C. F. CASWELL.

GLASS TONGS.

APPLICATION FILED SEPT. 8, 1919.

1,428,679. Patented Sept. 12, 1922.

Fig. 1

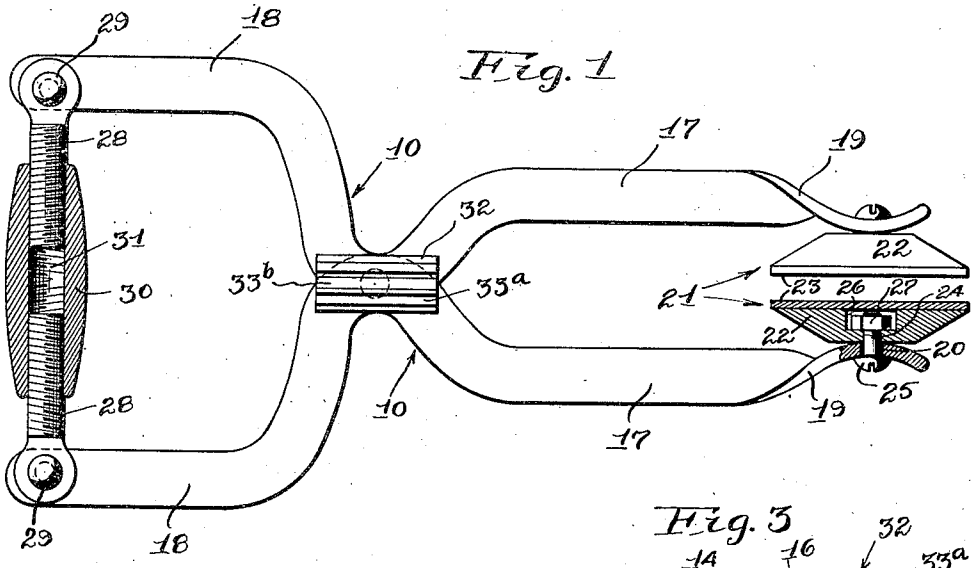
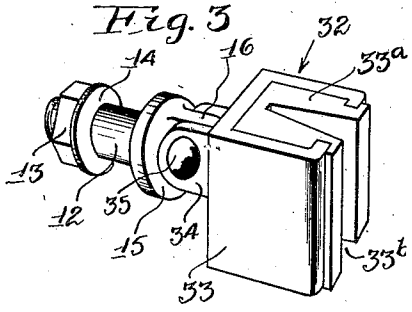


Fig. 3



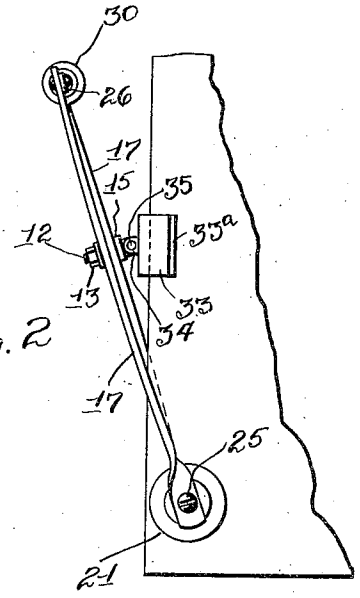


Fig. 2

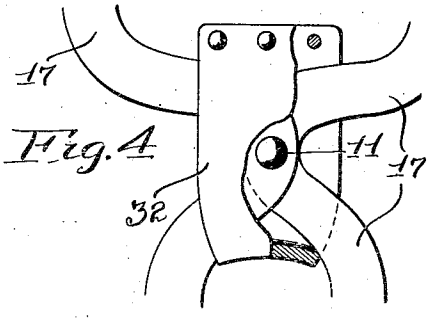


Fig. 4

Inventor
Carl F. Caswell
By Bradbury & Caswell
Attorneys

Patented Sept. 12, 1922. 1,428,679

UNITED STATES PATENT OFFICE.

CARL F. CASWELL, COON RAPIDS, IOWA.

GLASS TONGS.

Application filed September 8, 1919. Serial No. 322,488.

To all whom it may concern:

Be it known that I, CARL F. CASWELL, a citizen of the United States, residing at Coon Rapids, in the county of Carroll and State of Iowa, have invented a new and useful Glass Tongs, of which the following is a specification.

My invention relates to improvements in glass tongs.

Numerous devices have been employed for handling plates of glass. The common rubber hand pads and slings usually employed meet with more or less success in the hands of experienced men, but they have failed in the hands of inexperienced users, who are timid in undertaking the risks involved in handling large and expensive glass plates.

It is the purpose of my present invention to provide a simple, durable and inexpensive device adapted to securely grip plates of glass or like objects and furnish means for conveniently carrying the same.

A further object is to provide a gripping device of this kind having a handle by which the same may be grasped, said handle being also adapted to clamp and lock the grips against an object.

A further object is to furnish in a device of this nature, a rest adapted to bear against the object to be moved and to steady the device with respect to said object.

With the foregoing and other objects in view, which will appear in the following description, the invention resides in the novel combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the drawings, Fig. 1 is a plan view of my improved device, certain portions thereof being broken away to reveal otherwise concealed parts; Fig. 2 is a side elevation thereof and is shown in operative position as applied to a plate of glass; Fig. 3 is a perspective view in detail illustrating the pintle for pivotally connecting the levers and also showing the rest attached to said pintle; Fig. 4 is a fragmentary view of my improved device portraying an alternate form thereof.

Referring to the drawings, I have used the reference numeral 10 to indicate the levers which form the body of my improved tongs. These levers are pivotally connected at or near the centers thereof by means of a rivet 11 (Fig. 4) or by means of a pintle 12 (Fig. 3), which is secured in place by a nut 13 threaded thereon. A washer 14 interposed between the nut 13 and the adjacent lever 10 prevents displacement of said nut. The pintle 12 is formed with a head 15 and a projection 16 thereon, the latter being for purposes hereinafter described. The levers 10 are preferably, though not necessarily, formed from bars of iron or steel. They rest, one against the other at the point of connection and are offset at either side thereof to form jaws 17 and arms 18. The tips of the jaws are twisted at right angles as at 19 and are curved as shown in Fig. 1, similar openings 20 being formed in said tips at the highest points in said curved portions. Opposed grips 21 are mounted on these jaw tips. Each grip includes a block 22 and a pad 23, preferably of rubber, on the face thereof. Each block 22 is formed with a central aperture 24 to receive the bolt 25 loosely fitted in the opening 20 of a jaw 17 and an enlargement 26 of said aperture receives a nut 27 on said bolt. Each arm 18 has a threaded link 28 pivotally attached thereto by means of a bolt or rivet 29. These links are oppositely threaded, viz, one is formed with right hand threads and the other with left hand threads. Said links are fitted into opposite ends of a handle 30 having a longitudinally threaded bore 31 adapted to receive them. The turning of this handle 30 spreads and closes the jaws 17. It will therefore be seen that the grips 21 may be clamped and locked against opposite sides of objects of various dimensions by manipulation of the handle 30 and further that said handle provides a grasp for the user in carrying the tongs and object secured therein.

In use my tongs are applied to the margin of a glass plate in the manner shown in Fig. 2. To prevent the levers 17 from coming into contact with the glass at the point of connection between said levers, I supply a cushioned rest 32, which bears against the edge of the glass. In one form, this rest comprises a holder 33 having ears 34 connected by a bolt 35 to the projection 16 on the pintle 14, said holder containing a cushion 33^a of soft wood, rubber, cork or other suitable material, having an elongated recess 33^b to receive the margin of a plate of glass. This recess is V shaped in cross section to accommodate glass of different

thickness. Said rest performs an additional function in dividing with the grips 21 any strain upon the tongs in directions out of the plane occupied by the plate of glass to which said tongs are applied, thus avoiding breakage which might otherwise occur at the hands of a careless user. In my modified form, the rest 32 comprises a cushioned guard of leather or other suitable material placed around the levers 17 at the junction thereof.

My device is used in pairs, one being secured upon one margin of the object to be carried and the other upon the opposite margin thereof. The handles 30, being tightened, are conveniently grasped by the users, each having a free hand for steadying the object.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In a device of the class described, a pair of levers pivotally connected between the ends thereof, the junction between said levers forming a rest adapted to bear against an object grasped by the device, the adjacent ends of the levers forming opposed arms on one side of the rest and opposed jaws on the other side of said rest, a revoluble grip carried by said arms and providing a combination handle and arm actuating device for spreading, retracting and locking the arms with respect to each other to thereby close, open and secure said jaws.

2. In a device of the class described a pair of levers pivotally connected between the ends thereof, said ends of said levers forming opposed arms and jaws, grips mounted on the jaws, a combination handle and spreader mounted between said arms and a rest at the point of connection between said levers.

3. In a device of the class described, a pair of levers pivotally connected near the centers thereof, the ends of said levers being offset from the point of connection to form opposed arms and jaws, oppositely threaded links attached to said arms, a handle having a longitudinally threaded bore receiving said threaded links, said handle being adapted, when turned, to spread the arms and close the jaws or vice versa and a rest at the point of connection between said levers.

4. In a device of the class described, a pair of levers pivotally connected near the centers thereof, the ends of said levers being offset from the point of connection to form opposed arms and jaws, grips mounted on the jaws, oppositely threaded links attached to said arms, a handle having a longitudinally threaded bore receiving said links, said handle being adapted, when turned, to spread the arms and close the jaws or vice versa and a self adjustable rest at the point of connection between said levers.

5. In a device of the class described, a pair of levers, a pintle connecting said levers near the centers thereof, the ends of said levers being offset from the point of connection to form opposed arms and jaws, companion grips mounted on the jaws, oppositely threaded links attached to said arms and a handle having a longitudinally threaded bore receiving said threaded links, said handle being adapted, when turned, to open and close the jaws, a rest pivotally mounted on said pintle and a cushion therein formed with an elongated recess, V shaped in cross section and adapted to receive the margin of a plate of glass or other object to which the device is applied.

In testimony whereof, I have signed my name to this specification.

CARL F. CASWELL.