

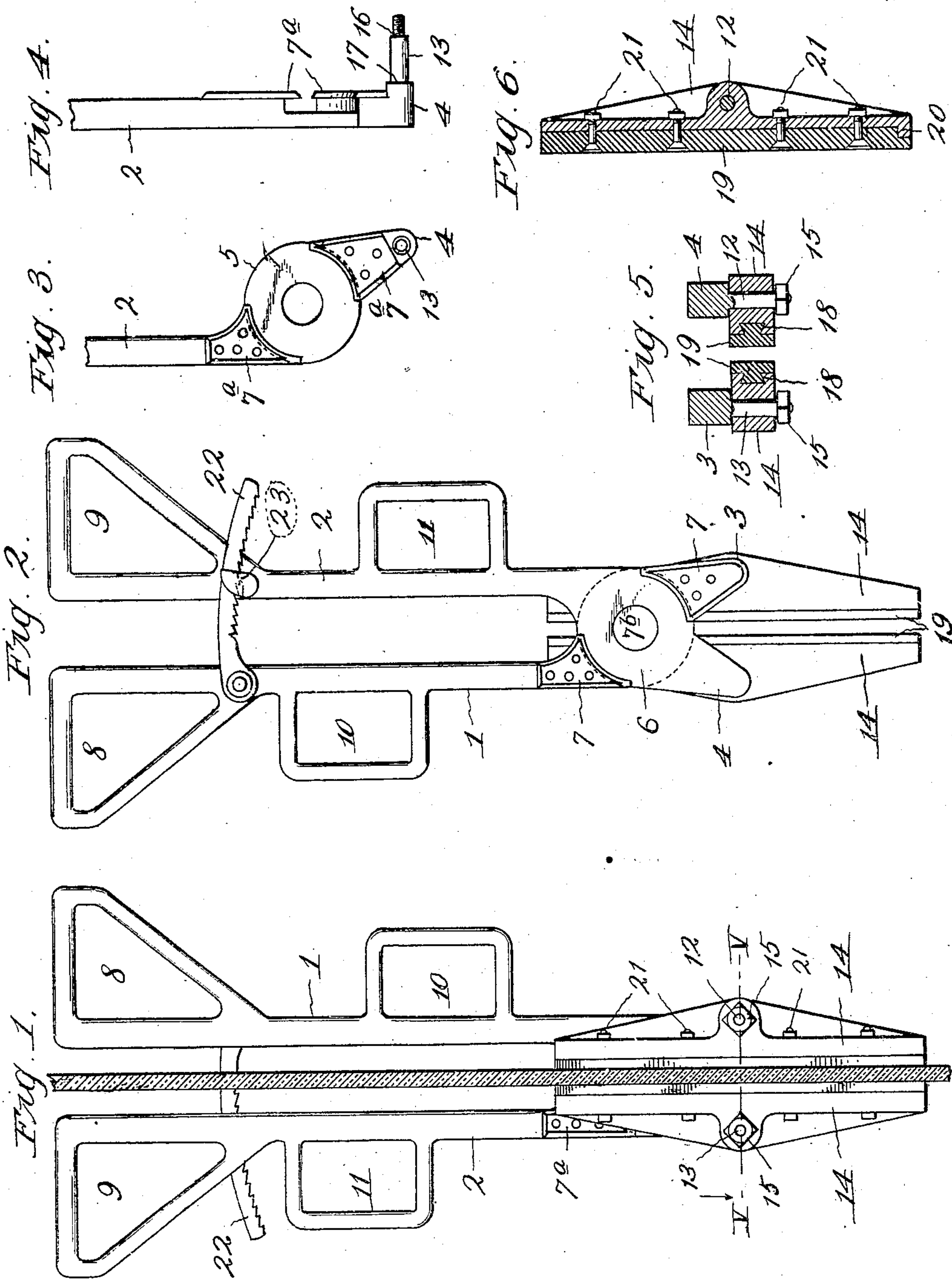
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TONGS.

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938,499.

Patented Nov. 2, 1909.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## TONGS.

938,499.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed March 15, 1909. Serial No. 483,391.

*To all whom it may concern:*

Be it known that I, JOHN L. MUNSILL, a citizen of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented certain new and useful Improvements in Tongs, of which the following is a specification.

My invention relates to improvements in tongs, and my object is to provide a pair of tongs especially adapted for handling large panes of plate-glass.

By employing my tongs a large pane of plate-glass can be carried to a window-frame and placed in position more easily and safely by a less number of men than has been possible heretofore, on account of the ease with which a reliable grip can be obtained on the glass with the tongs.

In order that the invention may be fully understood, reference will now be made to the accompanying drawing, in which:

Figure 1 shows a front elevation of the tongs gripping a piece of plate-glass. Fig. 2 is a rear elevation of the tongs. Figs. 3 and 4 are broken detail rear and side elevations, respectively, of one of the handles forming part of the tongs. Fig. 5 is a cross section on line V—V of Fig. 1, with the glass removed. Fig. 6 is a longitudinal sectional view through one of the jaws forming part of the invention.

In carrying out the invention, I employ a pair of crossed levers 1 and 2, provided at their lower ends with fingers 3 and 4, respectively, extending at an angle to the levers, so that when the latter are operably connected, as shown in Fig. 2, finger 3 will extend beneath lever 1, while finger 4 will extend beneath lever 2. This arrangement insures the opening and closing with the levers of a pair of jaws hereinafter described.

Lever 1 is provided near its lower end with an enlarged circular, recessed portion 5, in which the enlarged portion 6 of lever 2 snugly and operably fits, said enlarged portion 6 being held in place by a pair of retaining-plates 7 riveted or otherwise secured to lever 1 and its finger 3, and retaining-plates 7<sup>a</sup> secured to lever 2 and its finger 4. The levers are further connected by a rivet 7<sup>b</sup>, although when the latter is employed the retaining-plates may be dispensed with, and when the retaining-plates are used the rivet may be omitted, if desired. Levers 1 and 2 are provided at their upper ends with later-

ally extending main handles 8 and 9, and at their intermediate portions with laterally extending supplemental handles 10 and 11, respectively, the supplemental handles being arranged at different elevations for a purpose which will hereinafter appear.

Fingers 3 and 4 are provided at their lower ends with laterally or forwardly projecting studs 12 and 13, upon which the jaws 14 (above referred to) are pivotally mounted, so that the levers may swing freely and laterally independently of the jaws. Jaws 14 are held in position on the studs by retaining-nuts 15, which screw against shoulders 16 with which the studs are provided to prevent the nuts from binding against the jaws 14, and thus preventing them from moving freely on the studs. The studs are also provided with shoulders 17, to prevent the jaws from contacting with the retaining-plate 7. The jaws are, preferably, centrally-mounted on the studs, so that they will grip the glass with equal force throughout their entire length. Each jaw has a longitudinally dove-tail groove 18 extending longitudinally thereof, to receive a rubber or other cushion 19, which protects the glass from being scratched or otherwise damaged by the jaws. Cushion 19 is held from longitudinal movement in the groove by a shoulder 20 and bolts 21. The bolts, however, may be omitted by forcing the cushion into the groove friction tight. The jaws and handles are locked in closed position by a ratchet-bar 22, pivotally secured to handle 1, and a lug containing a tooth 23, on handle 2; these parts being on the back of the handles so as not to interfere with a large pane of glass extending above the handles. By mounting the jaws on the laterally projecting studs, a pane of glass may be gripped without interfering with the enlarged portions 5 and 6 of the levers. This is important as a large pane of glass may be gripped near its lower edge where it can be more conveniently carried, whereas if the jaws were in alinement with the levers, only the upper edge of the glass could be gripped, as otherwise it would contact with the enlarged portions 5 and 6, which, of course, would render the tongs useless as they would be too high to handle.

In carrying a large pane of glass to a window-frame the two vertical edges of said pane are grasped by the jaws of two pairs



of tongs which are firmly locked in a closed position by the ratchet-bars 22 and the lugs 23. Each main handle is then grasped by a man and the glass is carried to the frame. 5 The lateral vibrations imparted to the handles while carrying the glass, will not be transmitted to either the jaws or the glass on account of the jaws being pivotally mounted on the studs, hence the glass can easily be 10 held in an upright position. When the frame is reached, the glass is readily lifted up into position by grasping the supplemental handles 10 and 11, which are provided for that purpose.

15 While I have shown the preferred form of my invention, I, of course, reserve the right to make such changes in form, proportions, and details of construction, as properly fall within the spirit and scope of the 20 appended claims.

Having thus described my invention, what I claim is:—

1. A pair of tongs consisting of two crossed-levers operably connected at their 25 crossed portions, means projecting laterally from one side of the lower terminals of said levers, and a pair of jaws pivotally-mounted

upon said means and arranged wholly at one side of the levers, substantially as shown and described. 30

2. A pair of tongs consisting of two crossed levers operably connected at their crossed portions, means projecting laterally from one side of the lower terminals of said levers, a pair of jaws pivotally-mounted 35 upon said means and arranged wholly at one side of the levers, and a plurality of laterally-extending handles on each lever, substantially as shown and described.

3. A pair of tongs consisting of two 40 crossed levers operably connected at their crossed portions, means projecting forwardly from the lower terminals of said levers, a pair of jaws pivotally-mounted upon said means and arranged wholly at 45 one side of the levers, and means at the rear sides of the levers for locking the same, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses.

JOHN L. MUNSILL.

Witnesses:

WILLIAM E. DAWES,  
M. K. JOHNSON.