No. 683,023. Patented Sept. 24, 1901.

T. J. DONOVAN.

GLASS CUTTING APPARATUS.

(Application filed Apr. 12, 1901.)

(No Model.)

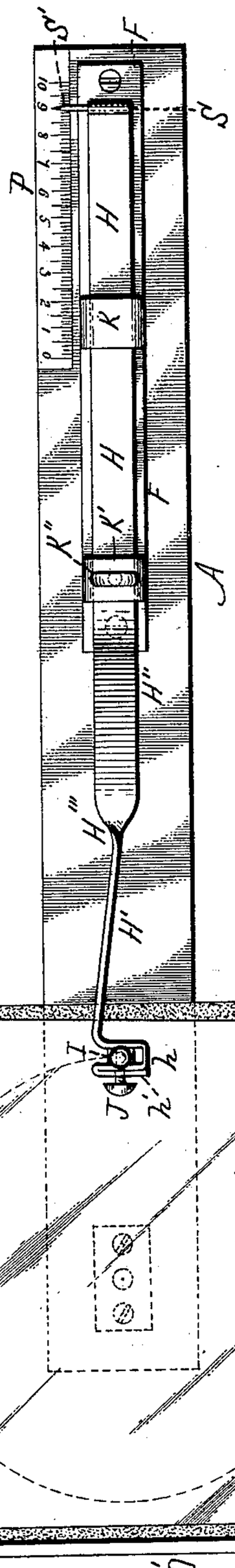

Fig. 1.

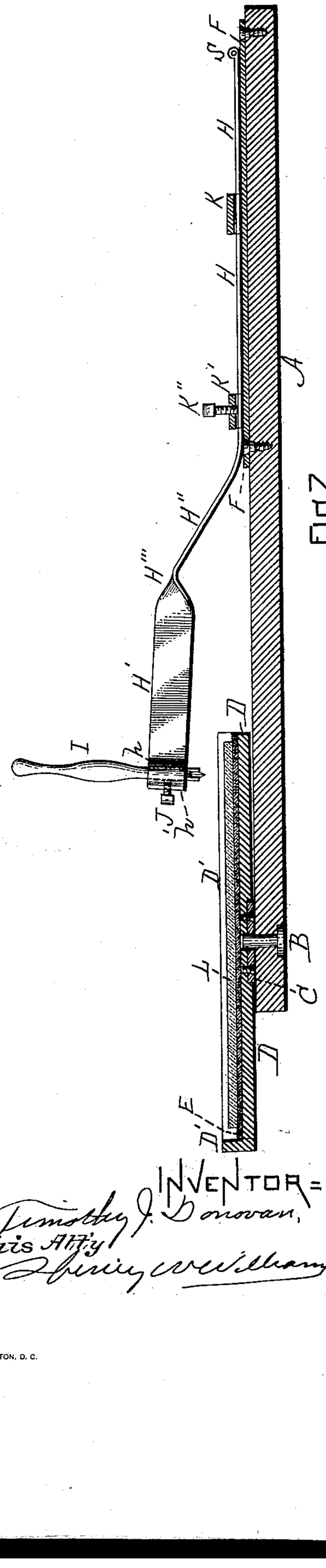

Fig. 2.

WITNESSES:

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GLASS-CUTTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 683,023, dated September 24, 1901.

Application filed April 12, 1901. Serial No. 55,488. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY J. DONOVAN, a citizen of the United States, residing in Milton, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Glass-Cutting Apparatus, of which the following is a specification.

This invention or improvement relates to apparatus for cutting out round pieces of glass from a flat sheet or plate. In the construction of street-cars many circular glass lights are employed, and in the manufacture of clocks and some other articles round plates or windows of glass are used. It was principally for the purpose of enabling these circular glass lights and windows to be cut out quickly, and hence to be furnished at as low a cost as possible, that this device was invented.

The nature of the invention is fully described below, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved device, showing a piece of glass in position for having a circular piece cut out from it. Fig. 2 is a view partly in central longitudinal vertical section and partly in elevation.

Similar letters of reference indicate corresponding parts.

A represents a base, of wood or other suitable material, and made, preferably, long and narrow, as shown. Near one end of this base a vertical pivot B is secured, said pivot extending from the base up through a small flat plate C, which is secured centrally to the under side of the flat bottom D of a holder, preferably rectangular in shape and comprising said bottom and the three flanges D′, extending up vertically from three sides or edges of the bottom, the fourth edge being left open. Secured to the upper surface of the bottom D by cement or other suitable means is a sheet E, of leather, fabric, or other suitable material, which has or can be provided with a frictional upper surface. Secured to the base A, near the opposite end from the pivoted holder, is a narrow longitudinally-arranged plate F, preferably of metal. This plate supports a spring-holder, which comprises a flat bar H, which rests directly on the plate, a raised portion H′ H″, which is formed up from the portion H, a tool-holder, and a pointer-holder, as below described. The portion H is adapted to slide longitudinally on the plate F by means of the metallic straps or guides K and K′, said guides being secured to the plate F or base A and extending over the portion H. In order that the bar H may be locked in position, the guide K′ is provided with a set-screw K″. The portion H″ extends up at an obtuse angle from the portion H, and the portion H″ is bent at H‴ into the portion H′, which is in a nearly horizontal position and with its edges on a vertical plane, and its forward end is bent around into the rectangular holder *h*, thus leaving a vertical passage having parallel sides for the reception of an ordinary glass-cutting tool I, the lower portion of which is usually formed with flat sides. Preferably the extreme end of the portion H′ is formed with a fold *h*′, and a set-screw J extends through the two thicknesses of metal at that point and holds the tool adjustably in position. The rear end of the bar H is formed over into a fold or socket S, from which a horizontal pointer S′ extends over a scale P, secured to the upper surface of the base A.

When a round piece of glass of a given diameter—say nine inches—is desired, a plate of glass L of any suitable shape is laid on the upper roughened surface of the soft piece of leather or fabric E. The bar H is then moved until the indicator S′ registers with the figure "9" on the scale, and the tool I, which is held fast in the holder *h*, is pressed down upon the glass plate. The plate-holder D D′ is then rotated, the glass being prevented by a gentle pressure of the hand from sliding on the frictional surface E until the tool has marked or cut a complete circle, when the tool is released and the portion H′ is allowed to fly up into the position indicated in Fig. 2. The plate-holder may be rotated in such a position as to allow the plate to be slid out at its open edge.

It will readily be seen that circular lights can very quickly be cut out of a glass plate by means of this contrivance, especially when a large number of the same diameter are ordered.

Preferably the pivot B is not headed at its

upper end, so that the plate-holder can be readily lifted off and another substituted, if desired.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a glass-cutting apparatus of the character described, a base; the glass-plate holder D pivotally mounted on said base; the spring tool-holder comprising the flat portion H, and the raised portions H′, H″, the portion H′ being formed into the holder *h* for the glass-cutting tool; and means for securing the portion H to the base and allowing it to slide thereon toward and from the glass-plate holder, substantially as set forth.

2. In a glass-cutting apparatus of the character described, a base; the glass-plate holder D pivotally mounted on said base and provided with the soft frictional surface E; the spring tool-holder comprising the flat portion H, spring-raised portions H′, H″ and holder *h;* the guides K, K′; the pointer S′ extending horizontally from the spring tool-holder; and a scale P on said base, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

TIMOTHY J. DONOVAN.

Witnesses:
HENRY W. WILLIAMS,
A. N. BONNEY.