

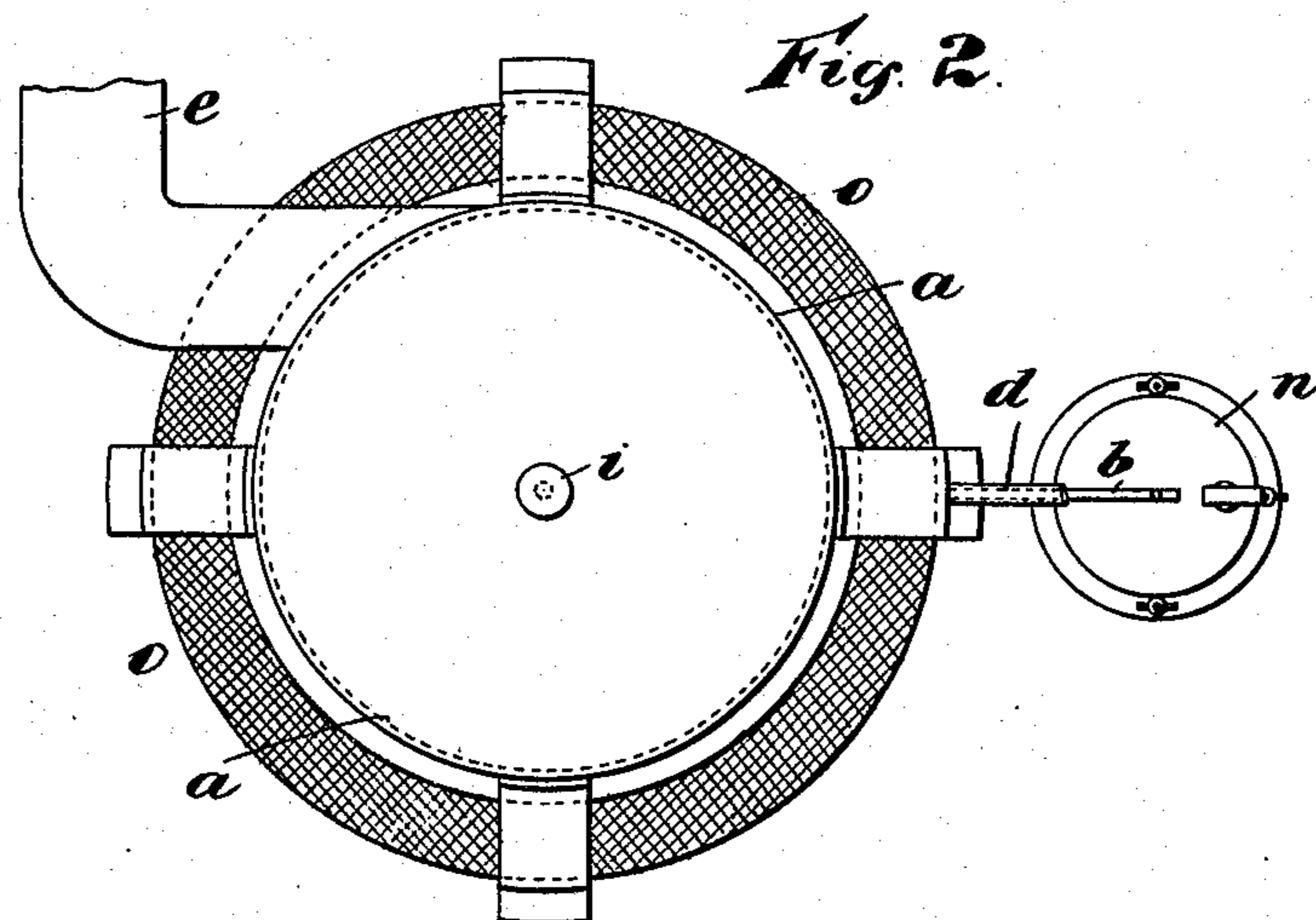
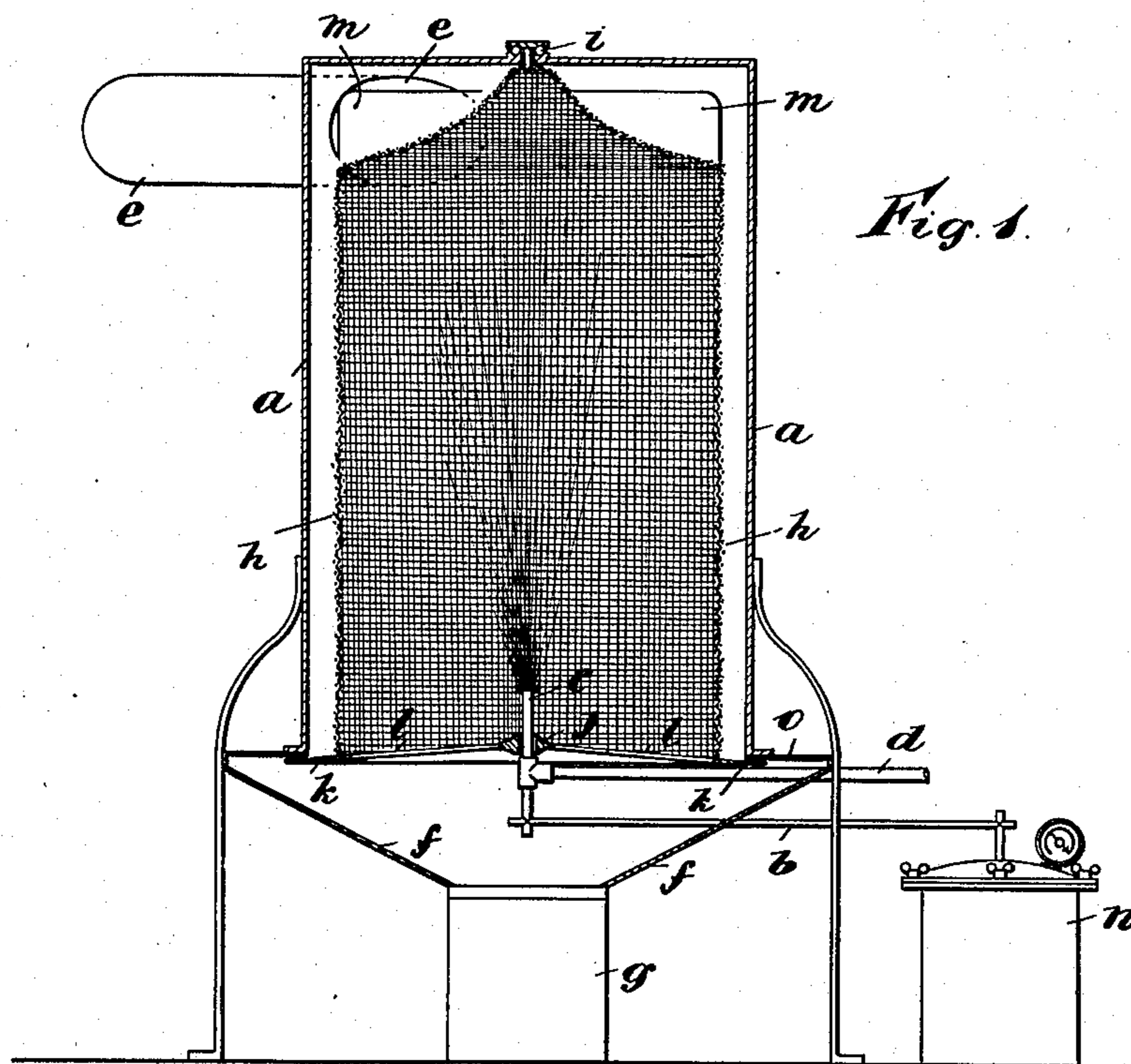
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DESICCATING APPARATUS.

APPLICATION FILED NOV. 6, 1908.

924,561.

Patented June 8, 1909.



Witnesses.

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DESICCATING APPARATUS.

No. 924,561.

Specification of Letters Patent.

Patented June 8, 1909.

Original application filed January 15, 1907, Serial No. 352,475. Divided and this application filed November 6, 1908. Serial No. 461,431.

To all whom it may concern:

Be it known that we, JAMES MECREDY and DAVID MARC ANDREW GRAHAM HAWES, both subjects of the King of Great Britain, residing at London, England, have invented a new and useful Improved Desiccating Apparatus, of which the following is a specification.

This invention relates to improved means and apparatus for obtaining dry products from liquids or semi-liquids.

This case is a division of a former application filed by us on January 15, 1907, Serial No. 352,475.

In the processes and apparatuses heretofore employed for the above mentioned purpose certain difficulties have been experienced in producing on a commercial scale a uniformly satisfactory product in a simple, reliable and efficient manner, and the object of this invention is to overcome those difficulties.

Figure 1 of the accompanying drawing represents diagrammatically in vertical section, and Fig. 2 in plan view, our improved apparatus for carrying out our present invention.

a is a cylindrical chamber or vessel into the central and lower part of which the liquid to be treated is introduced under pressure, by a pipe *b* leading from the container *n*, into a spraying or atomizing device *c* of any suitable construction, cold or heated air being also introduced by the pipe *d* simultaneously with the liquid.

In the upper part of the wall of the cylindrical chamber *a* is fitted a suitably shaped pipe *e* which also introduces heated air into the chamber but in a tangential direction.

h is a light cylindrical cage of gauze, muslin or the like introduced between the stationary wall of the cylindrical chamber *a* and the atomized liquid issuing from the atomizing device *c*. This cage *h* is suspended from the chamber *a* at its upper central part in a suitable bearing *i*, and is guided at its lower end by the boss *j* passing over the nozzle of the spraying or atomizing device *c* and connected to the circumferential flange *k* by

light spikes *l*. The upper part of the cage *h* is furnished with wind-vanes *m* which are acted upon by the heated air as it enters the chamber *a* in a tangential direction through the pipe *e* from a centrifugal fan or other blower, not shown in the drawing. This heated air impinging upon the vanes *m* causes the cage *h* to rotate more or less rapidly, and the atomized liquid is thereby prevented from being deposited upon the stationary walls of the chamber *a*, but is collected in a more or less dried state upon the moving surface of the said gauze or muslin cage, whence it falls, or is periodically removed by any convenient means and allowed to settle on to the coned bottom *f* from which it falls, or is drawn, into any suitable collecting vessel, such as *g* for example.

The heated air entering by the pipe *e* sweeps around and around in a helical path downward in the annular space between the walls of the chamber *a* and the cage *h* giving up its heat to the atomized material deposited upon the inner surface of the cage, thereby drying such material, and finally escapes into the atmosphere in a cooled condition through the annular gauze covered opening *o* in the lower part of the chamber *a*.

Claim.

An apparatus for obtaining dry products from liquids and semi-liquids, comprising a cylindrical chamber having air outlets in the bottom thereof, a spraying device at the lower part thereof, a tangentially arranged air pipe at the upper part thereof, a light gauze cage supported in said chamber, into which cage the spraying device discharges and which is rotated by the current of air from the air pipe, and powder collecting means in the lower part of the chamber.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES MECREDY.

DAVID MARC ANDREW GRAHAM HAWES.

Witnesses:

STEPHEN EDWARD GUNYON,
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