

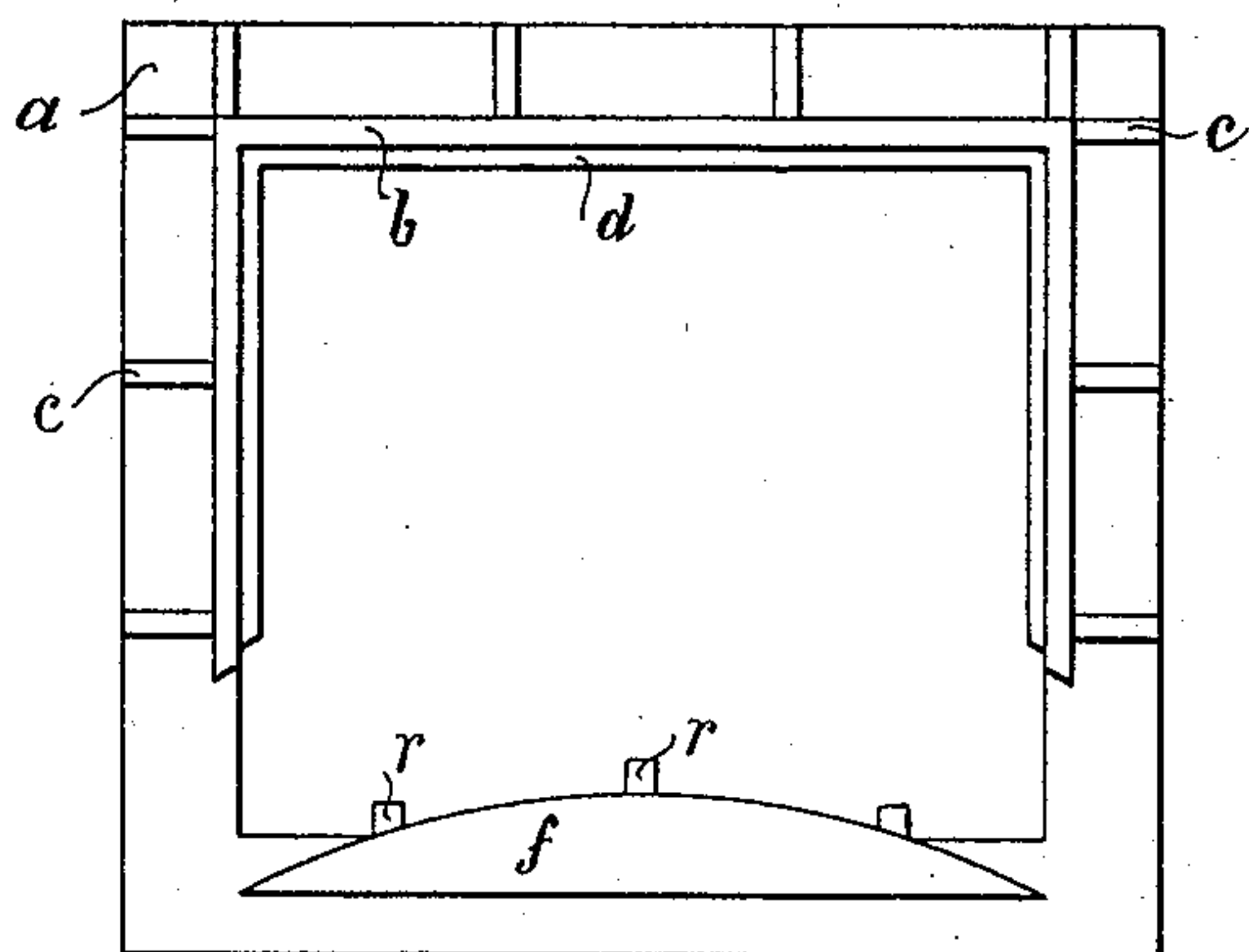
(No Model.)

G. P. GROSS.  
SIDEWALK CURB AND CULVERT COVER.

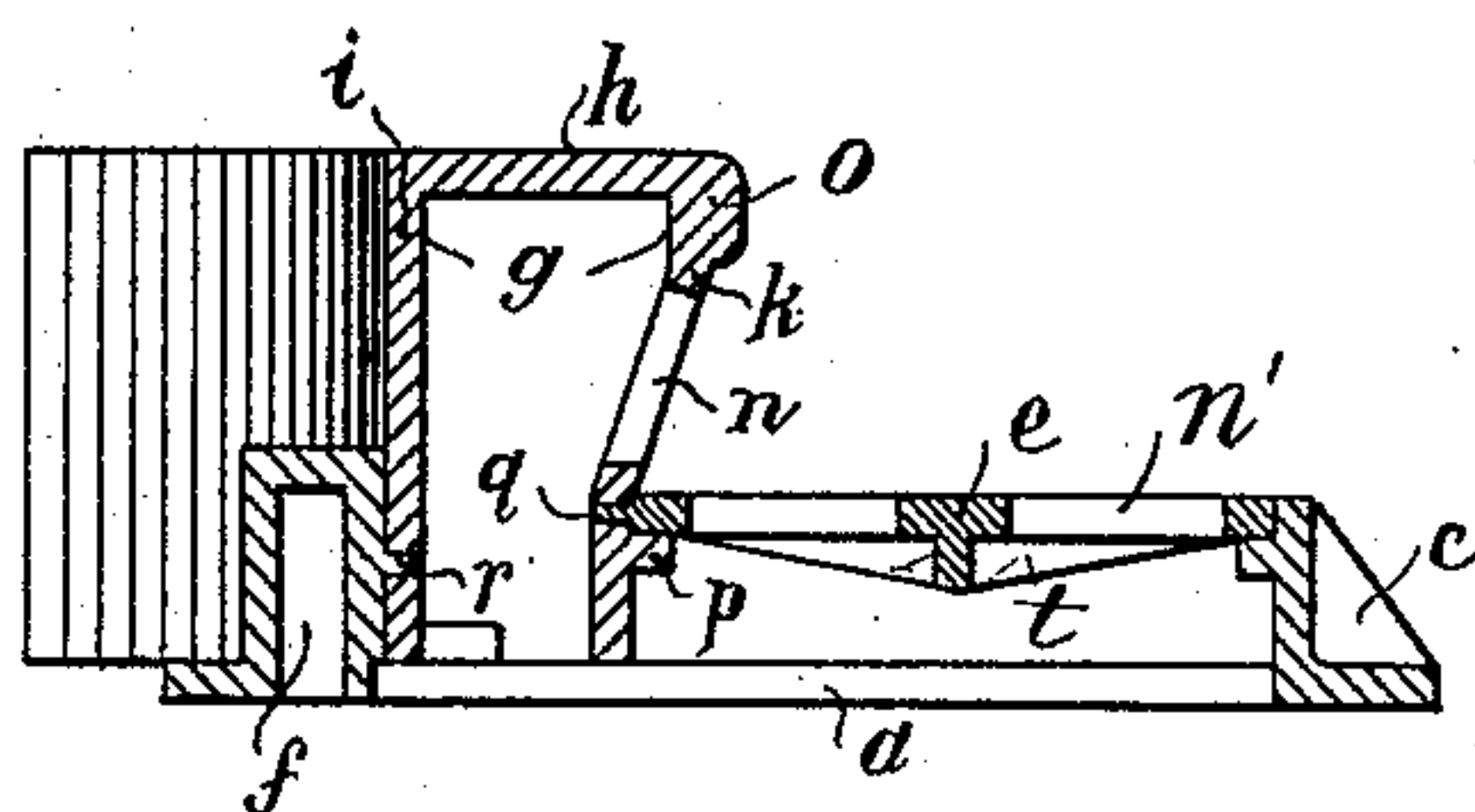
No. 603,561.

Patented May 3, 1898.

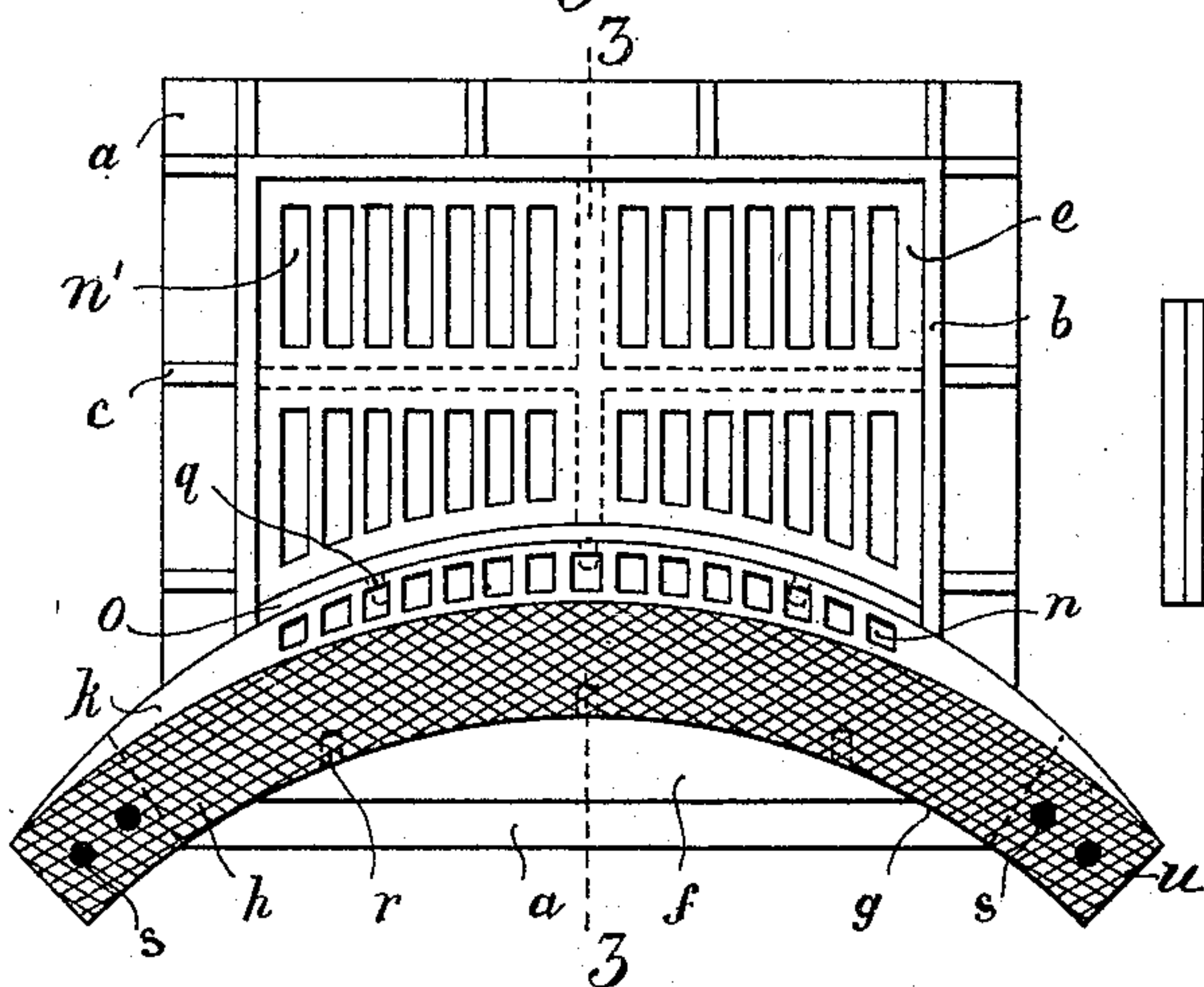
*Fig. 1.*



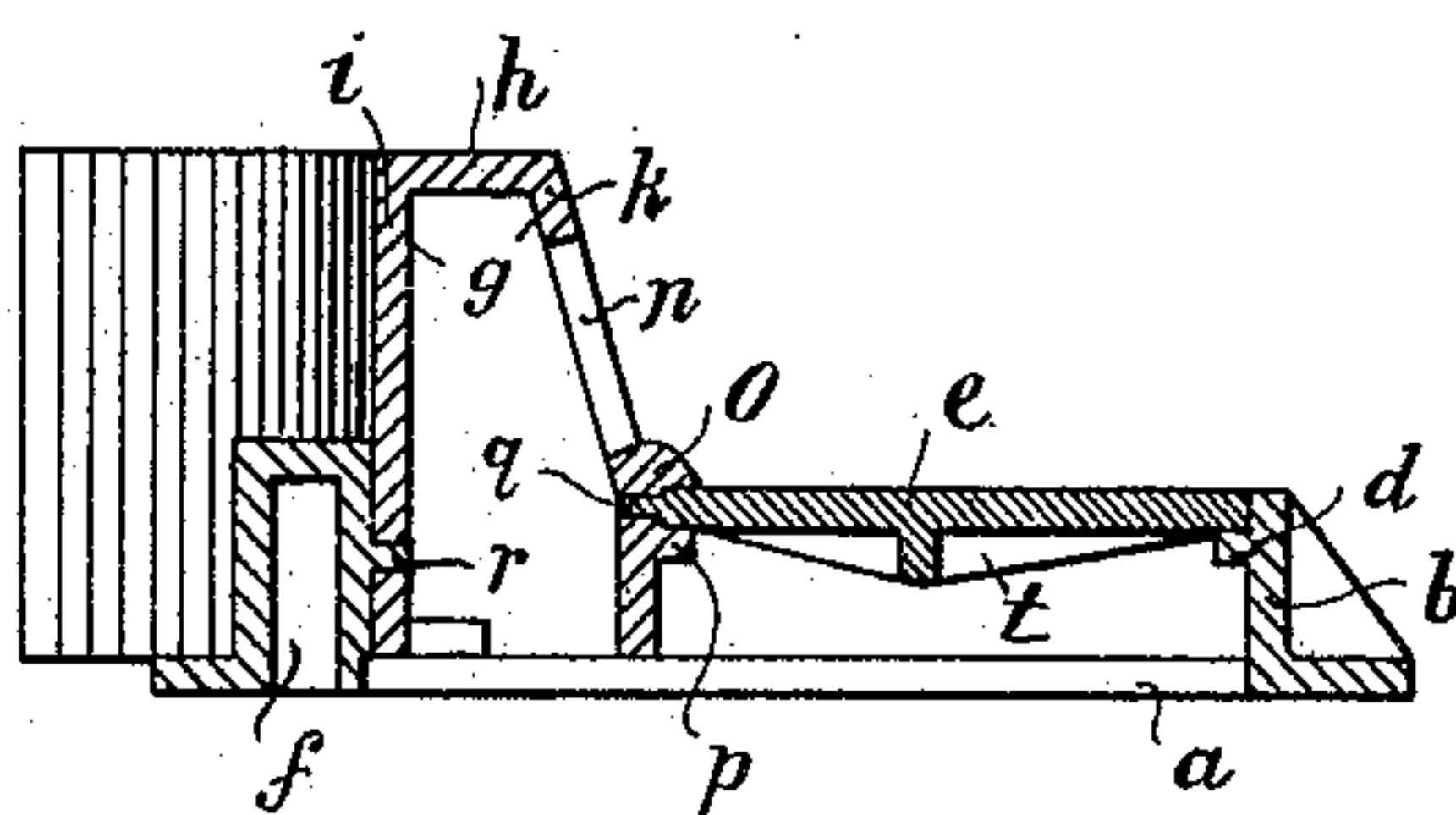
*Fig. 4.*



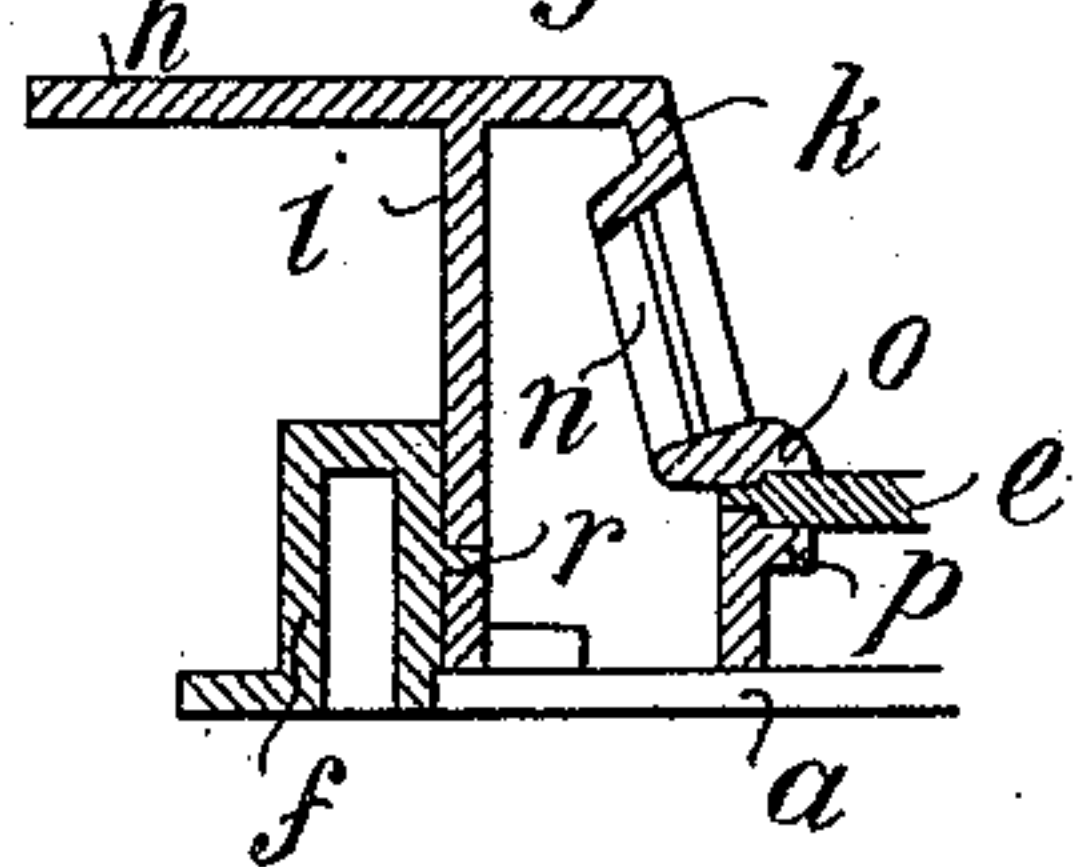
*Fig. 2.*



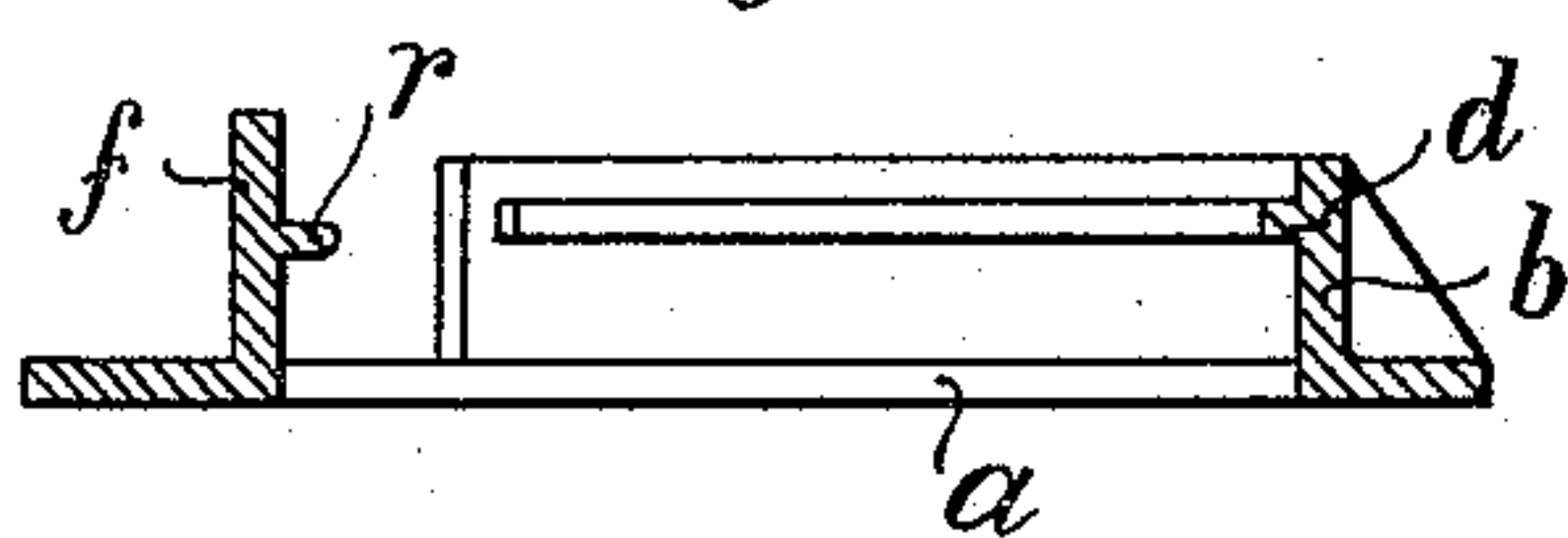
*Fig. 3.*



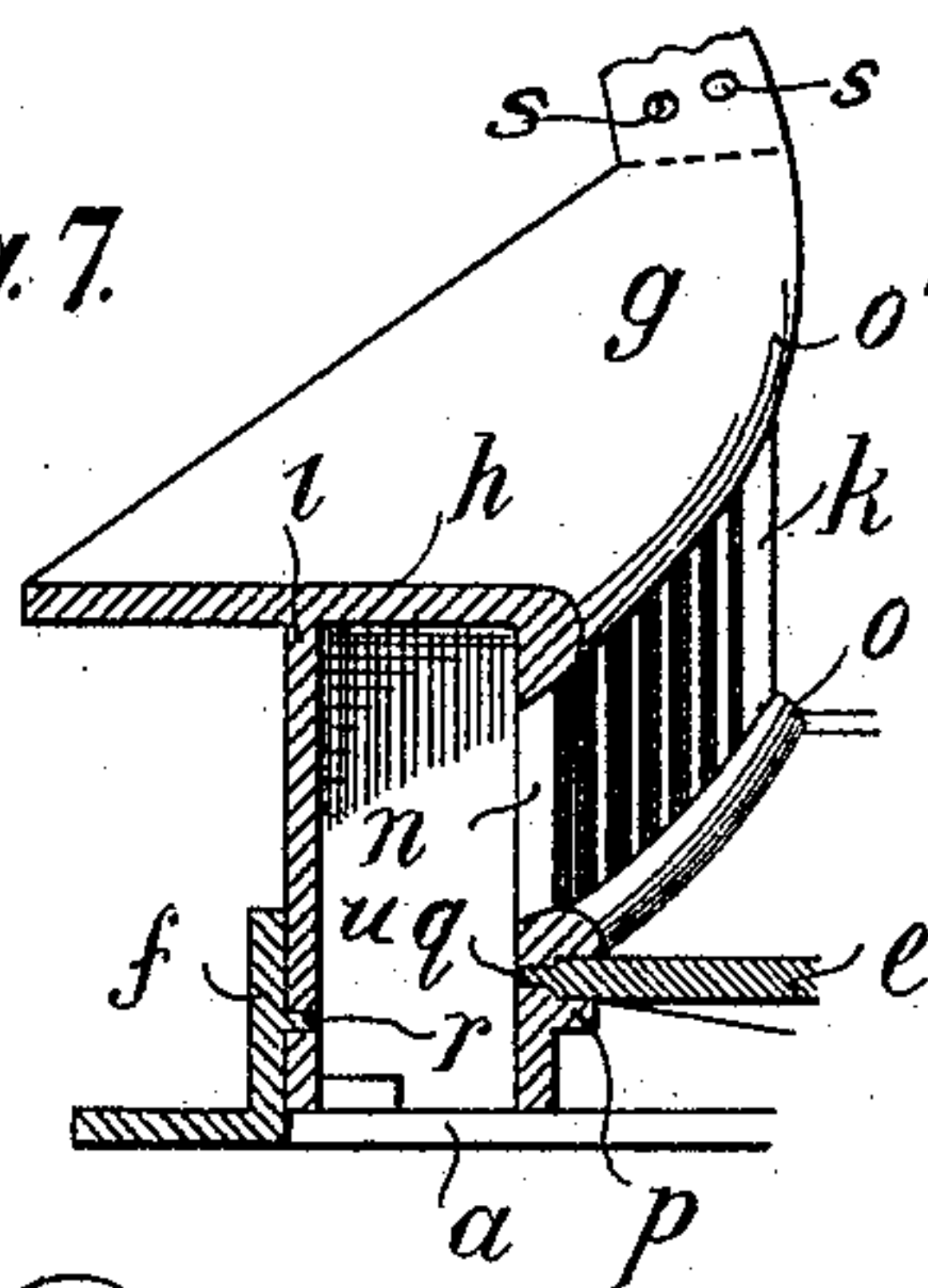
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



Witnesses

John A. Paulson.  
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# UNITED STATES PATENT OFFICE.

GEORGE P. GROSS, OF ROCKAWAY BEACH, NEW YORK.

## SIDEWALK-CURB AND CULVERT-COVER.

SPECIFICATION forming part of Letters Patent No. 603,561, dated May 3, 1898.

Application filed May 27, 1897. Serial No. 638,393. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE P. GROSS, a citizen of the United States, residing at Rockaway Beach, county of Queens, State of New York, have invented certain new and useful Improvements in Sidewalk-Curbs and Culvert-Covers, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a plan of the manhole-frame; Fig. 2, a plan of the combined curb and culvert-cover, showing all parts assembled. Fig. 3 is a section on the line 3 3, indicated in Fig. 2. Figs. 4, 5, 6, and 7 are sectional views upon the same line, but showing modified constructions of the curb-rim.

Similar letters of reference indicate corresponding parts in all views of the drawings.

The object of my invention is to provide a covering for the inlet of a sewer or drain-culvert, which, though compact and fully protecting the inlet, will permit easy access to the sewer and at the same time prevent the filling of the inlet with sediments, obstructing the passage for water.

The object of my invention is, further, to provide a covering composed of easily-separable parts fitted and so combined together that though any of its parts may be removed without disturbing the others the covering will be yet compact and safe at all times.

With these ends in view my invention consists of the hereinafter-described combined curb-rim and culvert-cover, composed of a flanged manhole-frame having the flange on one side separated from the flanges of the adjoining sides and provided with dowel-pins projecting therefrom, a cover fitted between the connected flanges and provided with dowel-pins on its disengaged edge, and of a hollow curb-piece adapted to be set upon the frame between the flange and the cover and provided with holes in position to receive the dowel-pins both of the flange of the frame and of the cover, whereby the curb-piece is secured to the frame, and with lugs for securing to it the curbstone or both ends thereof.

The rectangular frame *a* is adapted to be set into the masonry lining of the manhole. It is flat on its base and provided with flange *b*, projecting on three sides of the frame at right angles to its base. Flanges *b* are braced

by webs *c* and are strengthened by the flange *d*, extending inwardly. Upon these flanges rests the cover *e*. The fourth side of the frame *a* is provided with a flange *f*, curved to correspond to the inner curvature of the curb-piece, and dowel-pins *r*, projecting from its face, are provided to engage into corresponding recesses of the curb-piece.

The curb-piece *g* is hollow. In the drawings it is shown curved; but it may also be made polygonal in shape. Its top *h* is roughened to prevent slipping of feet on it. Its back *i* is vertical, and its slanting front side *k* is perforated and protected by rim *o*, provided on its outmost edge, against the wheels of vehicles. Below rim *o* is a flange *p* at the same level as the flange *d* on the manhole-frame. These flanges support the cover *e* when the parts are assembled.

Between flange *p* and the rim *o* are three or more holes, in which dowel-pins *q*, provided on the edge of the cover *e*, fit. Similar holes are also made in the back or inner side *i* at a suitable height to receive the dowel-pins *r*, projecting above the described flange *f* of the frame.

The open ends *u* of the curb-piece *g* are adapted to receive curbstones or timbers. Holes *s* are provided for securing the stones or timbers in place.

Cover *e*, fitted into the frame *a* and to the curved front of the curb, is strengthened on its lower side by ribs *t*, running radially from its center, and may be perforated with holes or slots *n'*. Dowel-pins *q* fit into the corresponding holes in the front wall of the curb *g*, as described, securing thus the cover in its position.

Modified forms of parts and of construction are shown in Figs. 4, 5, 6, and 7. In Fig. 4 the front wall is sloping inward instead of outward. In this case the protecting-rim *o* is set on the upper edge of the front wall. In Fig. 5 the perforated face *n* of the curb-rim is recessed, and in Fig. 7 the face is held vertical and two protecting-rims *o* and *o'* are provided. In Fig. 6 the flange *f* is shown in different form. The shape of frame *a* and cover *e* may also be circular, elliptical, or otherwise to conform to the shape of the culvert or manhole. The shape of the curb-piece *g* may also be varied to conform to the out-



lines of the sidewalks. All parts must, however, in all cases be fitted together as described above.

My improved sidewalk-curb and culvert-cover is assembled as follows: First the frame is laid upon the masonry lining of the manhole. Next the curb *g* is placed thereon, between the ends of the flange *b* and the flange *f*. The dowel-pins *r* are slid into the corresponding holes of the curb-piece *g*, holding it securely in place. Then the curbstones or timbers are inserted into the ends of curb *g*, secured therein by screws or bolts passing through the holes *s* in the curb, and, finally, cover *e* is laid in its place.

I claim as my invention and desire to secure by Letters Patent—

1. A combined sidewalk-curb and culvert-cover, comprising a flanged manhole-frame, having the flange on one side separated from the flanges of the adjoining sides, and provided with dowel-pins projecting therefrom, a cover fitted between the connected flanges and provided with dowel-pins on its disengaged edge, and a hollow curb-piece provided with holes in position to receive the dowel-pins of the separated flange of the frame and of the cover, and with lugs for securing to it the curbstones on both ends thereof.

2. The combination of frame *a*, provided with flanges *b*, *d* and *f*; dowel-pins *r*, integral with flange *f* with hollow curb-piece *g*, set upon the frame provided with holes in corresponding positions to engage dowel-pins *r*, and cover *e*, fitted between the flanges and provided with dowel-pins *g* in position to enter corresponding holes in the curb-piece, thereby locking the cover and the curb-piece in position and with the frame.

3. The combination with a manhole-frame having flanges adapted to hold a cover in position, one flange being provided with dowel-pins; and with a cover, snugly fitted upon the flanges of the frame and having one edge provided with dowel-pins, of a removable curb-piece, fitted between the edge of the cover and the opposite flange of the frame and provided with holes in position to receive the dowel-pins projecting from the flange and from the edge of the cover.

In witness that I claim the improvements described in the foregoing specification I have signed my name in the presence of two subscribing witnesses.

GEORGE P. GROSS.

Witnesses:

HENRY SCHREITER,

ROBERT VALENTINE MATHEWS.