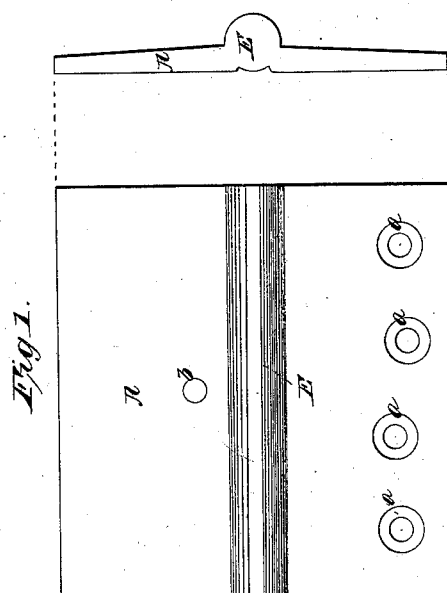
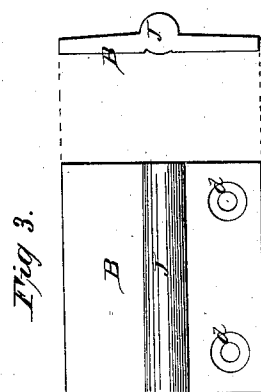
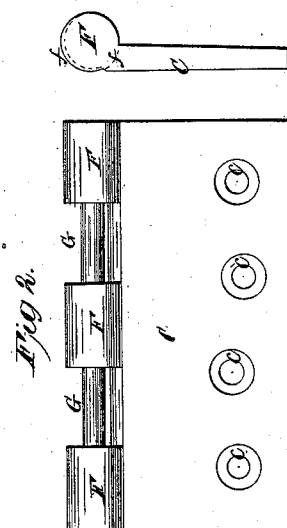
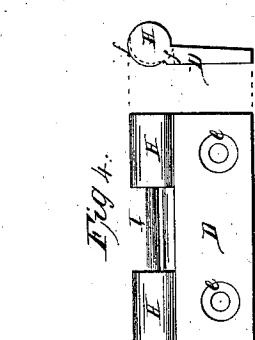


Squire & Scharfenberg, Hinge.

N^o 22,830.

Patented Feb. 1, 1859.



UNITED STATES PATENT OFFICE.

SAM. S. SQUIRE AND T. SCHARFENBERG, OF BROOKLYN, NEW YORK.

HINGE.

Specification of Letters Patent No. 22,830, dated February 1, 1859.

To all whom it may concern:

Be it known that we, SAMUEL S. SQUIRE and THEODORE SCHARFENBERG, of Brooklyn, Kings county, New York, have invented a new and Improved Method of Constructing Hinges; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, figures and letters thereof, making part of this specification.

Of the said drawings, Figure 1, denotes a face and end view of the large pattern we use for molding. Fig. 2, represents a face and end view of a half hinge of the same size as Fig. 1, having three knuckles and the pins thereto on which the other leaf turns, which is also a pattern. Fig. 3, shows a front and edge view of a small pattern for a hinge. Fig. 4, is a front and end view of a half hinge or leaf with two knuckles and the pin thereto.

Heretofore in the manufacture of such hinges or as they are termed "butts" the pin connecting the two leaves together has been inserted either by drilling through the leaves after being fitted together and inserting the pin, or by casting the pin or separate pins for each joint to one leaf by means of cores, difficult to make and requiring nice adjustment in the mold in order to get them central and capable of free action, or by means of cores or chills; countersinks have been made in one leaf, and corresponding centers in the other leaf cast thereto. All of these methods are objectionable and expensive in the manufacture of this article; and the purpose and object of our invention is to obviate these difficulties, and by means of our invention we are enabled to manufacture those goods at the ordinary cost of light castings which is usually about six cents per pound.

To enable others skilled in the art to make and use our invention we will proceed to describe the method of construction we employ.

We first make a pattern like A or B, Figs. 1 and 3, of any size desired with the cylindrical part E or J, of the desired size and the countersink holes for the screws *a a*, and *d d*, as shown on one side only, as seen in Figs. 1 and 3, and on the other side may be made a hole (*b*) for drawing the pattern from the sand. We then make patterns C

or D, like Figs. 2 and 4, taking care that they shall exactly fit and correspond in size to half the pattern A or B, including the cylindrical part which forms the knuckles F F, and H H, as shown in Figs. 2 and 4. These half leaves are provided with the hinge pins G G, or I, which are solid with the pattern and form part thereof. These leaves are countersunk *c c*, and *e e*, as desired. We then cast such a quantity as desired of C or D, Figs. 2 and 4, which are easily molded and usually come from the molds ready for use, but may sometimes require smoothing from want of care on the part of the workman. We then mold the blanks or patterns A or B Figs. 1 and 3, and after drawing the pattern, we place within the said impression the leaf C or D, Figs. 2 and 4, which fits perfectly the countersinks for the screws being on the opposite side from those made by the blank or patterns A or B according as either is used. The metal is then poured into the molds which readily runs around the pins G G, or I, and thus forms a perfect hinge, the only finish required being to fold the hinge, and grind the joints or knuckles and edges smooth on an emery wheel.

In the end views in Figs. 2 and 4, on the knuckles F and H will be seen two small projections (*f, f.*) The object and purpose of these projections is to render the hinge perfectly free in its movements and prevent any unnecessary friction or binding.

Having thus described our improved method of constructing hinges we will state what we desire to secure by Letters Patent.

We are aware that hinges have been constructed with a separate pin for each core and also that centers have been cast on one leaf and fitted by recesses on the other leaf by means of cores or chills and we therefore disclaim such devices.

What we claim as an improvement and for which we desire Letters Patent is—

Providing the half leaves on one side of a butt with the hinge pins G G, or I, which are solid with the pattern and form part thereof when cast in the manner specified.

SAMUEL S. SQUIRE. [L. S.]

THEODORE SCHARFENBERG. [L. S.]

Witnesses:

C. A. DURGIN,

D. G. ROWLANDS.