

G. H. IRWIN & F. KNOWLSON.

SAND VALVE.

APPLICATION FILED APR. 9, 1909.

927,544.

Patented July 13, 1909.

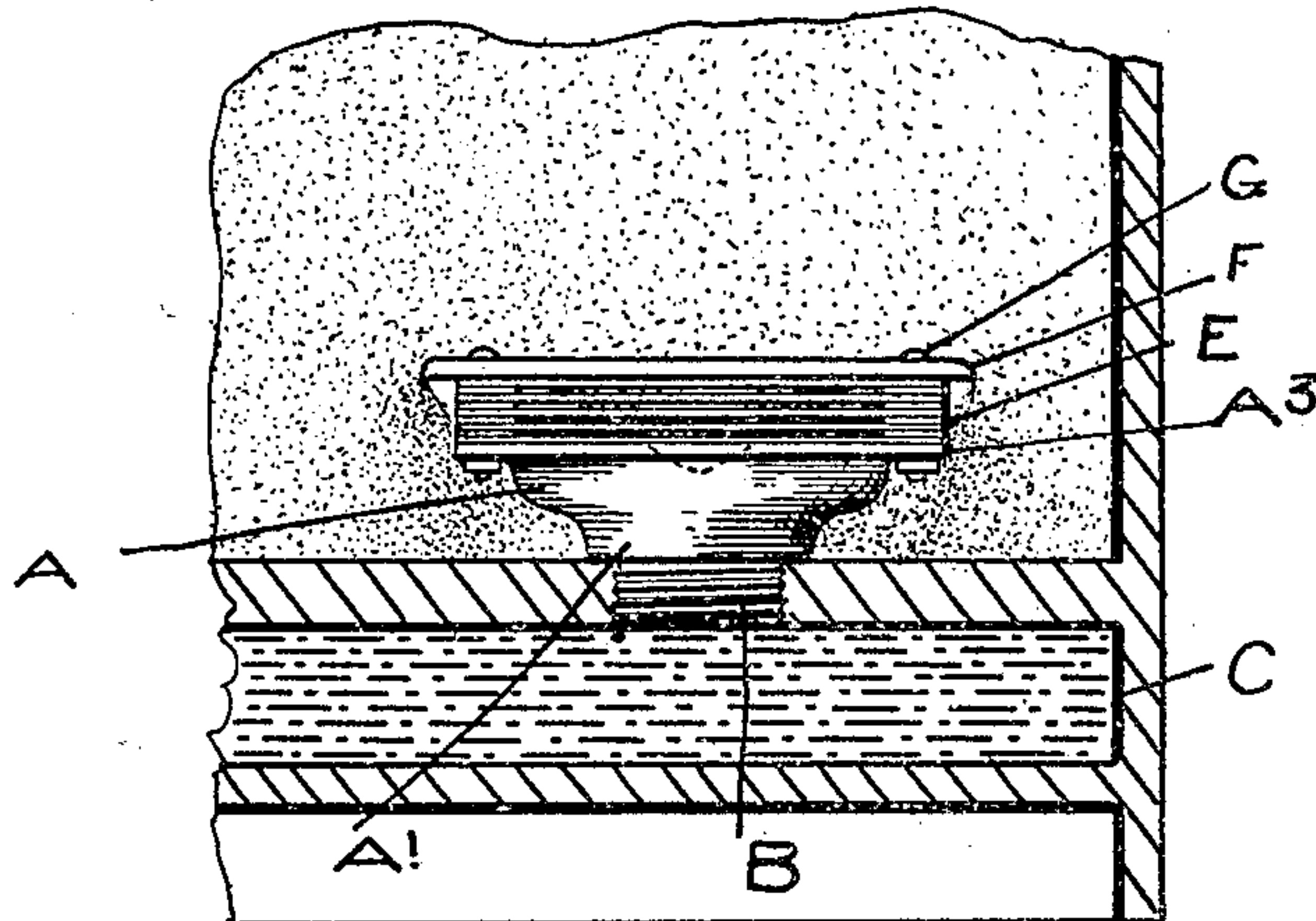


FIG. 1.

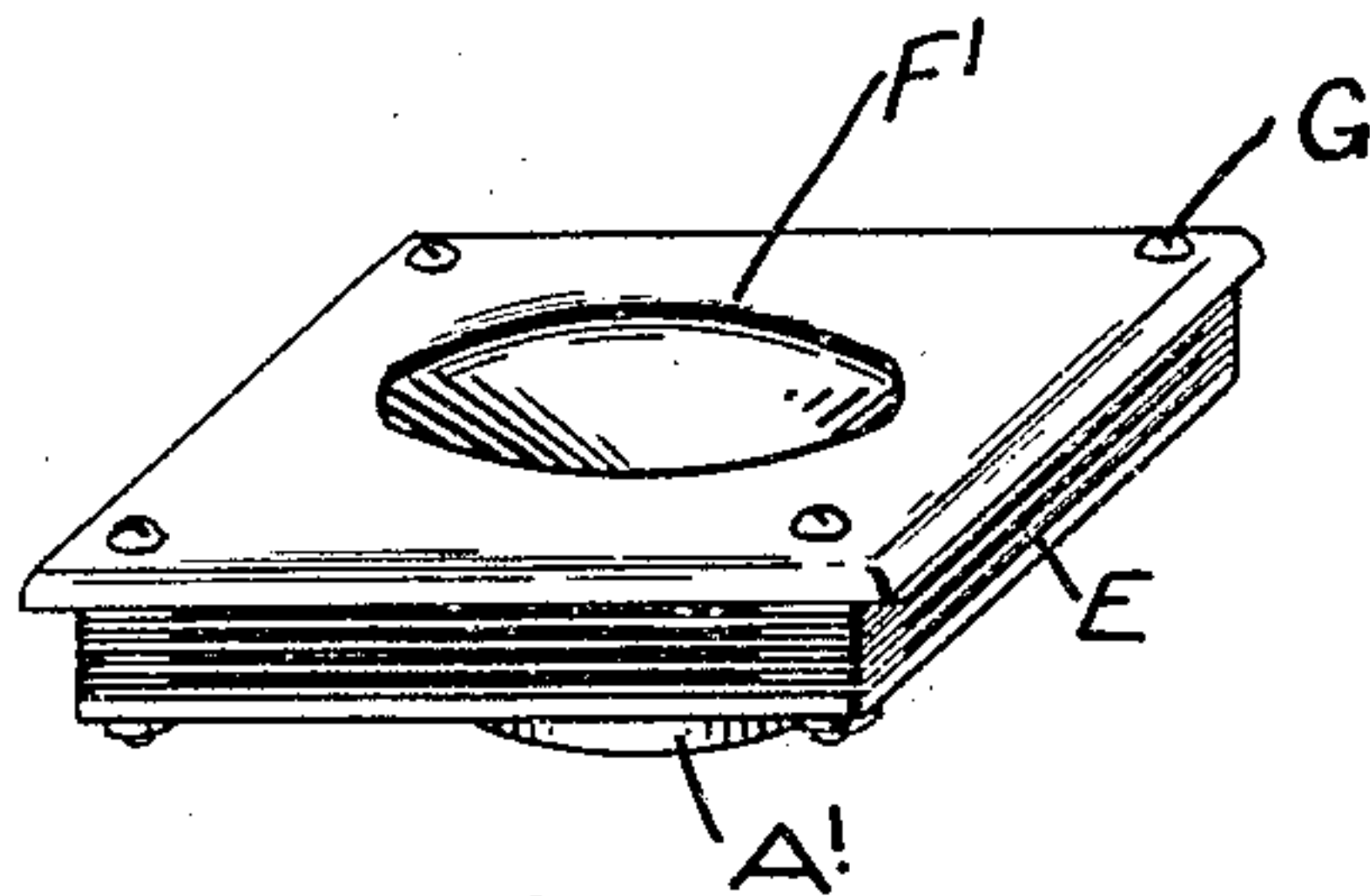


FIG. 2.

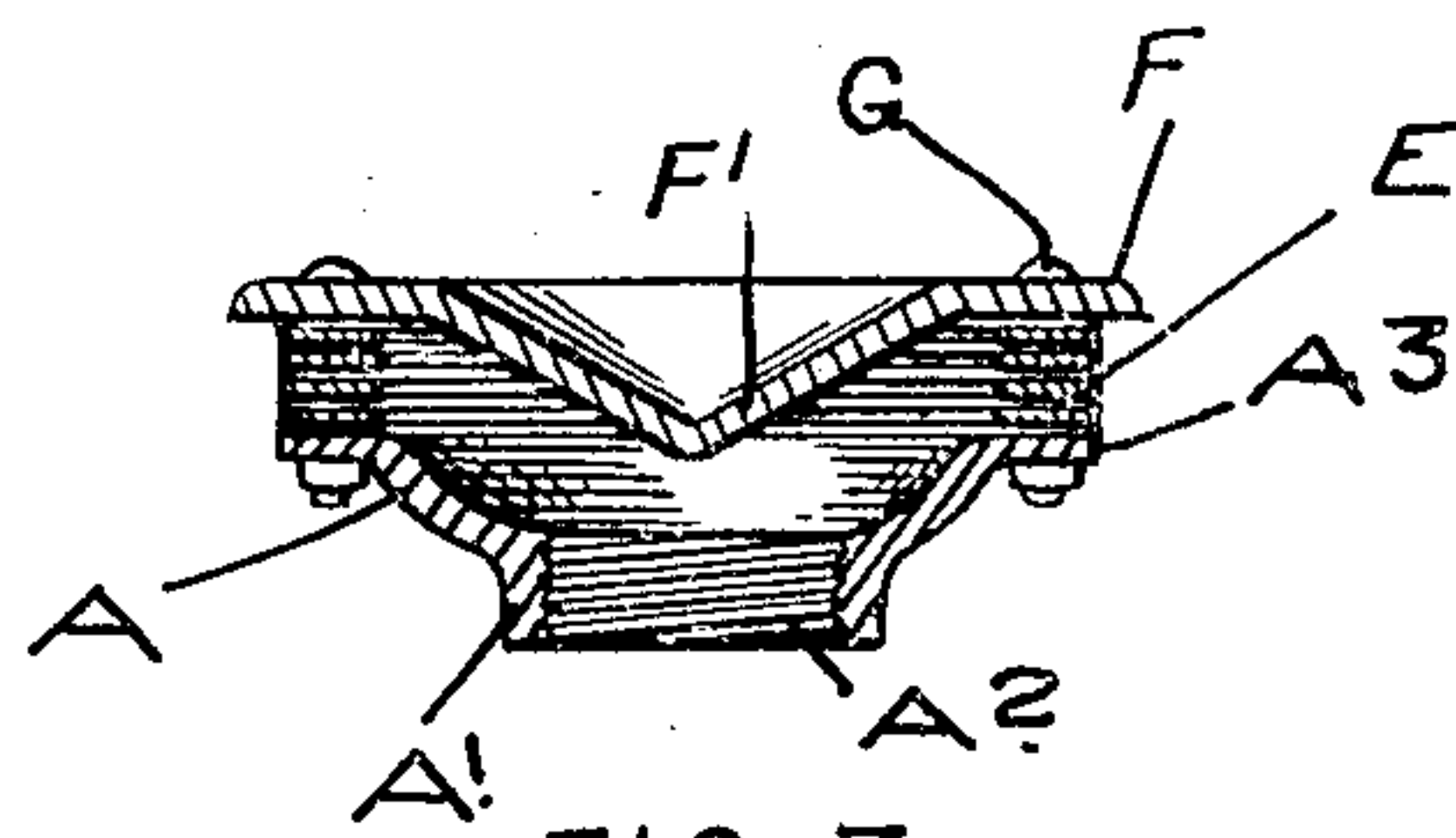


FIG. 3.

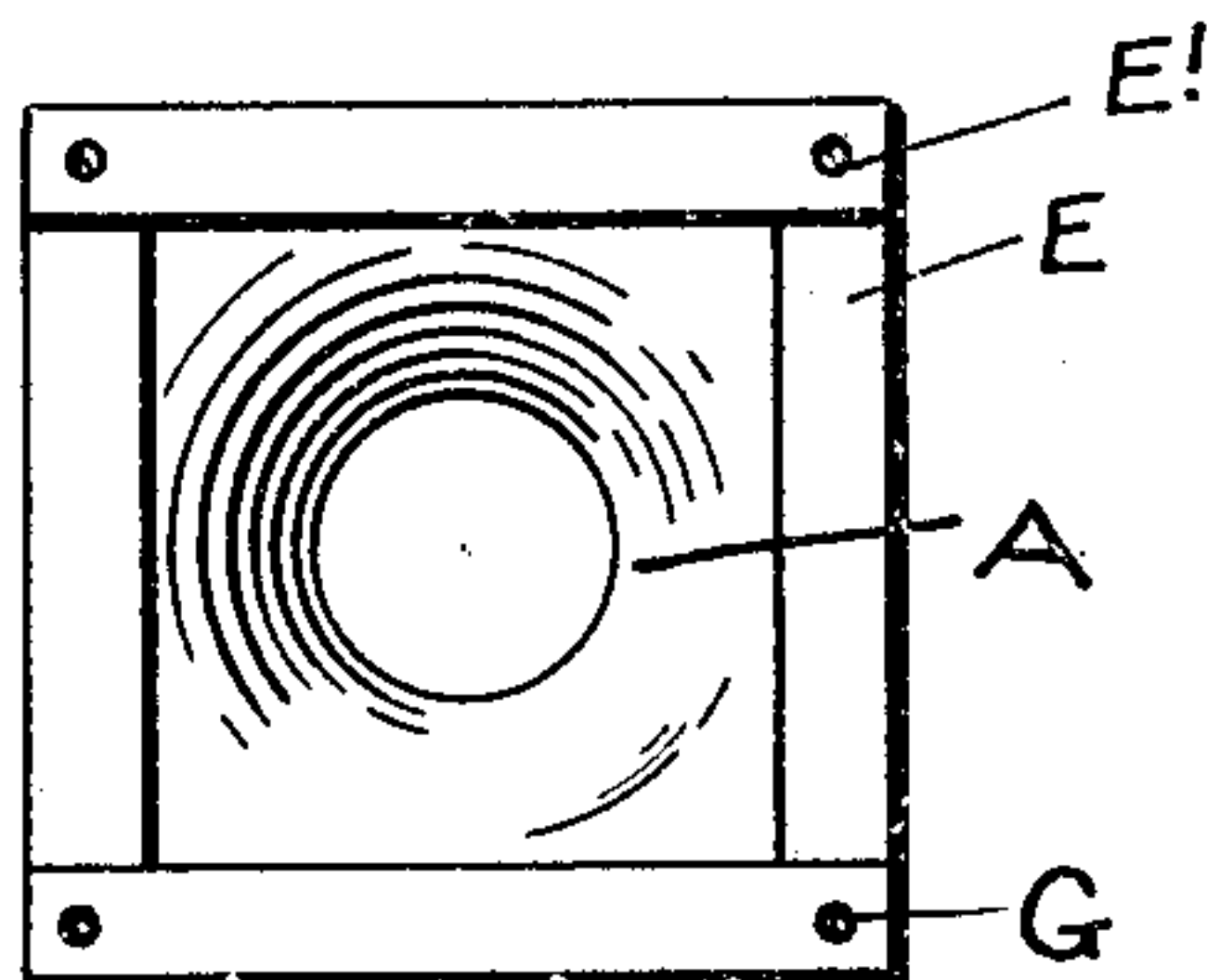


FIG. 4.

WITNESSES

J. E. Boyce

D. E. Craigie.

INVENTORS

G. H. IRWIN.

F. KNOWLSON.

by Fred. B. Jellisonbaugh  
ATTY.



# UNITED STATES PATENT OFFICE.

GEORGE HARTFORD IRWIN AND FREDERICK KNOWLSON, OF LINDSAY, ONTARIO, CANADA.

## SAND-VALVE.

No. 927,544.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed April 9, 1909. Serial No. 488,859.

*To all whom it may concern:*

Be it known that we, GEORGE HARTFORD IRWIN and FREDERICK KNOWLSON, both of the town of Lindsay, in the county of Victoria, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Sand-Valves, of which the following is the specification.

Our invention relates to improvements in sand valves used in filters, and the object of the invention is to devise a simple, cheap and effectual strainer for a filter in which sand or other similar filtering material is used, which will not be liable to become stopped by the sand and which may be also very effectually used in cleaning the filter by forcing the water back through the strainer.

Our invention consists of a strainer comprising a top plate preferably rectangular and formed with a depending converging deflector, a bottom provided with a hollow depending boss having an orifice designed to receive a nipple, and a series of flat strips at each side located one above the other and adapted to lie on each other at the corners, so as to form an open strainer between the corners, the corners being fastened together by bolts and the top projecting beyond the edge of the straining strips, the parts being otherwise constructed and arranged as hereinafter more particularly explained.

Figure 1, is a view of a small portion of a filtering bed showing my improved strainer. Fig. 2, is a perspective view of the strainer proper. Fig. 3, is a vertical section through the strainer. Fig. 4, is a sectional plan with the top removed.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the bottom of the strainer, which is provided with a hollow depending boss A' having a threaded orifice A<sup>2</sup>, which is connected to the bottom of the filter by a hollow nipple B, which extends through the bottom and communicates with the main water chamber C.

A<sup>3</sup> is the flat portion of the bottom.

E are series of strips of equal thickness and arranged to overlap each other at the corners as indicated and provided with corner holes E' through the overlapping portions, which form substantially solid corners. It will thus be seen that the bars form at the sides a strainer, the open portion corresponding, although not necessarily so, to the depth of the strip.

F is the top plate, the edges of which overhang the edge of the strip D.

G are the bolts, which extend through the top plate F and the holes E in the overlapping corners of the strips D and the holes in the bottom B.

It will be noticed that the top plate is provided with a depending converging deflector F' for a purpose, which will hereinafter appear.

The strainers above referred to may be arranged in the filter in any suitable manner and at any desired distance apart that may be found most conducive for effectual results.

The overhanging edges of the top plate F serve to prevent the sand during filtration from passing into the slits or openings between the strips D. The converging depending deflector F' serves when the filter is being used to deflect and direct the water outward through the slits between the strips D, so as to effectually aid in the cleaning of the filter by allowing the water to pass freely into the filtering sand bed.

We are aware that strainers for filters are not new and we do not claim broadly any such arrangement, nor even the arrangement of a strainer with slitted walls, but we are not aware of any device which can be made up as cheaply and will produce as effectual results as that which we have shown and described.

What we claim as our invention is:

1. In a strainer for filters, the combination with a bottom having a depending boss provided with a threaded orifice, of a series of strips designed to overlap and form a wall with intermediate slits, and a top superimposed on the strips and provided with a depending deflector as and for the purpose specified.

2. In a strainer for filters, the combination with a bottom having a depending boss provided with a threaded orifice, of a series of strips designed to overlap and form a wall with intermediate slits, and a top superimposed on the strips and provided with a depending deflector, and means for fastening the strips together where they overlap as and for the purpose specified.

3. In a strainer for filters, the combination with a bottom having a depending boss provided with a threaded orifice, of a series of strips designed to overlap and form a wall with intermediate slits, and a top superim-



posed on the strips and provided with a depending deflector, and bolts extending through the strips where they overlap as and for the purpose specified.

- 5 4. The combination with the bottom having a sided edge and a depending boss provided with a threaded orifice, of a series of strips designed to overlap and form a wall parallel to the edges of the bottom with

intermediate slits, and a correspondingly sided top superimposed on the strips and provided with a depending deflector as and for the purpose specified.

GEORGE HARTFORD IRWIN.  
FREDERICK KNOWLSON.

Witnesses:

FLORENCE CURRIE,  
ANNIE WRIGHT.