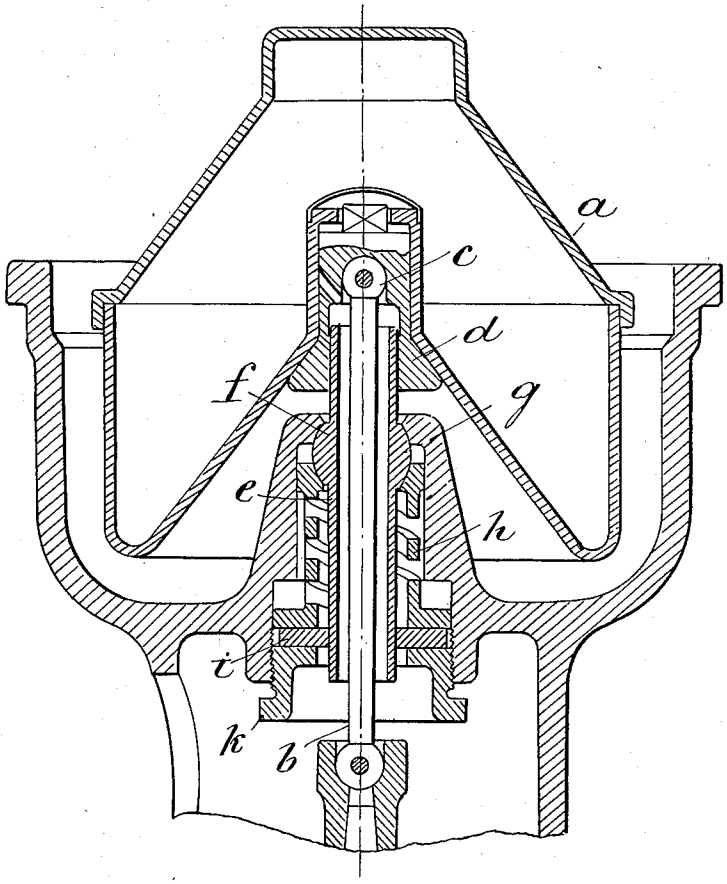
No. 880,383. PATENTED FEB. 25, 1908.

I. P. B. KNUDSEN.

GUIDING DEVICE FOR SUSPENDED SEPARATOR DRUMS.

APPLICATION FILED SEPT. 4, 1906.



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GUIDING DEVICE FOR SUSPENDED SEPARATOR-DRUMS.

No. 880,383. Specification of Letters Patent. Patented Feb. 25, 1908.

Application filed September 4, 1906. Serial No. 333,095.

To all whom it may concern:

Be it known that I, IVAR PETER BAGGER KNUDSEN, director, subject of Denmark, residing at 56 Svanemöllevej, Copenhagen, have invented new and useful Improvements in Guiding Devices for Suspended Separator-Drums, of which the following is a specification.

Separator-drums, of the kind which are suspended on a shaft in such a manner that they are actuated thereby but at the same time may move freely relatively to the shaft, present the great drawback that the separator-drum swings too violently, thereby making the motion very inconstant.

The object of the present invention is to remedy this objection by employing with the guiding device, a device which without influencing the connection between the drum and the shaft, guides the drum in such a manner that it moves without jerk or wabble.

The accompanying drawing shows an embodiment of the invention in vertical section.

Referring to the drawing, *a* is the separator-drum, *b* the driving shaft on the upper end *c* of which the separator-drum is suspended in such a manner that it is capable of moving freely with relation to the shaft. *d* is a guide or guide-coupling fastened to the bottom of the separator. This guide *d* is fitted on and is capable of turning freely on the upper end of the hollow guide-pivot *e*. The latter is provided with a ball-guide *f* inserted in a fixed bearing *g*. The lower part of the ball-guide *f* is supported by an elastic and split cylinder *h* which also may be made of springs and which presses or bears against a ring *i* made of metal, leather or ebonite or the like and fixed on the lower part of the guide-pivot, said ring receiving all the forces transmitted from the separator-drum to the ball-guide and guide-pivot without producing a reactionary effect. *k* is a pressure-nut fastened in the fixed bearing. This nut serves for keeping together the parts and forms the bottom friction-surface for the ring *i*.

From the foregoing description it will be seen that the drum is guided on a guide-pivot which in turn is supported by a part capable of receiving the movements transmitted from the drum without producing reactionary effects. In other words, there is provided a friction means retarding the vibrations of the guide-pivot to prevent undue vibrations of the drum relatively to the shaft.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a centrifugal separator having a separator drum carried by a vertical shaft imparting rotation to the drum, the combination of a guide pivot for the drum, said guide-pivot being only acted upon by horizontal stresses, a fixed bearing having a ball-guide for said pivot, and retarding non-reacting means inclosing the guide-pivot in spaced relation to the ball-guide, substantially as and for the purpose set forth.

2. In a centrifugal separator having a separator drum carried by a vertical shaft imparting rotation to the drum, the combination of a guide pivot for the drum, said pivot being only acted upon by horizontal stresses, a fixed bearing having a ball-guide for said pivot, a ring surrounding the guide pivot in spaced relation to the ball-guide, and a pair of members having surfaces between which the ring is clamped in such a manner that it can move in a direction transversely to the axis of the guide pivot by overcoming the frictional resistance, substantially as and for the purpose set forth.

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

IVAR PETER BAGGER KNUDSEN.

Witnesses:
AXEL FERMIN,
MARCUS MOILEE.