

W. M. FLEMING.
 INJECTOR CONDENSER.
 APPLICATION FILED MAY 13, 1906.

949,761.

Patented Feb. 22, 1910.

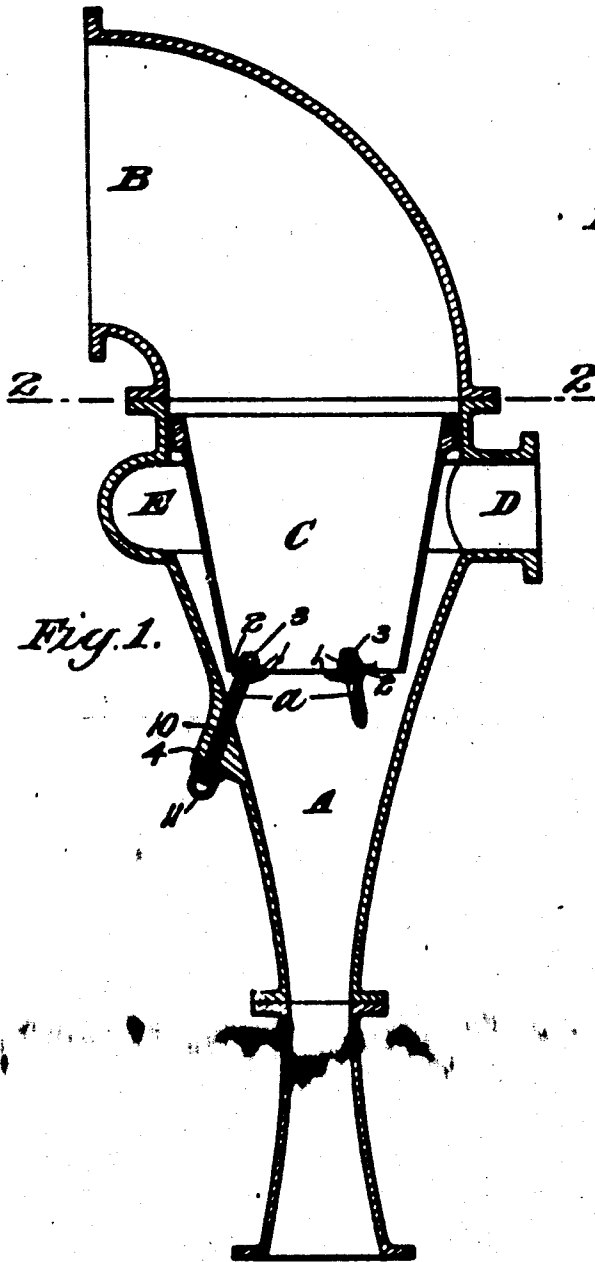


Fig. 1.

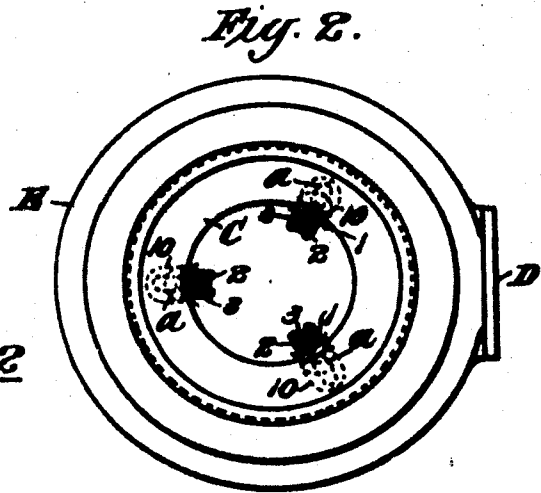


Fig. 2.

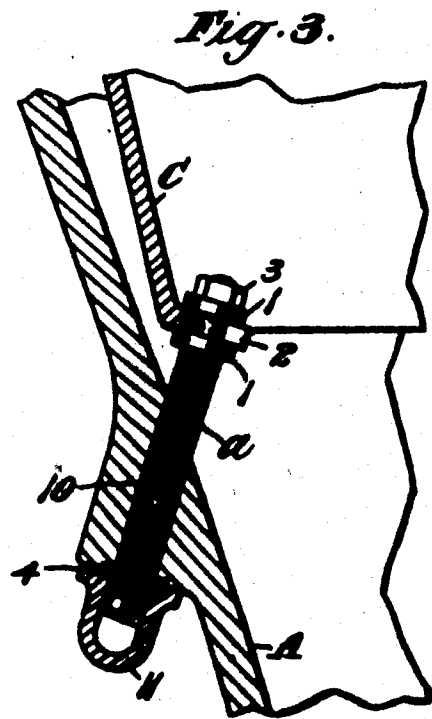


Fig. 3.

Witnesses:
 W. H. H. H.
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Inventor:
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UNITED STATES PATENT OFFICE.

WILLS M. FLEMING, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR TO INTERNATIONAL
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INJECTOR-CONDENSER.

949,761.

Specification of Letters Patent.

Patented Feb. 22, 1910.

Application filed May 12, 1909. Serial No. 495,735.

To all whom it may concern:

Be it known that I, WILLS M. FLEMING, a citizen of the United States, residing at Holyoke, county of Hampden, and State of Massachusetts, have invented certain new and useful Improvements in Injector-Condensers, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to condensers of that type generally known as injector condensers in which a hollow injection cone is used for the admission of steam, and this cone is made adjustable to vary the annular water opening about the cone, so as to give the proper water velocity from the injection chamber to condense the entering steam and carry it out through the throat, the object of the invention being to provide an improved device for supporting and adjusting the steam cone.

In accordance with the present invention, the cone is supported and adjusted by adjustable bolts extending through the condenser shell from the outside and arranged around the lower end of the cone so as to support and strengthen the cone while enabling it to be adjusted from outside the condenser shell through a sufficient range to vary the water flow as desired.

In the accompanying drawing, forming a part of this specification, a construction is shown embodying the invention in its preferred form, and this construction will now be described in detail, and the features forming the invention particularly pointed out in the claims.

In the drawing:—Figure 1 is a vertical central section of the condenser, which may be a barometric condenser or otherwise. Fig. 2 is a top view of the condenser on the line 2 of Fig. 1. Fig. 3 is an enlarged detail showing one of the adjusting bolts.

Referring to the drawing A is the condenser proper having a steam inlet B, steam cone C, injection water inlet D, and injection chamber E, all these parts, except as to the means for supporting and adjusting the cone C, being shown as of a common form which may be varied as desired. The steam cone C is mounted to slide vertically within the upper part of the condenser above the injection chamber E, and at its lower end

is supported and adjusted by a number of adjusting bolts *a* arranged about the cone, three bolts being shown and preferably used, although the number may be varied. These adjusting bolts *a* are threaded through threaded portions 10 of the condenser shell, and are provided at their inner ends with collars 1 between which the condenser shell is held, preferably by slipping the inner ends of the bolts between the collars 1 into slotted lugs 2 on the condenser cone and tightening the outer collar by nut 3. At their outer ends the bolts *a* are preferably provided with fiber or other suitable gaskets 4 held in place and the bolt openings closed by caps 11 screwed on to the adjusting bolts, or otherwise secured.

My improved construction for supporting and adjusting the steam cone is very simple and cheap, not liable to get out of order, and the adjusting bolts support and brace the bottom of the cone against vibration and avoid any possible collapse of the cone from excess pressure in the injection chamber E.

What I claim is:—

1. In an injector condenser, the combination with a hollow steam cone mounted to slide vertically in the condenser, of a plurality of adjusting bolts arranged about the cone and extending through the condenser shell, said bolts being adjustable from outside the condenser and connected to the cone at their inner ends so as to support and adjust the cone.

2. The combination with an injector condenser and its steam cone C, of adjusting bolts *a* in the condenser shell arranged about the cone and having their inner ends connected to the lower end of the cone in such a manner as to support inner and outer pressure on the cone.

3. The combination with condenser cone C having slotted lugs 2, of screw bolts *a* having collars 1 on opposite sides of the lugs and nut 3, gaskets 4 at the outer ends of the bolts, and caps 11, substantially as described.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

WILLS M. FLEMING.

Witnesses:

JAMES J. DOWD,
T. F. GUSTAFSSON.