

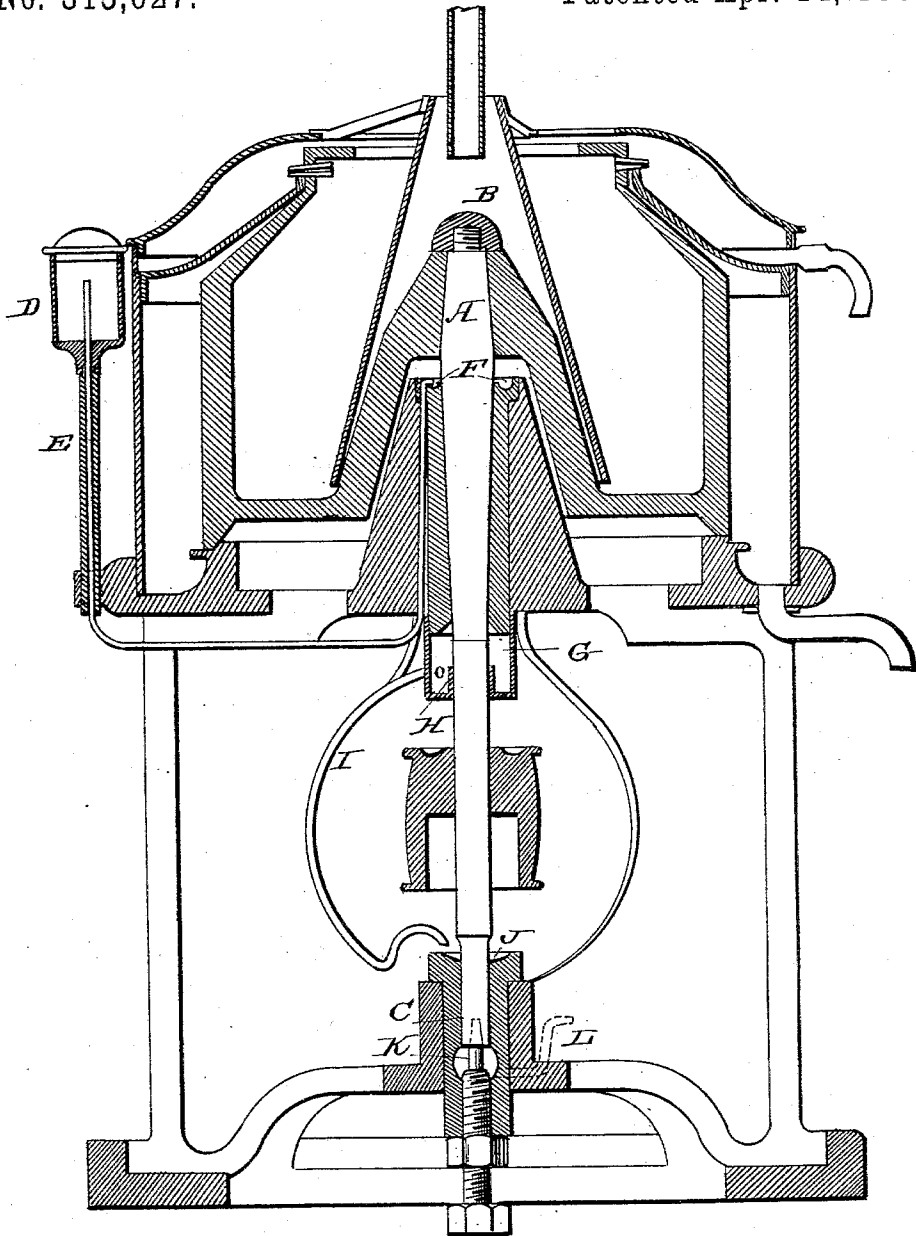
(No Model.)

N. JACOBSEN & H. P. JENSEN.

LUBRICATOR.

No. 315,627.

Patented Apr. 14, 1885.



WITNESSES:

*Ad. G. Dietrich*  
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*Hans Peter Jensen.*  
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INVENTORS,

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# UNITED STATES PATENT OFFICE.

NIELS JACOBSEN AND HANS PETER JENSEN, OF AARHUS, DENMARK.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 315,627, dated April 14, 1885.

Application filed September 20, 1884. (No model.) Patented in Denmark October 23, 1882, No. 738.

*To all whom it may concern:*

Be it known that we, NIELS JACOBSEN and HANS P. JENSEN, of Aarhus, in the Kingdom of Denmark, have invented certain new and useful Improvements in Lubricators; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification, which indicates a vertical sectional view of a centrifugal machine provided with our improved lubricator.

Our invention has relation to lubricators for centrifugal machines and other machines having vertical shafts; and it consists in the improved construction and combination of parts of such a lubricator, by means of which the oil which is used for oiling the upper bearing of the shaft may pass down and lubricate the step for the shaft, whereupon it will pass out of the step and be again carried up to the upper bearing, thus utilizing the oil or lubricant continually, and forming a continuous flow of lubricant through the bearings, which will effectually cool them, the rapid revolutions of the said shaft necessitating a very copious and constant lubrication, as will be hereinafter more fully described and claimed.

In the accompanying drawing, the letter A indicates the drive-shaft, which is journaled in the upper bearing, B, and rests and turns with its lower end in a step, C.

D is an oil-cup, provided with an outlet-tube, E, and placed above the upper bearing, and the outlet-tube of the said oil-cup passes upward through the bearing, opening at the upper end of the same, where the oil is collected in a cup, F, from which it may pass

down upon the shaft, and a cup or casing, G, is secured under the bearing, and is provided with a central upwardly-projecting flange, H, which bears closely against the shaft and turns the oil running down the shaft into the bottom of the casing, from which it is carried through a pipe, I, down to the cup J, formed at the upper end of the step. From this cup the oil passes down the lower end of the shaft into a cavity, K, at the bottom of the step, from which cavity a pipe, L, passes out of the step, which pipe may be provided with suitable means for raising the oil up into the oil-cup, allowing it to pass down again, and thus lubricate the bearing and step continuously.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

In a lubricator for vertical shafts, the combination of the upper bearing having the cup at its upper end and formed with a tube or conduit opening from the lower end of the bearing into the cup, the oil-cup having the outlet-tube opening into the conduit in the bearing, the casing at the lower end of the bearing, having the central upwardly-projecting flange, the pipe leading from this casing, the lower step formed with a cup at its upper end and with a cavity at its bottom, and the outlet-pipe, as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

NIELS JACOBSEN.  
HANS PETER JENSEN.

Witnesses:

N. HASPTRUS,  
C. SCHAARUP.