

No. 688,471.

Patented Dec. 10, 1901.

R. KNIETSCH.

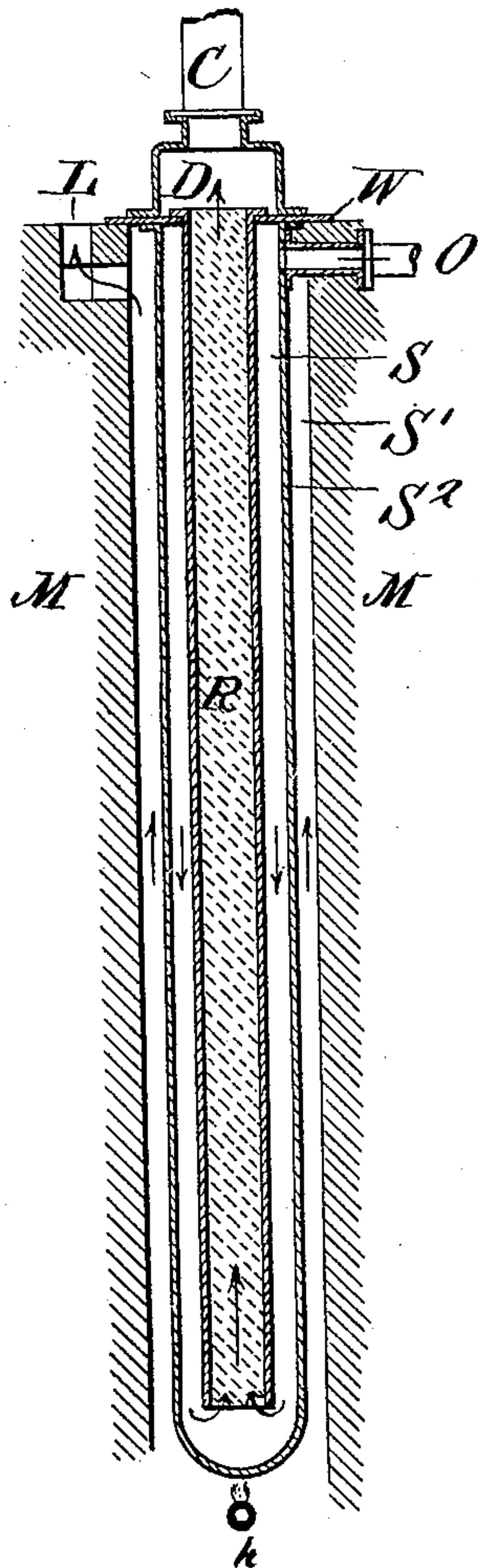
APPARATUS FOR THE MANUFACTURE OF SULFURIC ANHYDRID.

(Application filed Nov. 23, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1,



WITNESSES:

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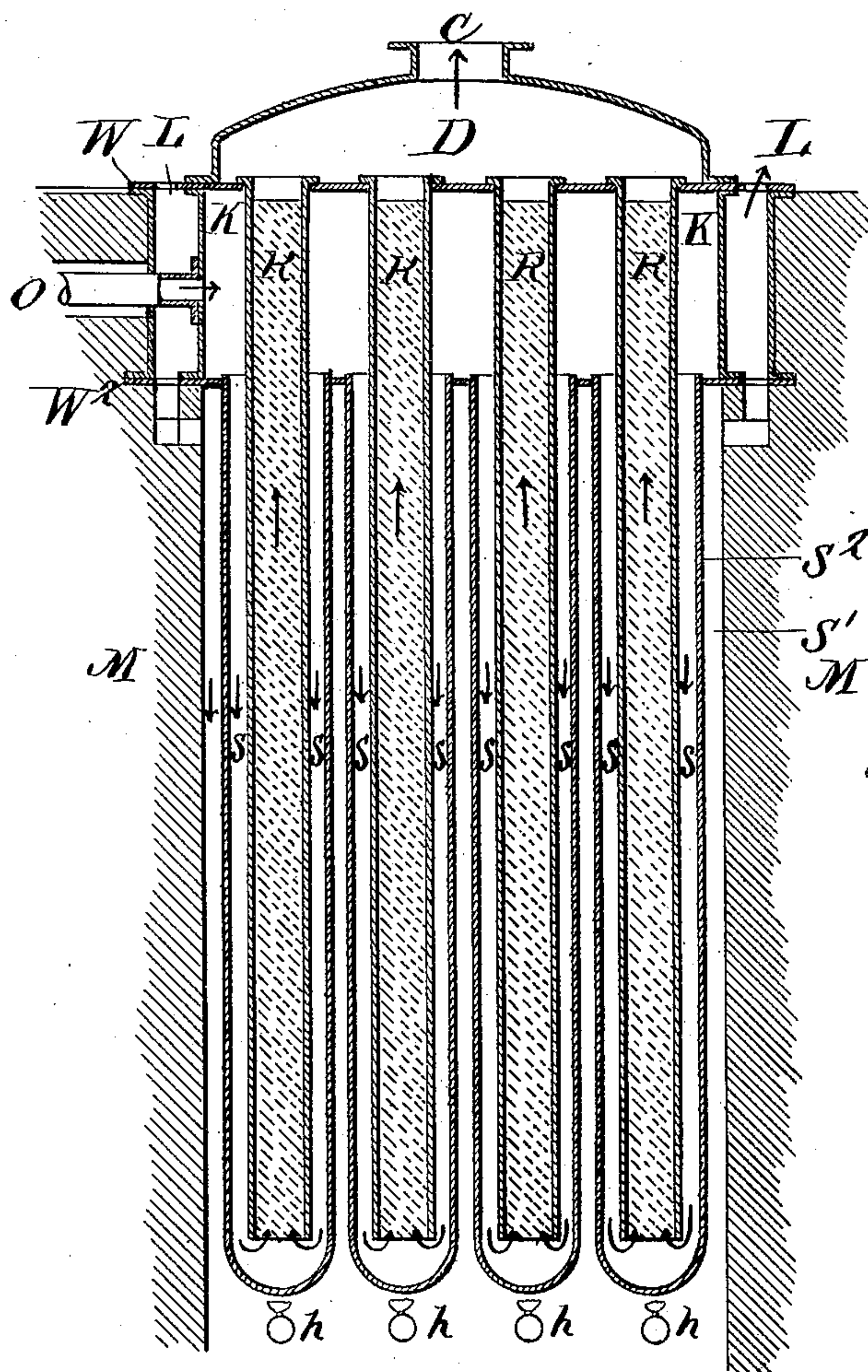
APPARATUS FOR THE MANUFACTURE OF SULFURIC ANHYDRID.

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(No Model.)

2 Sheets—Sheet 2.

Fig. 2.



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APPARATUS FOR THE MANUFACTURE OF SULFURIC ANHYDRID.

SPECIFICATION forming part of Letters Patent No. 688,471, dated December 10, 1901.

Original application filed July 14, 1898, Serial No. 685,969. Divided and this application filed November 23, 1899. Serial No. 738,007. (No model.)

To all whom it may concern:

Be it known that I, RUDOLF KNIETSCH, doctor of philosophy, a subject of the King of Prussia, Emperor of Germany, residing at Ludwigshafen-on-the-Rhine, in the Kingdom of Bavaria and Empire of Germany, have invented new and useful Improvements in Apparatus for the Manufacture of Sulfuric Anhydrid, of which the following is a specification.

In my application, Serial No. 685,969, of July 14, 1898, I have described the apparatus which is the subject of this application and have included it within the generic claims, and I have filed this as a division of said application for the purpose of securing specific claims for said apparatus.

The form of apparatus here particularly described and claimed is characterized by having the contact-chamber inserted into a tubular pocket or chamber closed at the bottom and which is provided with an entrance at the top for the sulfurous gases to be operated upon.

In the drawings, Figure 1, M represents the brickwork. S² may be a wrought-iron pipe and forms a tubular pocket, and R a contact-chamber containing the contact substance. (Indicated by the broken section-lines.) The shaft L allows of the ventilation and regulation of the temperature of the space S', which is provided with the source of heat h, which should be of such character as to be easily and quickly regulated, such as gas-flames, and serves, primarily, to heat up the apparatus to start the operation and, if necessary, to maintain the proper temperature in the apparatus for successful working. The upper tube-plate W carries the tubular pocket S², as well as the contact-chamber R. The sulfurous gas to be operated upon enters at O, passes into the cooling-chamber S in the direction of the arrows, then turns back upon itself into the contact-chamber R and through the contact substance, entering then into the hood D and leaving the apparatus by the exit C.

In Fig. 2 I show an apparatus made up of a plurality of such tubular pockets, each tubular pocket containing a single contact-chamber. This apparatus has, in addition to the parts of Fig. 1, the space K, inclosed between the tube-plate W and the extra tube-plate W². This space K serves to distribute the gas entering the cooling-chambers S. The tube-plate W² serves as a support for the tubular pockets S². The space S' about the tubular pockets S² has its temperature regulated by the sources of heat h and is ventilated, as before, by the ventilating-shafts L. The gas containing the so-produced sulfuric anhydrid leaves both apparatus by way of D and C and can be worked up or used in any suitable way.

I claim—

1. In an apparatus for the manufacture of sulfuric anhydrid by the contact process, in combination with the contact material, a receptacle for the same containing ingress and egress openings, a pocket-like inclosure into which said ingress-opening extends whereby the sulfurous gas on its way to said contact material is held adjacent to the receptacle thereof.

2. In an apparatus for the manufacture of sulfuric anhydrid by the contact process, in combination with the contact material, a receptacle for the same containing ingress and egress openings, a pocket-like inclosure into which said ingress-opening extends whereby the sulfurous gas on its way to said contact material is held adjacent to the receptacle thereof, a second inclosure forming a cooling-medium passage adjacent to said pocket and means whereby the temperature of said cooling medium is regulated.

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

RUDOLF KNIETSCH.

Witnesses:

ERNEST F. EHRHARDT,
BERNHARD C. HESSE.