

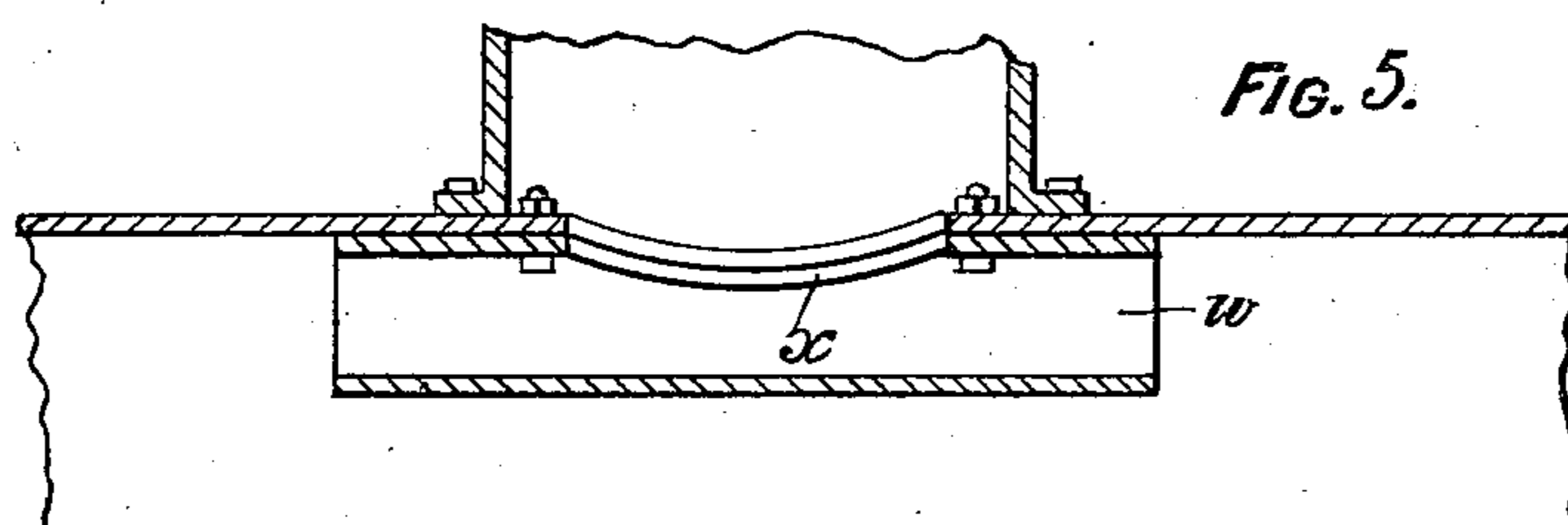
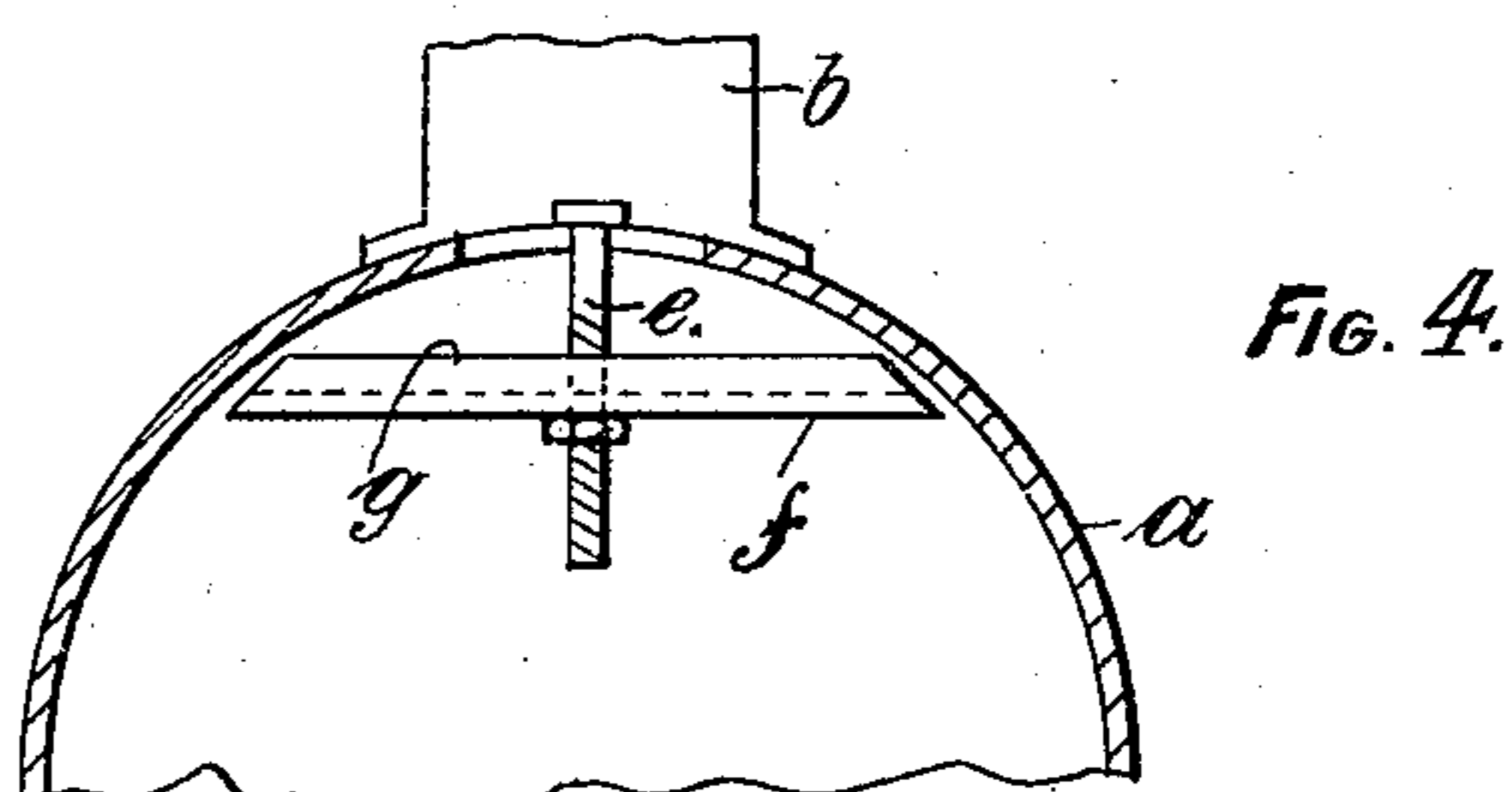
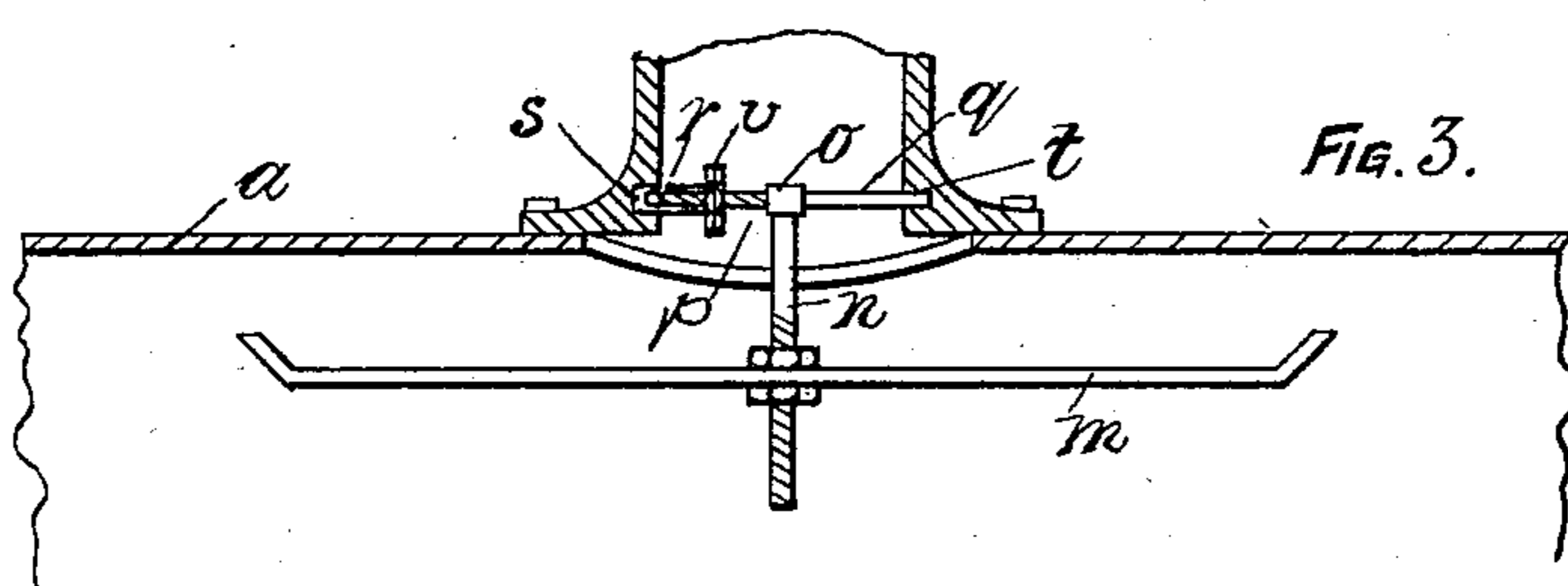
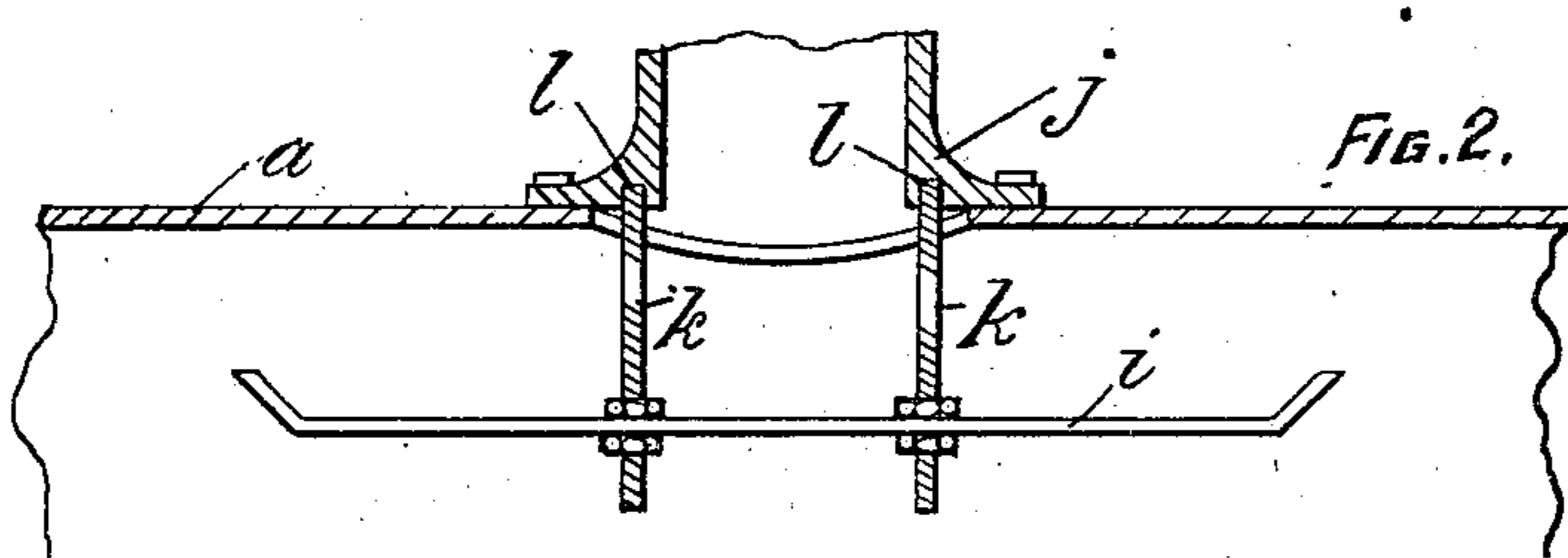
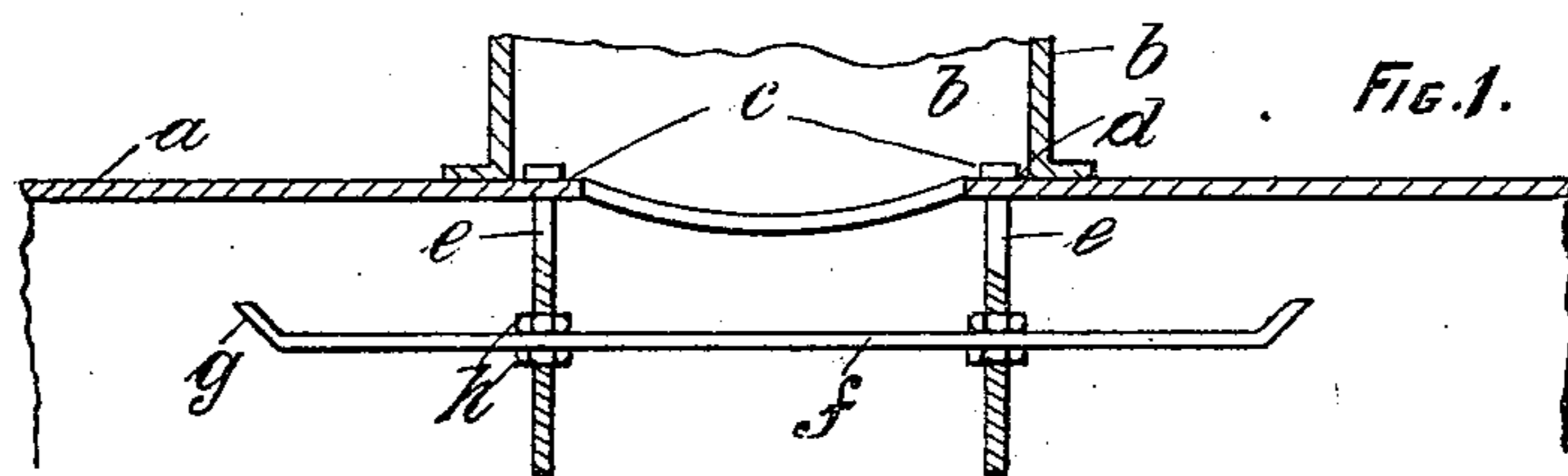
No. 725,698.

PATENTED APR. 21, 1903.

R. H. GOACHER.  
SEPARATOR FOR STEAM BOILERS.

APPLICATION FILED APR. 21, 1902.

NO MODEL.



Witnesses  
Peter Hughes.  
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# UNITED STATES PATENT OFFICE.

ROBERT HENRY GOACHER, OF WOODSETTS, ENGLAND.

## SEPARATOR FOR STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 725,698, dated April 21, 1903.

Application filed April 21, 1902. Serial No. 104,035. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT HENRY GOACHER, a subject of the King of the United Kingdom of Great Britain and Ireland, residing at Woodsetts, near Worksop, in the county of York, England, have invented new and useful Improvements in Separators for Steam-Boilers, of which the following is a specification.

This invention relates to improvements in steam-boilers, the object being to provide means for preventing "priming" by admitting only dry steam to steam dome or delivery pipe.

In carrying my invention into effect I cause the steam to reach the steam dome or delivery pipe by passing between a plate and the shell of the boiler.

In the accompanying drawings, Figures 1, 2, and 3 show in longitudinal section several modes of attaching the plates in position, and Fig. 4 is a cross-section of Fig. 1, and Fig. 5 a longitudinal section of a modification.

Referring to Fig. 1, *a* is a boiler-shell; *b*, the steam-dome; *c*, the opening in the boiler, of less diameter than the dome, so as to provide an instanding ledge *d*. Through the ledge *d* are passed downward the screw-threaded bolts *e*, which pass through plain holes in the separator-plate *f*, having upwardly and outwardly turned ends *g*. The plate *f* extends across the boiler a few inches below the dome *b* and is kept in place on the bolts *e* by the nuts *h*.

Fig. 2 shows the separator-plate *i* attached to the "block" *j* of the delivery-pipe by bolts *k*, screwing into the block *j*, as at *l*.

In Fig. 3 the separator-plate *m* is shown as suspended by a bolt *n*, the head *o* of which is carried by the cross-bar *p*, one end of which is plain, as at *q*, and the other screw-threaded,

as at *r*. The screw-threaded end *r* of the cross-bar *p* works in a pipe *s*. The plain end *q* of the said bar enters a hole or recess *t* on one side of the block *j*, and the pipe *s* enters a similar hole or recess on the opposite side of the block. Lock-nuts *u* keep the outer ends of the pipe *s* and that of the plain end *q* in their respective recesses on opposite sides of the block *j*.

The separator-plates may be flat, with the ends turned up, they may be curved from end to end upward or downward, with or without turned-up ends, and they may be perforated or not.

In substitution for the separator-plates I sometimes use an open under tube *w*, as shown in Fig. 5. In this case the tube has a central opening *x*, communicating with the dome or steam-delivery pipe.

In cases where the plate is wider than the manhole of the boiler it may be in two pieces, which can be bolted up when inside the boiler.

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

For preventing the immediate access of steam to the steam-dome, an instanding ledge surrounding the mouth of the steam-dome: bolts depending from the said instanding ledge and a plate of greater length than breadth suspended by the said depending bolts and having its shorter sides outwardly upturned, substantially as hereinbefore described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT HENRY GOACHER.

Witnesses:

JOHN N. DEWICK,  
WILLIAM YORK.