

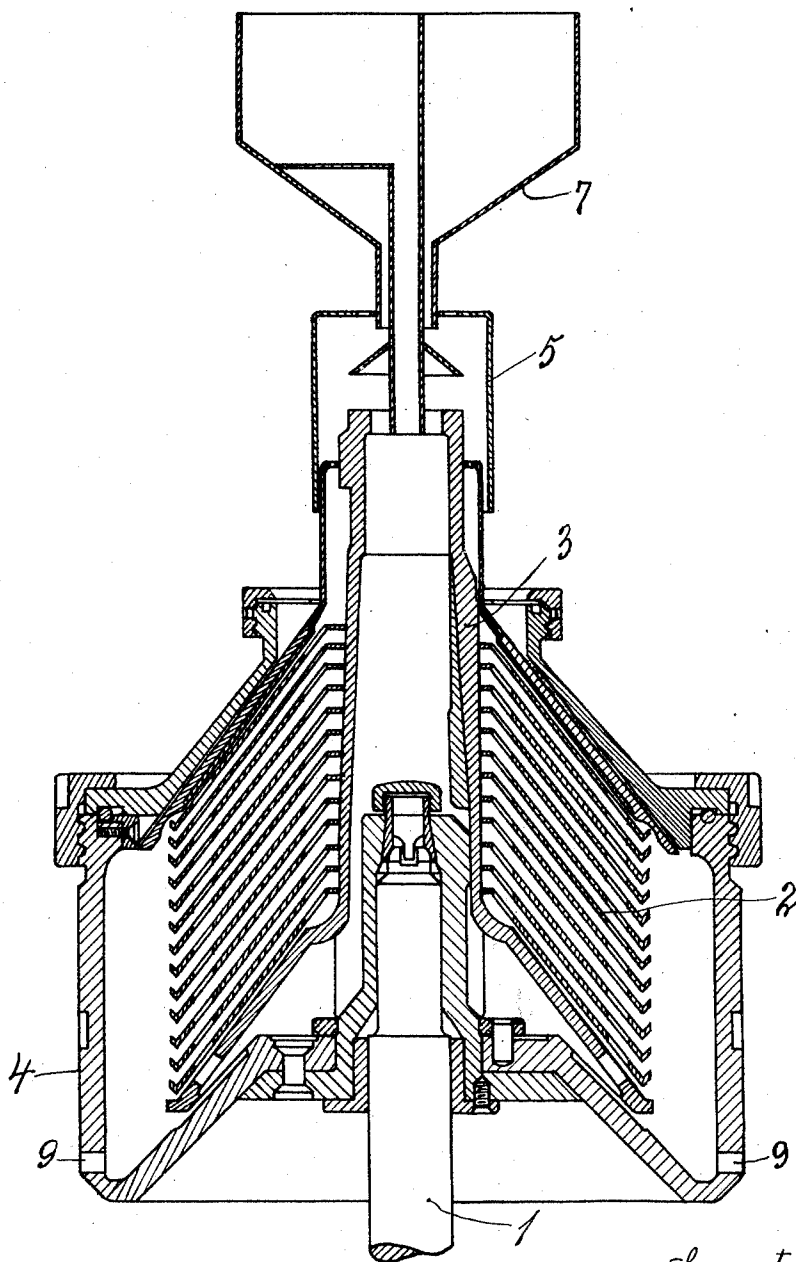
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CENTRIFUGAL SEPARATOR

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UNITED STATES PATENT OFFICE

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CENTRIFUGAL SEPARATOR

Application filed February 20, 1928, Serial No. 255,692, and in Norway June 18, 1925.

My invention relates to an arrangement for the cleaning of the plate set and distributing cross of centrifugal separators without having to take these parts out of the bowl body of the separator.

According to my invention I combine for this purpose a device for supplying the cleaning medium in known manner centrally in relation to the distributing cross, with openings (slots, perforations or the like) in the bowl body of the separator for the exit of the impurities and arranged to be closed at will, in order to make the apparatus act alternately as a centrifugal separator and a cleaning apparatus. In order to effect a cleaning it is only necessary to uncover the said slots, and put the device for supplying the cleaning medium in action, letting the same pass through the apparatus until a complete cleaning has been effected.

In the accompanying drawings is shown a sectional view of a centrifugal separator in accordance with my invention.

1 is the rotating spindle of the separator, 2 the plate set held in place in the bowl 4 of the separator by aid of the usual distributing cross 3. The cylindric part (wall) of this bowl is, contrary to the solid walls of ordinary bowl bodies, perforated by slots 9, holes or the like.

The cleaning medium, is supplied to the plate set by the same path as that by which the lightest liquid leaves the plate set during the separation operation (at the inner edges of the plates). The cleaning medium is supplied either by means of a special top piece 5 placed on the top of the plate set and so constructed that the cleaning medium through the channels of the distributing cross and through the inner holes of the plates flows in between the plates, or the ordinary top piece (upper plate with neck) is retained. The cleaning medium is introduced into the neck of the top piece by means of a hopper 7, pipe or the like. This supply may be so arranged that alternately or simultaneously the cleaning medium may be supplied to the interior or/and exterior of the distributing cross.

For cleaning the separator the separator is

put in rotation and the cleaning medium is flung out against the bowl body between the plates and cleans the same from within outwardly. On account of the perforations of the bowl body being uncovered the cleaning medium and all impurities are flung out through these perforations.

The cleaning medium may be in a liquid or a gaseous state, and if desired a special drying medium may be used after the cleaning is accomplished.

Claims:

1. In a centrifugal separator having a stationary bowl-body and a rotatably mounted distributing cross and plate set, means for directing a flow of cleaning medium axially to the plate set and distributing cross and radially outward therethrough into the bowl-body, said bowl-body having a plurality of outlet openings therein to permit the discharge of said cleaning medium, and means for closing said openings, whereby said separator may be operated at will as a cleaning device or a separator and said plate set and distributing cross cleaned without removing them from the bowl-body.

2. In a centrifugal separator having a stationary bowl-body and a rotatably mounted distributing cross and plate set, means for directing a flow of cleaning medium axially to the plate set and distributing cross and radially outward therethrough into the bowl-body, said bowl-body having a plurality of outlet openings in the side wall thereof to permit the discharge of said cleaning medium, and means for closing said openings, whereby said separator may be operated at will as a cleaning device or a separator and said plate set and distributing cross cleaned without removing them from the bowl-body.

In testimony whereof I have signed my name to this specification.

HALLVARD NÆSS.