J. M. KURTZ.

Glazier's Square and Rule.

No. 208,104. Patented Sept. 17, 1878.

Fig. 1

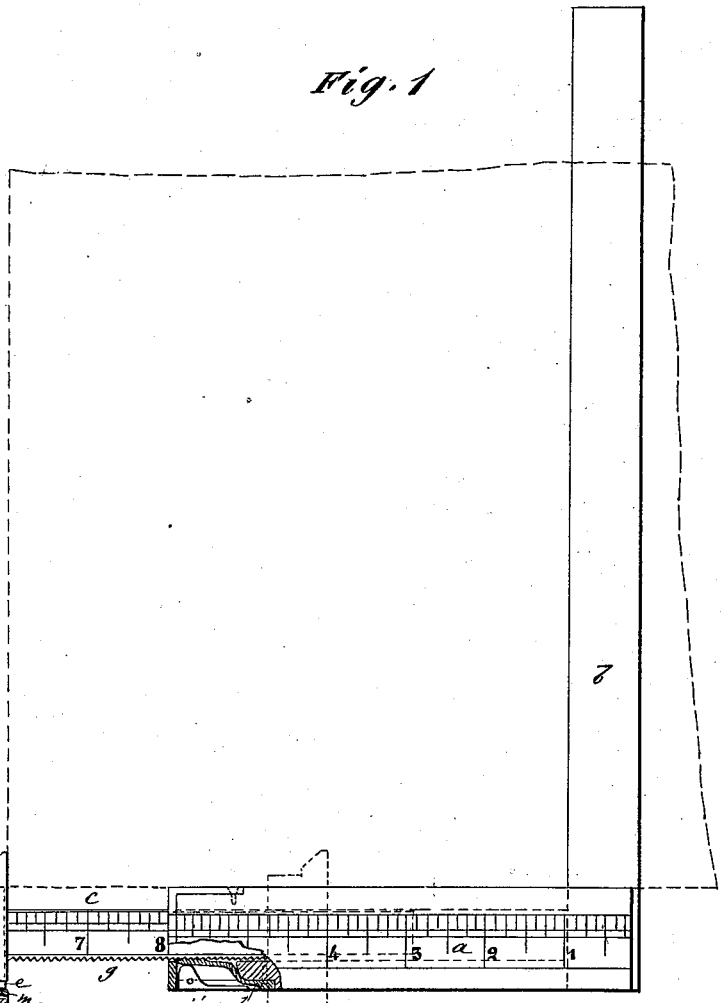


Fig. 3

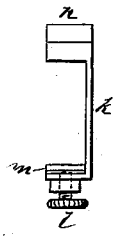
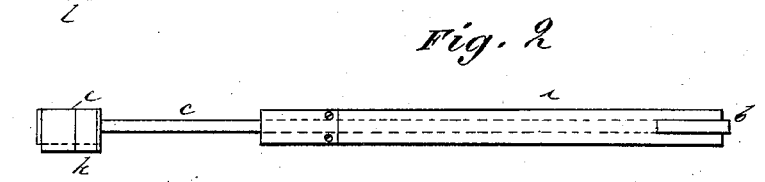
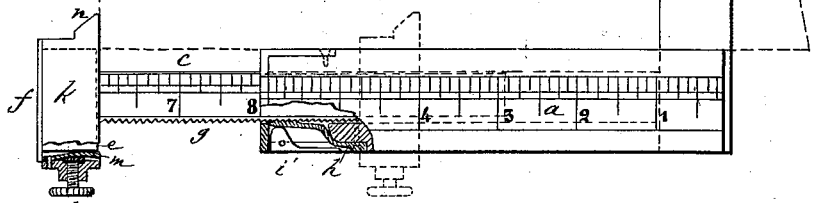


Fig. 2





WITNESSES:

C. Neverra

C. Sedgwick

INVENTOR:

J. M. Kurtz

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH M. KURTZ, OF WESTON, MISSOURI.

IMPROVEMENT IN GLAZIERS' SQUARE AND RULE.

Specification forming part of Letters Patent No. **208,104**, dated September 17, 1878; application filed August 2, 1878.

To all whom it may concern:

Be it known that I, JOSEPH M. KURTZ, of Weston, in the county of Platte and State of Missouri, have invented a new and Improved Glaziers' Square and Rule, of which the following is a specification:

The object of my invention is to furnish a square for use in cutting window and picture glass to any desired size, which square shall be compact in form and capable of extension, and shall have a movable guide and stop for the edge of the glass, to prevent it from slipping.

My invention consists in a rule having inches and parts of inches marked upon it, and provided with an arm at a right angle, to form a square. The rule or base has an extension-slide at one end, which may be clamped in position, and it is also provided with a movable guide, which may be clamped at any point on the rule, and forms a stop for the glass, while the arm of the square serves as a straight edge along which the cut is made.

In the drawing, Figure 1 is a plan view of my improved square, as laid upon a pane of glass and set for cutting the same eight inches wide, the glass being shown in dotted lines. Fig. 2 is an edge view of the square, and Fig. 3 is a side view of the guide and stop.

Similar letters of reference indicate corresponding parts.

The square is to be made of wood or metal. It consists of a rule or base, *a*, and a right-angled arm, *b*, extending from one end. The arm *b* is of thinner material than the rule *a*, and is mortised into the rule to permit the edge of *a* to come squarely against the glass when the arm *b* is laid on the same.

Upon one side of the rule *a* inches and parts of inches are marked in permanent lines, and numbered from 1 upward, commencing next to the arm *b*. The first inch is a full sixteenth short, to allow for the cutting-diamond, which cuts that distance outside of the straight edge.

c is an extension-slide that fits into a longitudinal mortise in rule *a*, at the end opposite to the arm *b*, and may be slid easily in and out of the mortise. It is provided with a head, *e*, corresponding with *a* in thickness, and coming flush with the same at the edges.

f is a narrow plate on the end of head *e*, and projecting slightly at the edges of the head.

The surface of slide *c* is marked in inches similar to the rule *a*, commencing, next to head *e*, with the number next above the last one on the rule.

g is a serrated metal plate secured upon one edge of slide *c*. *h* is a spring secured in a mortise in the edge of rule *a* adjacent to the serrated edge *g*, and having its free end serrated on the side toward *g*. *i* is a cam-lever pivoted in the said mortise, in such position that when it is turned down flush with rule *a* the cam of *i* will bind the spring *h* against the serrated edge *g*, and hold the slide *c* firmly. By raising the lever *i* the spring is relieved, and the slide can be adjusted.

k is the guide, which is adapted for application to the rule *a* or to the head *e* of the slide. It consists of a plate with flanged ends to fit over the edges of the rule *a*, and it is clamped to the rule by a thumb-screw, *l*, in the flange which comes upon the outer edge of rule *a*, and which screw *l* binds a spring, *m*, against the edge of the rule. It may also be clamped to the head *e* in a similar manner.

n is a stop projecting from guide *k*, at the inner edge of rule *a*. This stop may be formed with or attached to *k*.

If the glass is to be cut four inches, the guide *k* will be clamped at the four-inch mark on *a*. The square is then to be laid on the glass, with the edge of rule *a* against one edge of the glass, and the stop *n* against the adjacent edge of the glass. The outer edge of arm *b* will then serve as the line to cut by.

When the glass is to be cut of a length that requires the use of the slide, the latter is to be drawn out and clamped, and the guide *k* secured upon head *e*, as seen in Fig. 1. In this case the end of the rule *a* will be the guide for the number of inches, the guide *k* and stop *n* serving only as a stop for the end of the glass. Guide *k* is just the width of the head *e*, and when placed against the projecting ends

of plate *f*, and clamped, stop *n* comes to the proper place for the edge of the glass.

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

1. The herein-described glaziers' rule, provided with an adjustable notated slide and a guide, *h k l m*, secured on head *e*, against projecting ends of plate *f*, said guide having a stop, *n*, as and for the purpose specified.

2. The combination, with slide *c*, of the serrated plate *g*, end-serrated spring *h*, and the cam-lever *i*, as and for the purpose set forth.

JOSEPH M. KURTZ.

Witnesses:
LOUIS P. ILKENHAUS,
MARKUS EGGERT.