

K. MÜLLER.
 APPARATUS FOR DRAWING OFF WATER OF CONDENSATION.
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1,061,314.

Patented May 13, 1913.

Fig.1.

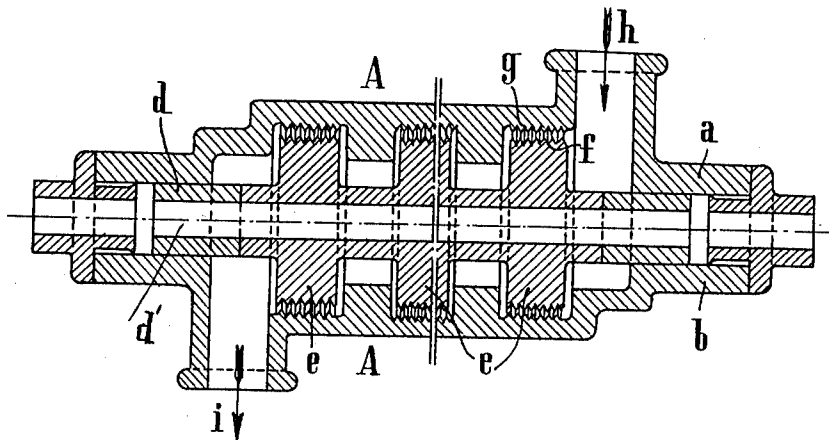
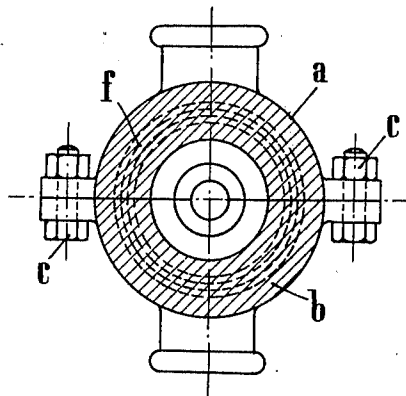


Fig.2.



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UNITED STATES PATENT OFFICE.

KARL MÜLLER, OF PARIS, FRANCE.

APPARATUS FOR DRAWING OFF WATER OF CONDENSATION.

1,061,314.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed December 30, 1912. Serial No. 739,241.

To all whom it may concern:

Be it known that I, KARL MÜLLER, engineer, a subject of Germany, residing at 33 Avenue Henri Martin, in Paris, France, formerly residing at 86 Avenue du Commerce, Antwerp, Belgium, have invented certain new and useful Improvements in Apparatus for Drawing Off Water of Condensation; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an apparatus for removing water of condensation formed in heat conductors, receivers, and such like. Its object is to provide a condensed water draw off arrangement (or trap) having no moving or easily damaged parts and in which the draw-off steam has its tension completely relieved and is condensed inside the apparatus. According to the present invention this object is effected by allowing the water of condensation to flow out through a suitable exhaust channel which is of such length and cross section that the tension of the steam drawn off with the water is entirely relieved by throttling; all as more fully herein after set forth, matters of novelty being particularly pointed out in the appended claim.

Figures 1 and 2 of the drawings show one method of carrying out the invention in which:—Fig. 1 is a longitudinal section through the apparatus. Fig. 2 is a cross section through the apparatus on the line A. A.

Similar letters of reference refer to similar parts in the views.

The casing of the apparatus for drawing off the water of condensation, is formed, according to Figs. 1 and 2, of the parts *a*, *b*, which are connected together by means of bolts *c*. The tubular spindle *d* is carried in the casing and is provided with disks *e*

having grooves *f* formed on their circumference. The inner wall of the parts *a*, *b*, of the casing is provided with corresponding recesses having a greater width than the disks and having grooves *g* at places opposite the grooves *f* and pointing toward the spindle *d* in such manner that a narrow channel is formed between the casing and the disks.

Water of condensation flows into the draw off apparatus at *h* and trickles through the channel formed between the wall and disks flowing out of the apparatus at *i*. In passing through the channel the pressure of the steam is reduced by throttling and at the same time its temperature is lowered as a consequence the tension of the steam is relieved and it is condensed. In order to increase the cooling action the spindle may have a hole *d'* bored through its center so that a cool current of air may pass through the apparatus. The hole can, as shown at Fig. 1, be drilled axially through the spindle but, if desired, other holes may also be drilled concentrically through the spindle.

What I claim is:—

A device of the character described, comprising a casing having a plurality of circumferentially grooved recesses, a spindle mounted within the casing and having an axial air passage, and a plurality of circumferentially grooved disks on the spindle that project a limited distance into the recesses and are of less width than the recesses, so as to form a tortuous steam passage therebetween.

In testimony whereof, I affix my signature in the presence of two witnesses.

KARL MÜLLER.

Witnesses:

HANSON C. COXE,
JACK H. BAKER.