

No. 854,263.

PATENTED MAY 21, 1907.

R. C. ZEPNICK.
GLAZIER'S TACK.
APPLICATION FILED APR. 1, 1905.

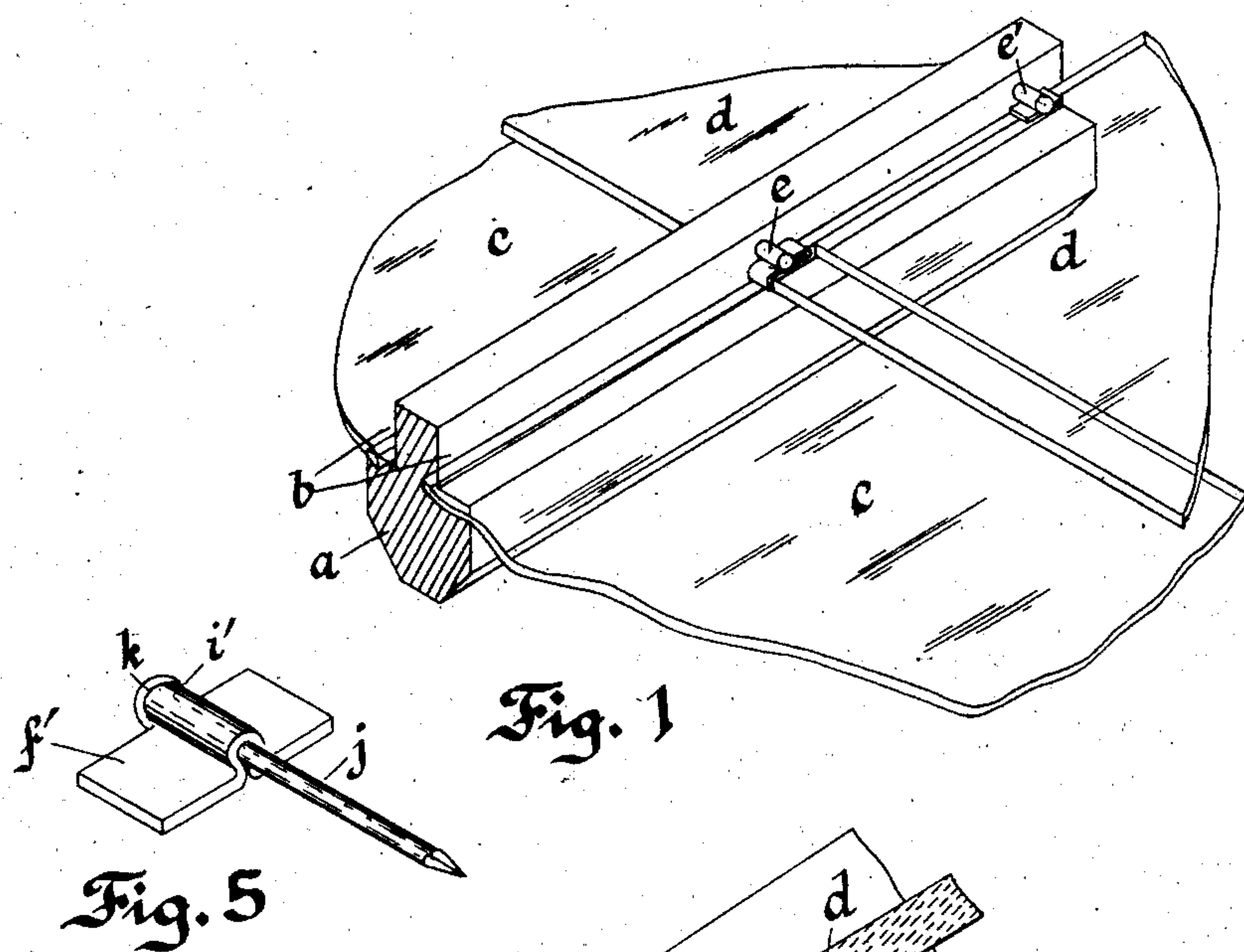


Fig. 1

Fig. 5

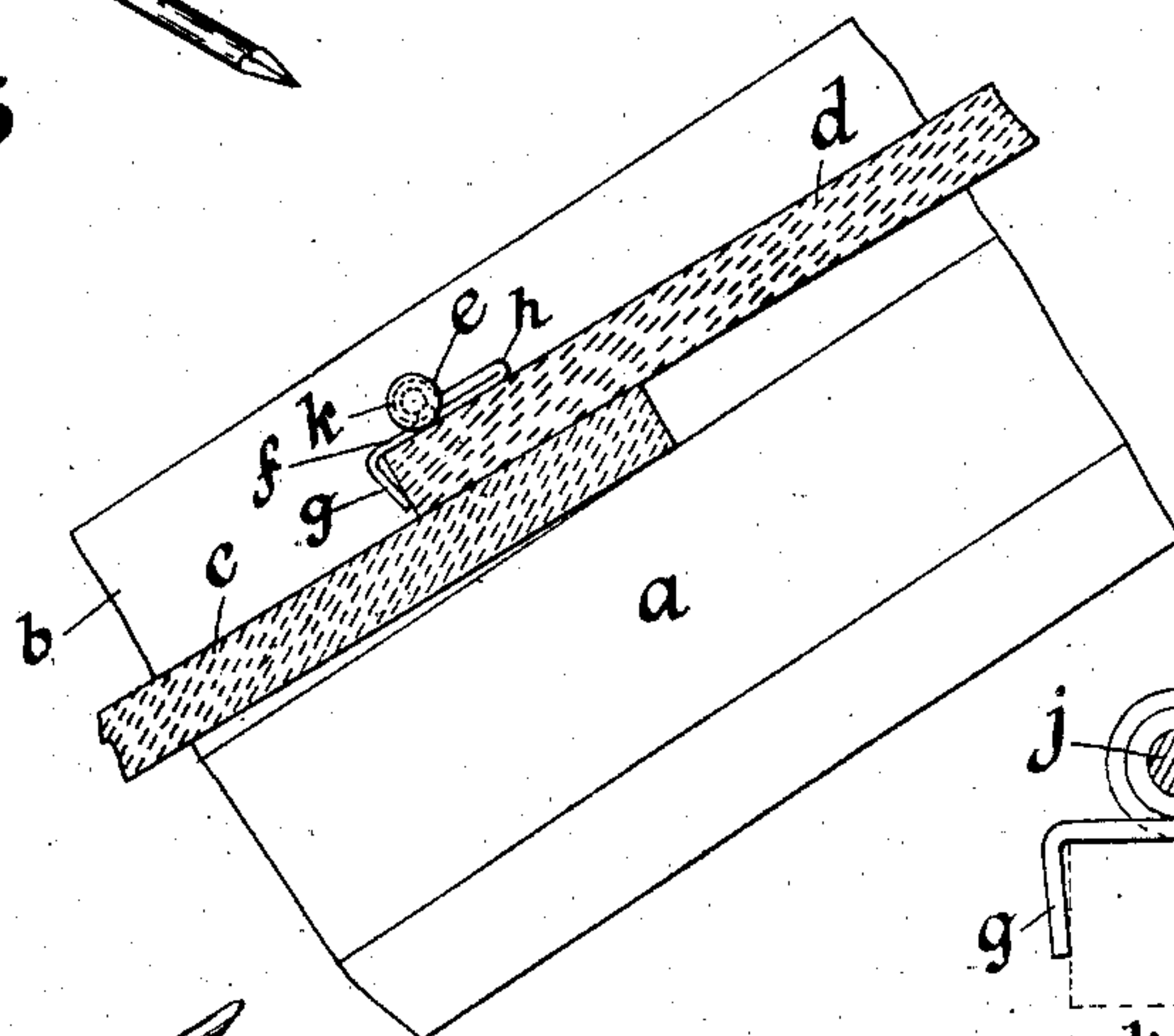


Fig. 2

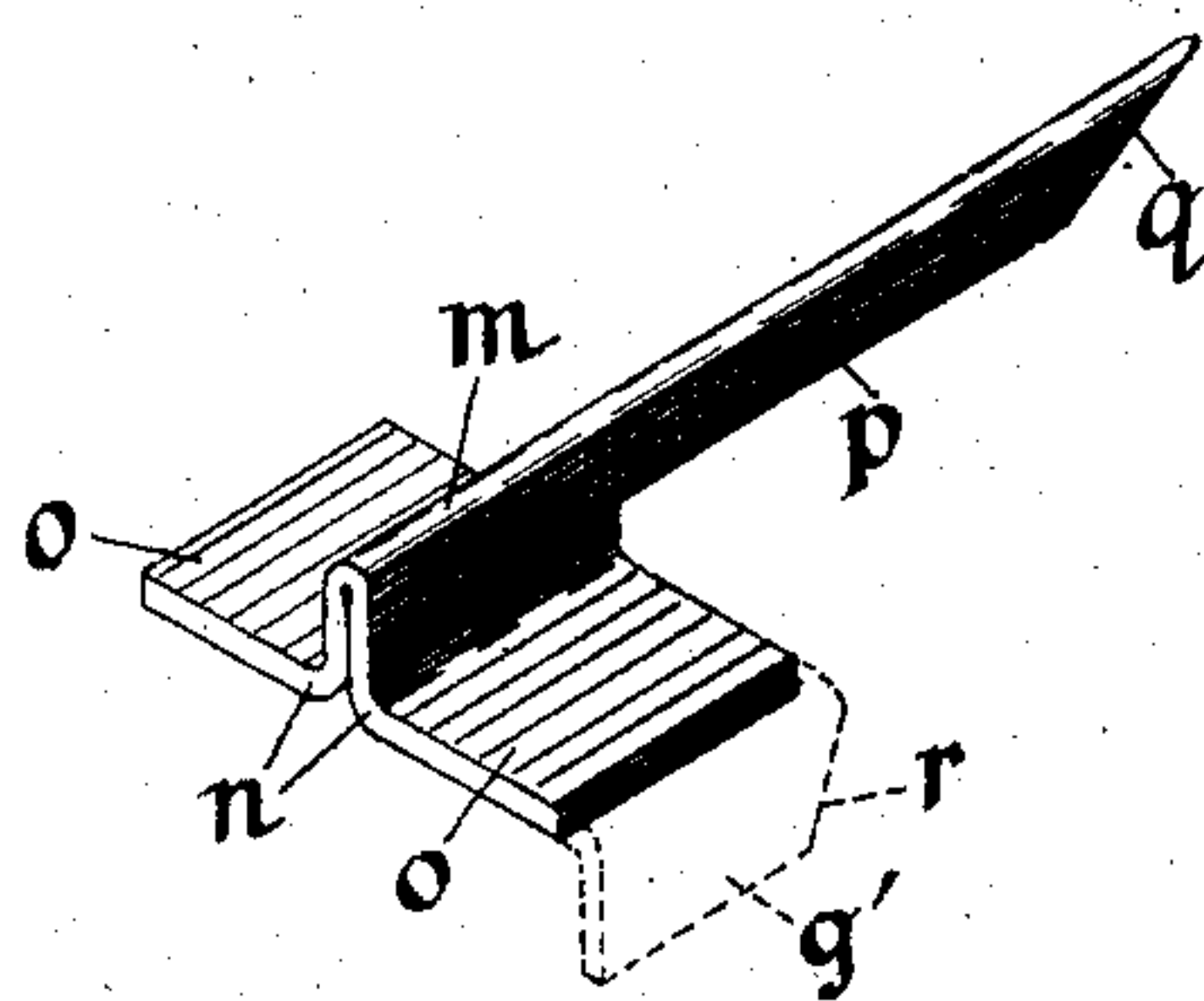


Fig. 6

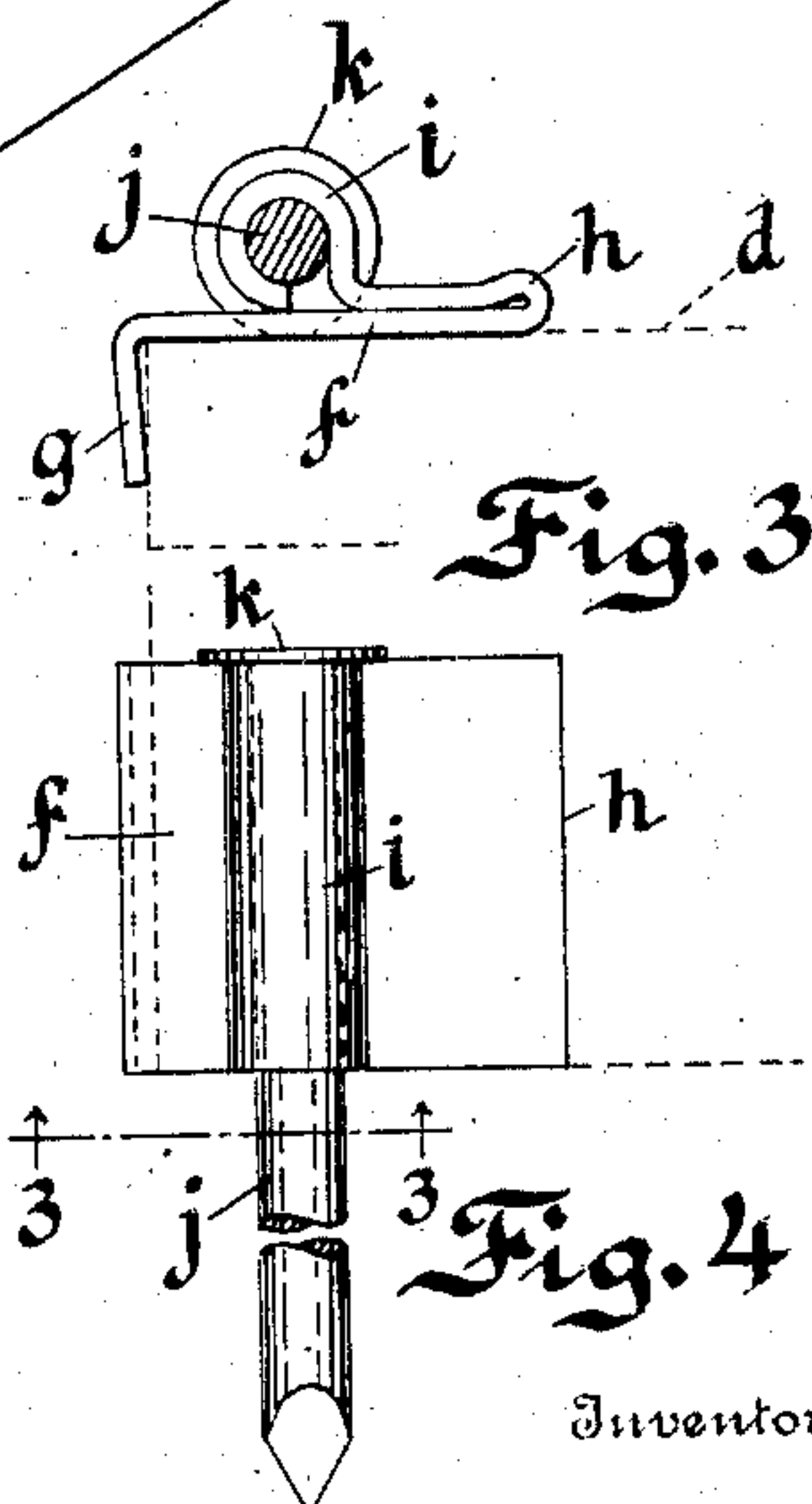


Fig. 3

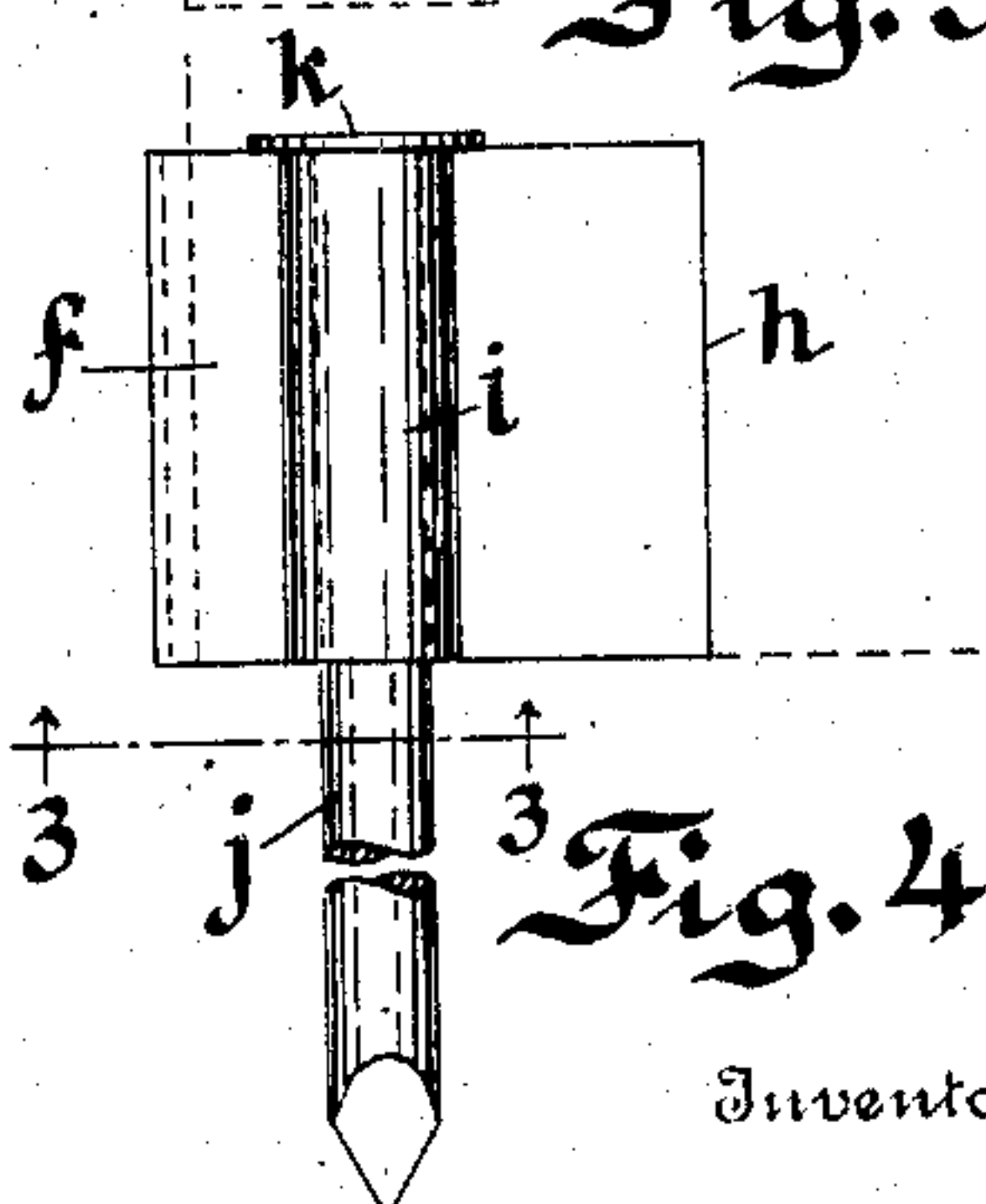


Fig. 4

Inventor

Witnesses

Samuel Reiss
Maur Krachey

Robert C. Zepnick

By George Wetmore
Attorney

UNITED STATES PATENT OFFICE.

ROBERT C. ZEPNICK, OF MILWAUKEE, WISCONSIN.

GLAZIER'S TACK.

No. 854,263.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed April 1, 1905. Serial No. 253,228.

To all whom it may concern:

Be it known that I, ROBERT C. ZEPNICK, of Milwaukee, Wisconsin, have invented a Glazier's Tack, of which the following is a specification.

My invention relates to a new kind of tack or point for securing glass in place in panels, but especially intended for use on greenhouses, skylights and the like, where a roof is made of panes of glass lapped one over the other in the manner of shingles, and secured in place on wooden rails running down the slope of the roof.

The glazier's tacks heretofore in use have many disadvantages; but principally, perhaps, the disadvantage that they present a round or angular surface against the side of the pane, which is very conducive to cracks. It is well known that when an ordinary nail is driven into a sash-rail to hold a glass pane in place therein, a slight jar or pressure against the nail, caused for instance by water freezing under it, will cause a crack to extend itself from the point of contact of the nail across the pane. Many other disadvantages are also inherent in glazier's tacks or points heretofore used for this purpose, such as difficulty of driving, lack of staying or holding power, rusting and the like, all of which are obviated by the use of my device, which is described below.

My improved point or tack is illustrated in the accompanying drawings, in which

Figure 1 is a perspective view of a portion of a greenhouse-roof or skylight, showing my improved tack in use. Fig. 2 is a side elevation of the same on a larger scale. Figs. 3 and 4 are respectively a sectional side elevation and a plan of the tack on a still larger scale, the nail in Fig. 3 being shown in cross-section on the line 3. Fig. 5 is a perspective view of a modified form of tack without a flange. Fig. 6 shows a further modification of my device.

In these drawings every reference letter refers always to the same part.

In Figs. 1 and 2, there is shown a portion of a rail *a*, having rabbet grooves *b*, in which are laid glass panes *c*, *d*, the upper one overlapping the lower as usual. At the lower edge of the pane *d* is fixed the tack *e*. This tack, as shown more in detail in Figs. 3 and 4, comprises a small strip *f*, preferably of non-rusting sheet metal, such as zinc, whose central part is flat and rests upon the glass, while at one end it has a downturned flange

g, and at the other end is bent over upon itself as indicated at *h*, and has formed on the end thereof, about over the middle of the flat portion, a cylindrical eye *i*, which is of just the right size to receive the shank of an ordinary wire nail *j*, the head *k* of which forms a protecting flange covering the outer end of the eye *i*, excluding moisture from reaching the shank within the recess of the eye.

In Fig. 5 is shown a modified form of my device which embodies the same principle, that is to say, a flat abutment-surface and a point in a plane parallel to but lying above the plane of the glass surface, but the flange *g* is in this case omitted. Said modification comprises a strip of preferably nonrusting sheet metal *f'* having a loop *i'* formed in the center thereof to receive the shank of the nail *j*. This form of tack will be found adaptable to securing panes which have no overlapping edge, as for instance, in ordinary window-lights, picture frames and the like, and one of them is shown applied at *e'* in Fig. 1, though it would not be ordinarily needed in this position.

To illustrate the numerous modifications of which my invention is capable without departing from the principle thereof, I have shown in Fig. 6 a tack made completely out of a piece of sheet metal having a longitudinal crease *m* and lateral rectangular bends *n*, forming flat abutment surfaces *o*; the central portion at each side of the crease *m* is prolonged to form a nail-shank *p*, and cut away obliquely at *q* to form a point.

Some of the advantages which my glazier's tack has over others heretofore in use are, first, that the nail-portion has parallel sides and cannot work out, as invariably happens with a point or tack having tapering sides; second, that the nail being completely inclosed by the contacting surfaces of the head and the eye *i* of the strip *f*, as before described, no water can reach the shank of the nail, to cause it to rust and rot the wood around the shank, and causing the nail to fall out, which has been a source of great trouble to greenhouse men in the past; third, that the head or part on which the driving-blow strikes is far enough above the surface of the glass so that it can be easily driven by a suitable tool without danger of cracking the glass and without missing the object struck at; fourth, that the strip *f* can be set in its final position before the nail is driven, whereby the nail is held straight, and it becomes easy to hold

said nail while driving, which is notoriously not the case with most glazier's tacks, which, by reason of the necessity of the driving-tool striking the finger, cause the operator to have
 5 very sore fingers after a thousand or so of such tacks are driven; fifth, that the head *k* projects around the head of the eye *i*, so that it can be readily withdrawn when it is desired to replace a broken pane; sixth, that it
 10 combines in suitable form the strength of a metal such as the iron or steel of which the nail is made with the nonrusting qualities of a metal like zinc; seventh, that it can be
 15 eighth, that it may be used alternatively as a right or left by simply removing the nail from the strip *f*, and inserting it from the opposite side; all of these advantages being in
 20 addition to that forming the main object of the invention, as hereinabove specified, namely, to provide a flat abutment-surface against the pane, whereby it is prevented from cracking; and further, that the glass is
 25 absolutely prevented from sliding on sloping roofs when it is provided with the flange *g*.
 By means of my improved tack a very great saving can be effected in the average annual cost of repairs on greenhouses, which has been caused heretofore by the working
 30 loose and falling out of the devices used to hold the glass in place, by the rusting and consequent rotting of the rails, and by the breaking of the glass. The fact that panes can be readily replaced when broken, and
 35 that without substantial injury to the rails by making additional holes therein, will also conduce to a greater economy in the cost of heating the greenhouses. These advantages
 40 will be readily apparent to glaziers, and numerous modifications of my tack embodying

the same principle will readily suggest themselves, all of which are intended to be covered by my claims.

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

1. A glazier's tack comprising a nail and an abutment-piece having a surface parallel thereto and an eye through which said nail passes. 50
 2. A glazier's tack comprising a nail and a strip of sheet metal having a tubular eye through which said nail passes.
 3. A glazier's tack comprising a strip of metal having one end bent back upon itself and an eye formed thereon, and a nail passing through said eye parallel with the surface of the metal strip. 55
 4. A glazier's tack comprising a strip of sheet metal having an eye formed thereon, and a nail passing through said eye parallel to the plane of the strip and having a head covering the end of said eye and excluding moisture from the interior thereof. 60
 5. A glazier's tack comprising a member having a flat abutment-surface and a driving point having its sides parallel and secured to said member parallel to and offset from said surface. 65
 6. A glazier's tack comprising a flat abutment-surface and a driving point substantially parallel to and having a slidable engagement with said surface. 70
- In testimony whereof I have hereunto set my hand in presence of two witnesses.

ROBT. C. ZEPNICK.

Witnesses:

ROBERT H. RIEDY,
 H. HAFEMEISTER.