

FIG. 3 is a cross section of the apparatus of FIG. 2.

FIG. 1 shows a cutting device 25 mounted on a head block 26, which together form a pillar post 27. A resilient material 28, such as a leaf spring, acts as a positioning device for pillar post 27. The leaf spring is positioned at an end thereof to a base or mounting 29. The entire assembly is positioned on an L-shaped arm 30 which is pivotally mounted to a rigid member 31 about pivot 32. One arm of the L-shaped mounting is held in a tensioned position by a spring or other tensioning means 34. An adjusting mechanism 33 provides for the tensioning of the spring.

FIG. 2 shows another means of mounting a cutting tool on a pillar post. A plunger 40 is inserted through a block 41 and is movable relative to the glass surface. A scoring device 42 is mounted to a pillar post 43 (see FIG. 3). Resilient mounting means 44 support the pillar post and hold it in position to the movable base 45.

FIG. 3 is a cross section of the apparatus of FIG. 2. The resilient means 44 may be a strip of spring steel or any other material having sufficient resiliency and flexibility yet strong enough to perform the required operation. The resilient

mounting 44 is two flexible strips mounted in parallel relationship across the base opening 45. The resilient action of the mounting limits the cutting force applied to the glass.

FIG. 3 shows a flexible strip mounting used in the end of an air controlled piston. Air under pressure is introduced into a chamber of cylinder 41, and applies a uniform pressure to piston 40 and, hence, to scoring device 42.

Irregularity in cutting characteristics of the glass, such as "-hard spots," result in defective edges along the score line. The flexible mounting of the scoring device permits the adjustment of pressure applied to the glass when an irregularity is encountered during the scoring operation.

I claim:

1. Apparatus for scoring glass sheets comprising:
   a. a base having an opening therein;
   b. resilient means comprising at least one flexible strip fastened to either side of said base and spanning said opening;
   c. a pillar post mounted to said resilient means, said pillar post having a scoring device attached thereto.

2. Apparatus for exerting a uniform pressure on a scoring device held against a moving ribbon of glass comprising:
   a. a block having a hollowed out portion forming a cylinder;
   b. a movable piston positioned within said hollowed block and movable relative to the block;
   c. a scoring device resiliently fastened to said piston at one end thereof;
   d. means for supplying air under pressure to the hollowed portion of said block, the air being trapped between the cylinder and said piston so that the pressure of the air moves the piston relative to the block causing the scoring device to exert a uniform pressure against said glass ribbon, one end of said cylinder forming a base having an opening therein.