

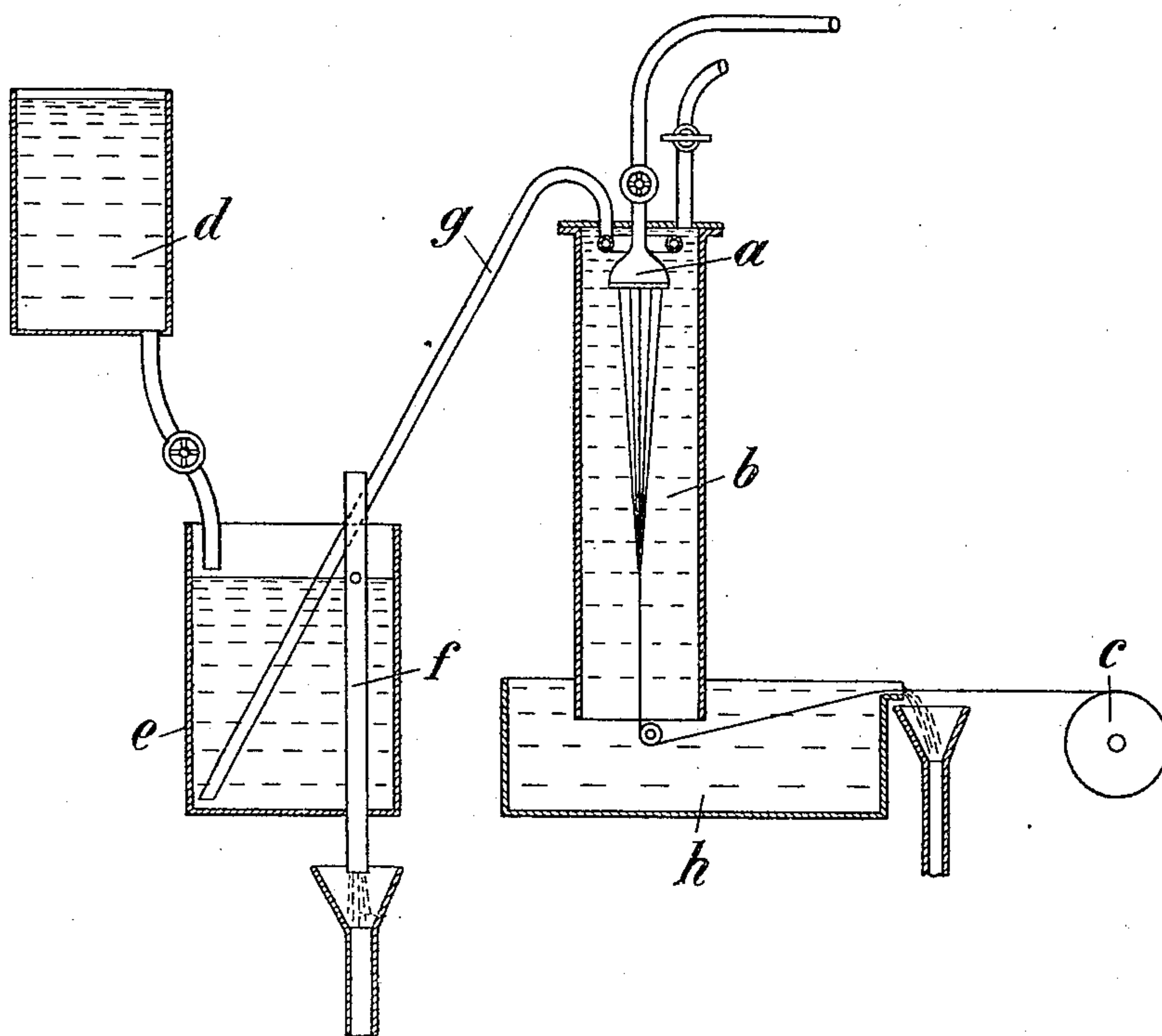
No. 838,758.

PATENTED DEC. 18, 1906.

E. THIELE.

APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL SILK.

APPLICATION FILED AUG. 29, 1906.



Witnesses;  
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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL SILK.

No. 838,758.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed August 29, 1906. Serial No. 332,415.

*To all whom it may concern:*

Be it known that I, EDMUND THIELE, chemist, a subject of the German Emperor, residing at Brussels, in the Kingdom of Belgium, have invented a new and useful Improved Apparatus for the Manufacture of Artificial Silk; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improved apparatus for the manufacture of artificial silk.

The apparatus is of the type in which the production of artificial silk is effected in a spinning vessel which resembles a barometer, being closed at the top and open at the bottom. In order to obtain in the spinning vessel traversed by the precipitation liquid a steadily uniform vacuum, adjustable, however, without interruption or disturbance of the continuity of spinning, the liquid is allowed, according to the present invention, to flow through a lower-level auxiliary reservoir, the surface level of which can be kept constant in any known manner—for instance, by an overflow-pipe. From the arrangement of the auxiliary reservoir at a lower level it results that the vacuum in the spinning vessel in spite of the juxtaposition of an open auxiliary reservoir which is in communication with the free atmosphere remains preserved, because the fluid column in the spinning vessel does not receive, as in a higher-situated auxiliary reservoir, the pressure of the precipitation fluid standing in the latter, but, on the other hand, must suck up the precipitation liquid out of the auxiliary reservoir. By raising or lowering the auxiliary reservoir or the overflow-pipe, regulating the depth of fluid therein, one can without difficulty alter the vacuum in the spinning vessel during working. If one lowers the fluid-overflow level in the auxiliary reservoir below that in the spinning vessel, one obtains both a lessening of the vacuum and simultaneous reversal of the direction of flow of the liquid, for the new apparatus represents an upright siphon filled with the precipitation liquid, the one leg being formed by the spinning vessel, the other leg by the tube. The two open leg ends of the siphon dip into the precipitation liquid contained in the aux-

iliary reservoir and the trough of the spinning vessel. The thread formation takes place in the one leg at the knee end. According as the fluid-level is raised at one or the other end of the knee-pipe, the fluid current can be caused to flow through in opposite directions.

The drawing shows diagrammatically, by way of example, a form of carrying out the principle of the present invention.

The spinning solution enters through a spinning rose or nozzle *a* in thread form into the spinning vessel *b* and after passing through the same is wound upon the drum *c*. The precipitation liquid flows from the main reservoir *d* into the open auxiliary reservoir *e*, the liquid-level of which is maintained constant by the overflow-pipe *f*, and enters through pipe *g* into the spinning vessel, which is closed at the top, to flow away after passing through the same out of the trough *h*.

In the construction illustrated the surface in the auxiliary reservoir is somewhat higher than that in the trough *h*, so that the precipitation liquid flows in the direction mentioned. On the other hand, if one lowers the fluid-level in *e* through deeper setting of the overflow-pipe *f* or of the whole reservoir the flow of liquid is reversed, and the precipitation liquid must then be caused to flow from the main reservoir *d* directly into the trough *h*.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

An apparatus for the production of artificial silk, in which the spinning vessel is closed at the top and open at the bottom, and is connected by a tube with a deep-standing auxiliary reservoir so that the spinning vessel and the tube form together an upright siphon dipping on the one end into the auxiliary reservoir and on the other end into the trough of the spinning vessel, substantially as described.

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

EDMUND THIELE.

Witnesses:

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