

J. E. BRANDENBERGER.
HOPPER FOR PRODUCING CELLULOSE PLATES AND FILMS.
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1,049,658.

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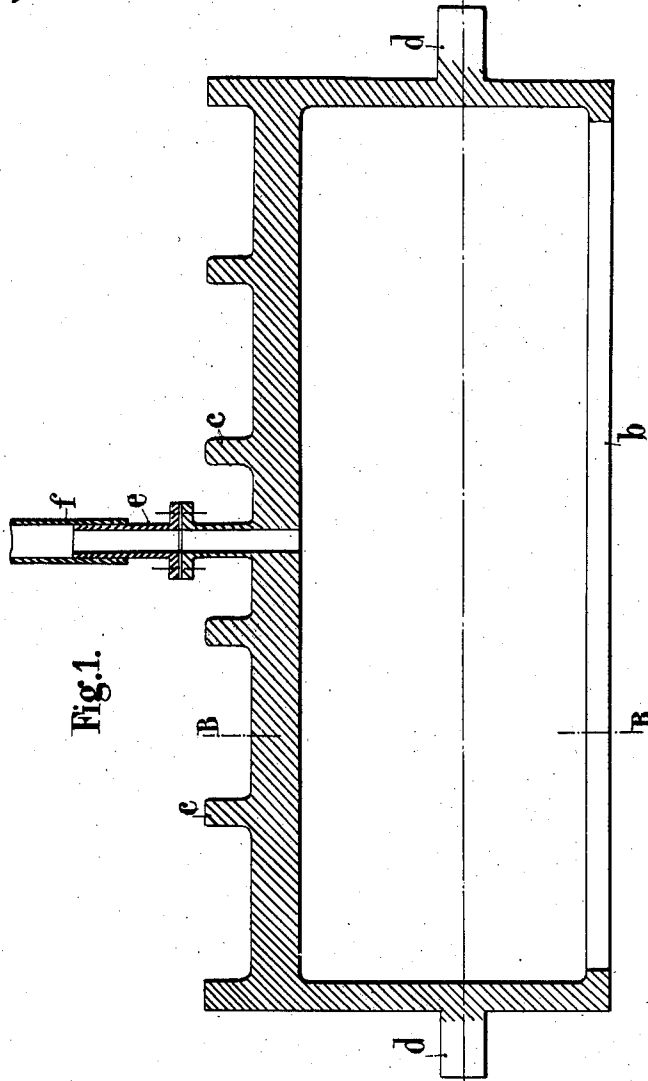


Fig. 1.

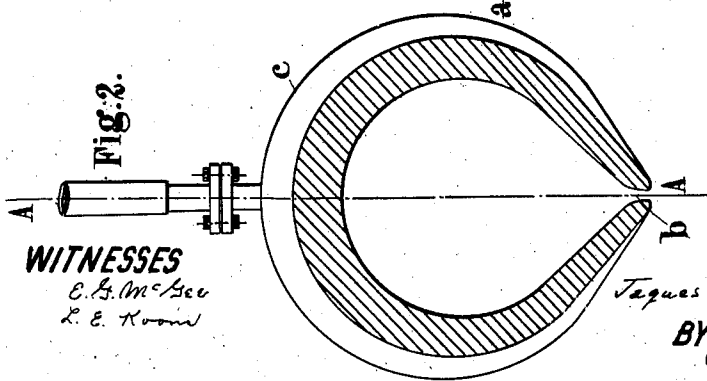


Fig. 2.

WITNESSES

E. A. McFee
L. E. Koon

INVENTOR

J. E. Brandenberger

BY

James H. Hunsley
ATTORNEY

UNITED STATES PATENT OFFICE.

JAKUES EDWIN BRANDENBERGER, OF THAON-LES-VOSGES, FRANCE.

HOPPER FOR PRODUCING CELLULOSE PLATES AND FILMS.

1,049,658.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAKUES EDWIN BRANDENBERGER, a citizen of the Republic of Switzerland, and resident of Thaon-les-Vosges, France, have invented new and useful Improvements in or Relating to Hoppers for Producing Cellulose Plates and Films, which improvements are fully set forth in the following specification.

10 In the manufacture of cellulose plates and films the hopper usually employed is merely a receptacle open to the atmosphere and having the shape of a triangular prism arranged horizontally above the coagulation bath, the lower edge of which receptacle is slotted for affording passage to the layer of aqueous cellulose solution stored in the receptacle. Such hopper has, however, certain disadvantages: Air is in contact with the cellulose solution, which results in a quick alteration of the latter, dust and foreign substances are liable to fall into the said solution, and air bubbles are liable to form at the moment of filling, etc.

25 This invention comprehends the use in the manufacture of cellulose plates and films, in place of the usual hopper, of a tubular receptacle with forced feed which has the following advantages over the ordinary hopper: 1. Impossibility of contact of the air with the cellulose solution owing to the forced filling of the receptacle, with consequent preservation, without possibility of alteration, of the solution during a considerable time. 2. Impossibility of penetration into the cellulose solution of dust and foreign substances which are the cause of defects in the manufactured product. 3. Impossibility of formation of air bubbles during the filling of the receptacle. 4. Possibility of a mathematical accuracy in the construction of the slot, owing to the mechanically rational construction of the walls. 5. Possibility of examination of the lips of the orifice and facilitation of the starting of the spinning by reason of the movable mounting of the hopper.

In order to make the following explanations as clear as possible, the accompanying drawings show by way of example the tubular receptacle forming the subject-matter of the invention.

Figure 1 is a longitudinal section of the improved hopper taken on line A—A of Fig. 2, and Fig. 2 is a cross-section on line B—B of Fig. 1.

The hopper *a* in question has the shape of a cylindrical tube with a base not necessarily circular, closed at the ends and split at *b* along one of its generatrices. This hopper is arranged horizontally above the coagulation bath, and is provided with outer transversely-disposed, strengthening ribs *c* to prevent it from becoming deformed or from bursting under the action of the internal pressure. Its end members are provided with pivot pins *d* which rotate in suitable bearings and enable the slot *b* to be quickly brought out of the coagulation bath and plunged back into it. A branch *e* to which is connected a conduit *f*, enables the receptacle to be filled with the aqueous solution of cellulose under a suitable pressure.

This apparatus facilitates the starting owing to the possibility of turning it to a predetermined angle about a horizontal axis. Moreover, this movement enables the longitudinal edges of the slot *b* to be examined and attended to.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

A hopper for use in obtaining cellulose plates and films comprising a cylindrical tube split along one of its generatrices and mounted for rotatable movement about an axis parallel to said generatrices.

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

JAKUES EDWIN BRANDENBERGER.

Witnesses:

EMILE LEDRET,

LUCIEN MEMMINGER.