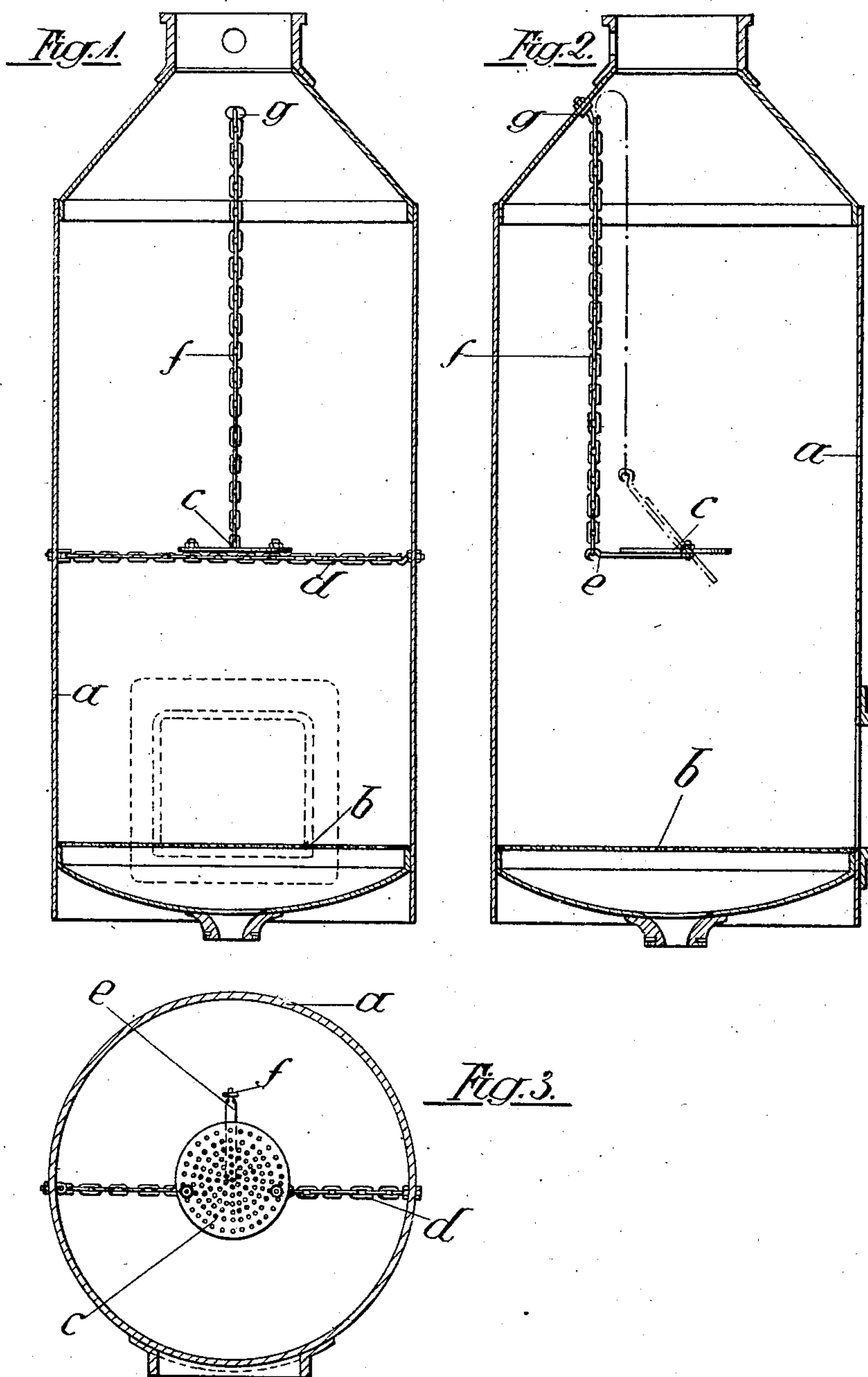


No. 868,328.

PATENTED OCT. 15, 1907.

F. CLOSS.  
DIFFUSION APPARATUS.  
APPLICATION FILED FEB. 23, 1907.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

FRIEDRICH CLOSS, OF STUTTGART, GERMANY.

## DIFFUSION APPARATUS.

No. 868,328.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed February 23, 1907. Serial No. 358,980.

*To all whom it may concern:*

Be it known that I, FRIEDRICH CLOSS, a citizen of the German Empire, residing at Stuttgart, in the Kingdom of Württemberg, Empire of Germany, have invented certain new and useful Improvements in Diffusion Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 The drawback which frequently arises in diffusion apparatus of the extraction proceeding too slowly, is always caused by too dense or close a packing of the beet-root shreddings, or the like, and particularly easily arises in the case of very fine shreddings or shreddings  
15 not cut with a very sharp knife, or those made from frozen roots. This invention relates to an arrangement whereby this drawback is avoided and consists of an obstructor which prevents the layers of the shreddings becoming too dense or close.

20 The object of the invention is constructed in a diffuser and shown in one form of construction as an example in Figures 1, 2 and 3, of the accompanying drawings which represent respectively two vertical sections turned through 90° relative to one another, and a horizontal section.  
25

The obstructor shown consists of a perforated plate *c* mounted on and attached to a horizontal chain *d* or the like fixed a suitable distance from the bottom or discharge portion of the diffuser *a*, transversely to the latter. The plate *c* lies in the center of the diffuser, while the horizontal chain lies somewhat aside of the vertical axis of the diffuser. The plate *c* is held in a level position, as regards the part lying eccentrically to the chain *d*, by means of a chain *f* suspended above on a  
30 hook *g*, which chain *f* carries at the lower end thereof the plate *c* by means of a yoke or bent arm *e*.  
35

When the diffuser is filled the portion of the shreddings lying above the plate *c* is carried by the plate and

does not rest on the shreddings located beneath it. This avoids the shreddings being too closely packed one upon the other in the lower part of the diffuser, and thereby the passage of the juice through them retarded. The consequence is, as experience has shown, that even in the case of extremely fine shreddings and even shreddings from frozen roots, a vigorous pressing  
40 takes place in the apparatus and its effective power is increased by over 20%. The extraction is better, and the shredding knives do not require to be so frequently sharpened. Further the diffuser may be built higher than hitherto in order to increase the apparatus.  
50

In discharging the diffuser through the lower man-hole, the plate *c* is placed obliquely by pulling up the chain *f*, whereby the shreddings which have remained supported on the plate drop off and may also be extracted. In place of a centrally lying perforated  
55 plate, a ring may be employed, or a similar ring, for instance in the middle of the diffuser and resting against its side walls. In the case of very high diffusers two or more superimposed plates or rings may also if desired be employed. The form of the plates or rings  
60 may be any suitable design and they may be made of perforated sheet metal, wire netting, gratings or the like.

I declare that what I claim is:—

In combination, with the diffuser, an obstructor disposed  
65 in the space thereof in spaced relation to the lower or discharge portion of said diffuser, said obstructor acting to prevent downward packing of the material above it on that below it, and chains suspended in the diffuser, said obstructor being carried by said chains; substantially as described.  
70

In testimony whereof I affix my signature, in presence of two witnesses.

FRIEDRICH CLOSS.

Witnesses:

HERM. HOPPE,  
ERNST ENTENMAN.