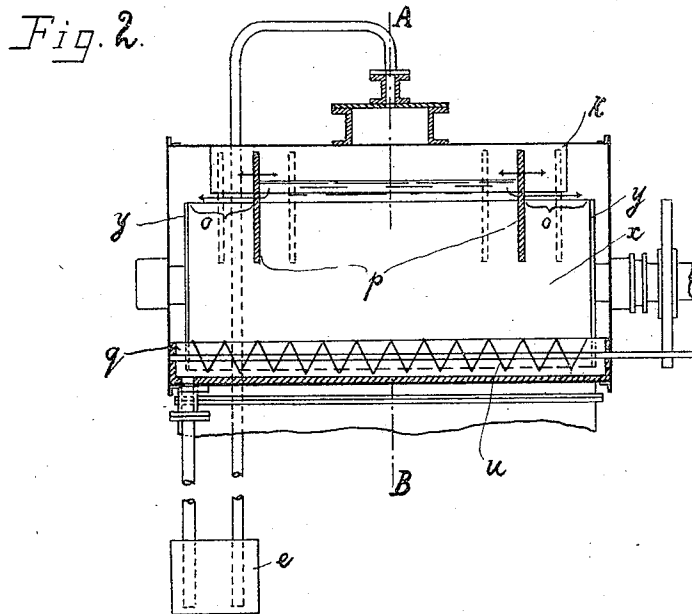
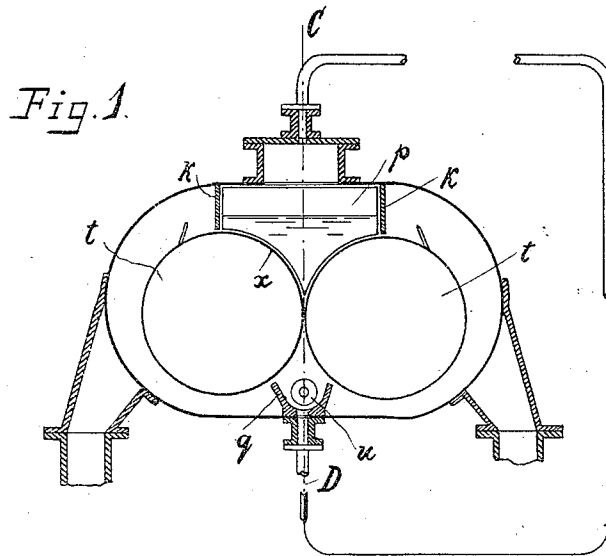


E. PASSBURG.
CYLINDER DRIER.
APPLICATION FILED JAN. 19, 1910.

988,022.

Patented Mar. 28, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

EMIL PASSBURG, OF BERLIN, GERMANY.

CYLINDER-DRIER.

988,022.

Specification of Letters Patent. Patented Mar. 28, 1911.

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To all whom it may concern:

Be it known that I, EMIL PASSBURG, engineer, a citizen of the German Empire, and a resident of Berlin, Germany, have invented certain new and useful Improvements in Cylinder-Driers, of which the following is a specification.

This invention has reference to improvements in cylinder driers provided with two rotary cylinders between which the liquid to be dried is fed.

The novel cylinder drier is purposed to dry liquids and semi-liquid substances for instance milk, blood, blood serum, the contents of eggs, egg albumin, egg yolks, fish albumin, etc.

It is the special object of this invention to prevent the liquid from flowing over the end edges of the cylinders onto the end walls where it will be overheated or burned.

Heretofore liquid holding or retaining devices were constructed between the converging walls of the cylinders resting against the parallel end walls of said cylinders or mounted at the end edges of same. Such devices are deficient because, a slight lateral dislocation of the device will allow the liquid to flow down on the parallel end walls of the cylinders and get overheated or burned and therefore is lost.

It is the purpose of the present invention to produce cylinder driers in which none of the liquid may reach the end walls and get overheated, burned and lost. To attain this desirable object the liquid holding or retaining device is so constructed that its parallel side walls located in the converging space between the cylinders are arranged at a certain distance from the end edges of said cylinders. The side end walls of such liquid retaining device do not form a tight closure between same and the cylinders, therefore liquid will flow sideways on the mantles of same but such liquid has to travel a certain distance on the cylinder mantles between the side walls of the retaining device and the end edges of same and therefore remains on the mantles and dries upon same. The distance between the side end walls of the liquid retaining device and the end edges of the cylinders depends on the consistency of the liquid to be dried. In apparatus for drying easy flowing or light liquids the distance must be greater than in apparatus designed for drying liquids of

relatively heavy consistency. To render one drier adapted for drying liquids of various consistency the liquid retaining device may be provided with adjustable end walls whereby the distance between them and the end edges of the cylinders may be regulated.

The invention may be applied in various kinds of driers, for instance in vacuum driers.

The invention is illustrated in the accompanying drawing in which:

Figure 1 represents in cross section on line A—B of Fig. 2 a vacuum drier with liquid retaining device embodying in desirable form the present improvements and Fig. 2 is a longitudinal section on line C—D of Fig. 1.

Similar characters of reference denote like parts in all the figures.

In the drawing the cylinders are designated by the reference letter *t* and *k* is a box containing the fluid to be dried. The end walls *p* of the box *k* extend close to the mantles *x* of the rotary cylinders *t* and are arranged at a certain distance from the end edges of said cylinders or their parallel end walls *y*. This distance can be adjusted according to the degree of density of the liquid to be dried so that the part of the liquid passing between the mantles *x* and the curved lower edges of the walls *p* dry on the part *o* of the mantles *x* lying between the walls *p* of the device and the end walls *y* of the cylinders without reaching the latter. As shown in Fig. 1 the walls *p* of the box *k* are located within the box *k* and may be laterally adjusted by a sliding and frictional contact of said end walls *p* with the sides of the box *k*. From the reservoir *q* below the joining line of the cylinders in which undried liquid collects that may pass said joining line, the liquid may be forwarded by a worm *u* located in the reservoir *q* and from here back into the box *k*. In place of this device other means may be employed for returning the liquid into the box *k*.

I claim as my invention:

1. A cylinder drier for drying liquids of various consistency comprising a pair of rotary cylinders, a liquid holding device above said cylinders arranged closely thereon and having laterally adjustable end walls at a certain distance from the end edges of the cylinders to retain all the liquid on the cylinder mantles during rotation and drying.

2. A cylinder drier comprising two rotary cylinders, and a liquid holding box above same closely arranged thereon, said box having end walls located between the side walls, and a sliding and frictional contact of the end walls with the side walls to move said end walls closer together or farther apart for the purpose of adjusting the distance

between said end walls of the liquid holder and the end edges of the cylinders. 10

Signed at Berlin this 10th day of January 1910.

EMIL PASSBURG.

Witnesses:

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