(No Model.)

S. G. MONCE.

APPARATUS FOR CUTTING GLASS.

No. 453,867. Patented June 9, 1891.

Fig. 1

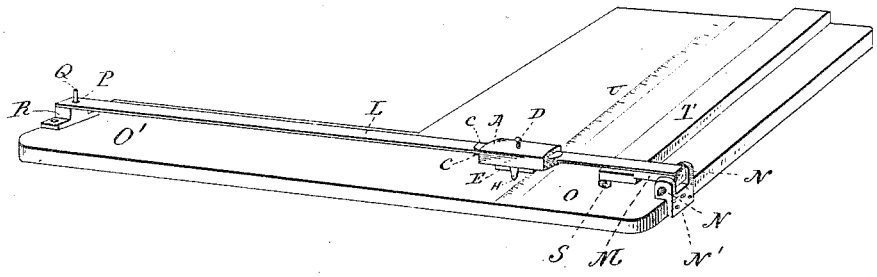
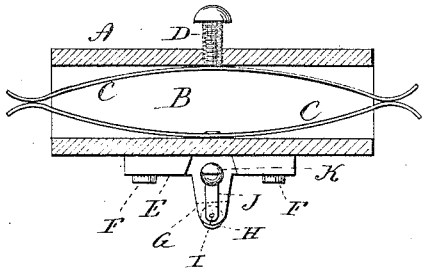


Fig. 2



Witnesses
Lillian D. Kelley.
Frank W. Beck

Samuel G. Monce
Inventor
by attys Earle & Seymour

UNITED STATES PATENT OFFICE.

SAMUEL G. MONCE, OF BRISTOL, CONNECTICUT.

APPARATUS FOR CUTTING GLASS.

SPECIFICATION forming part of Letters Patent No. 453,867, dated June 9, 1891.

Application filed June 30, 1890. Serial No. 357,224. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL G. MONCE, of Bristol, in the county of Hartford and State of Connecticut, have invented a new Improvement in Apparatus for Cutting Glass; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of one form which my device may assume; Fig. 2, an enlarged sectional view of the carrier thereof.

My invention relates to an improvement in devices for cutting glass, the object being to produce a simple and effective device, primarily designed to furnish cheap and convenient means for an unskilled person to cut glass successfully in any desired angular shape and size; but also applicable for use in cutting up large sheets of glass commercially.

With these ends in view my invention consists in the combination, with a movable straight-edge, of a carrier movably connected therewith so as to be guided in longitudinal movement thereby, and a wheel-cutter mounted in the carrier in line with the straight-edge.

My invention further consists in a straight-edge and carrier of specific construction; in means for movably mounting the said edge; in an oil-cup for the cutter to rest in when the device is not in use, and in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

As herein shown, the carrier consists of an oblong metallic box A, having a square longitudinal opening B, containing two longitudinally-bowed springs C C, adjusted in tension by a set-screw D, located in the upper face of the box. A bracket E, secured to the lower face of the box by screws F F, has its lower end slotted, as at G, in line with the length of the box, to receive the wheel-cutter H, which is mounted so as to rotate freely upon a pin I, made removable for exchanging the cutters and held in place by an upright spring-finger J, secured at its upper end to the bracket by a screw K. The said carrier is connected with a straight-edge consisting, as herein shown, of a flexible strip L of sheet metal, which passes longitudinally through the box and between the springs therein, which grip it, the strip being sufficiently wide to preclude lateral play of the box upon it. Under this construction the wheel-cutter will extend in line with the straight-edge. A block M, secured to one end of the strip, is adapted to be hung between two centers N N, mounted in a rigid head N′, secured to one edge of the table O, upon which the glass is laid for cutting. The other end of the strip has a perforation P formed in it to adapt it to be engaged with an upright pin Q, mounted in a supporting-head R, rigidly secured to the outer end of an arm O′, forming an extension of the table.

An oil-cup S, located in front of the head N and containing a small piece of sponge or felt, is provided to receive the wheel-cutter when not in use, at which time the carrier is moved up against the said head, whereby the wheel is always kept well lubricated.

A fixed straight-edge consisting of a strip T of wood, secured to the table near the outer edge thereof and at a right angle to the pivotal straight-edge L, when the same is in its operative position, is provided for setting and guiding the glass under the said pivotal straight-edge. A graduated scale *a*, drawn upon the table within and in line with the fixed straight-edge, facilitates the placing of the glass in right position for cutting it up into the required sizes.

Under the described construction the carrier is freely movable throughout the length of the flexible strip forming the movable straight-edge and the cutter permitted to yield vertically but not laterally, whereby being free to move in one direction it will not crowd and injure its edge.

When in use, the perforated end of the movable edge is always supported by its engagement with the pin in the fixed supporting-head. This engagement is readily made and as readily broken for lifting the edge, either for removing the carrier from it or for clearing the same entirely from the table.

Although it requires considerable practice to manipulate a wheel-cutter or a diamond when mounted in the ordinary handle, with

my improved device glass may be accurately cut by an unskilled person who has little more to do than to use care in rightly placing it upon the table.

In carrying out my invention the carrier need not necessarily assume the form herein shown, nor need it be connected, as shown, with the movable straight-edge; nor am I confined to the particular mode shown of mounting the movable straight-edge. In large machines, designed for cutting glass on a large scale, the movable straight-edge may have portable supports, and, if desired, two or more movable straight-edges may be arranged in gangs and even at right angles to each other. I would therefore have it understood that I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention. I am aware, however, that it is old to secure a diamond-point to a head connected with a rigid bar, over which the head may be longitudinally moved. I am also aware that a movable diamond-point controlled in the nature of its contact with the glass by a spring is old. I therefore claim neither of these features, broadly.

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

1. The combination of a movable and flexible straight-edge, a rigid head to which one of its ends is pivotally secured, a rigid head with which its other head is detachably connected for being supported in operative position, a carrier movably connected with the edge, so as to be guided in longitudinal movement thereby, and a wheel-cutter mounted in the carrier in line with the straight-edge, substantially as described.

2. The combination, with a movable straight-edge, of a carrier connected with the edge, so as to be guided in longitudinal movement thereby, a wheel-cutter mounted in the carrier in line with the edge, and an oil-cup for the cutter to rest in when the device is not in use, substantially as described.

3. The combination, with a table provided with a graduated scale and a fixed straight-edge, of a movable and flexible straight-edge located at a right angle to the said fixed straight-edge, a fixed head to which one end of the movable straight-edge is pivoted, a fixed head to which the other end of the movable edge is detachably connected, a carrier mounted upon the movable straight-edge, so as to be guided in longitudinal movement thereby, and a wheel-cutter mounted in the carrier in line with the said movable edge, substantialy as described.

SAMUEL G. MONCE.

Witnesses:
WM. L. BARRETT,
GROVE E. CASTLE.