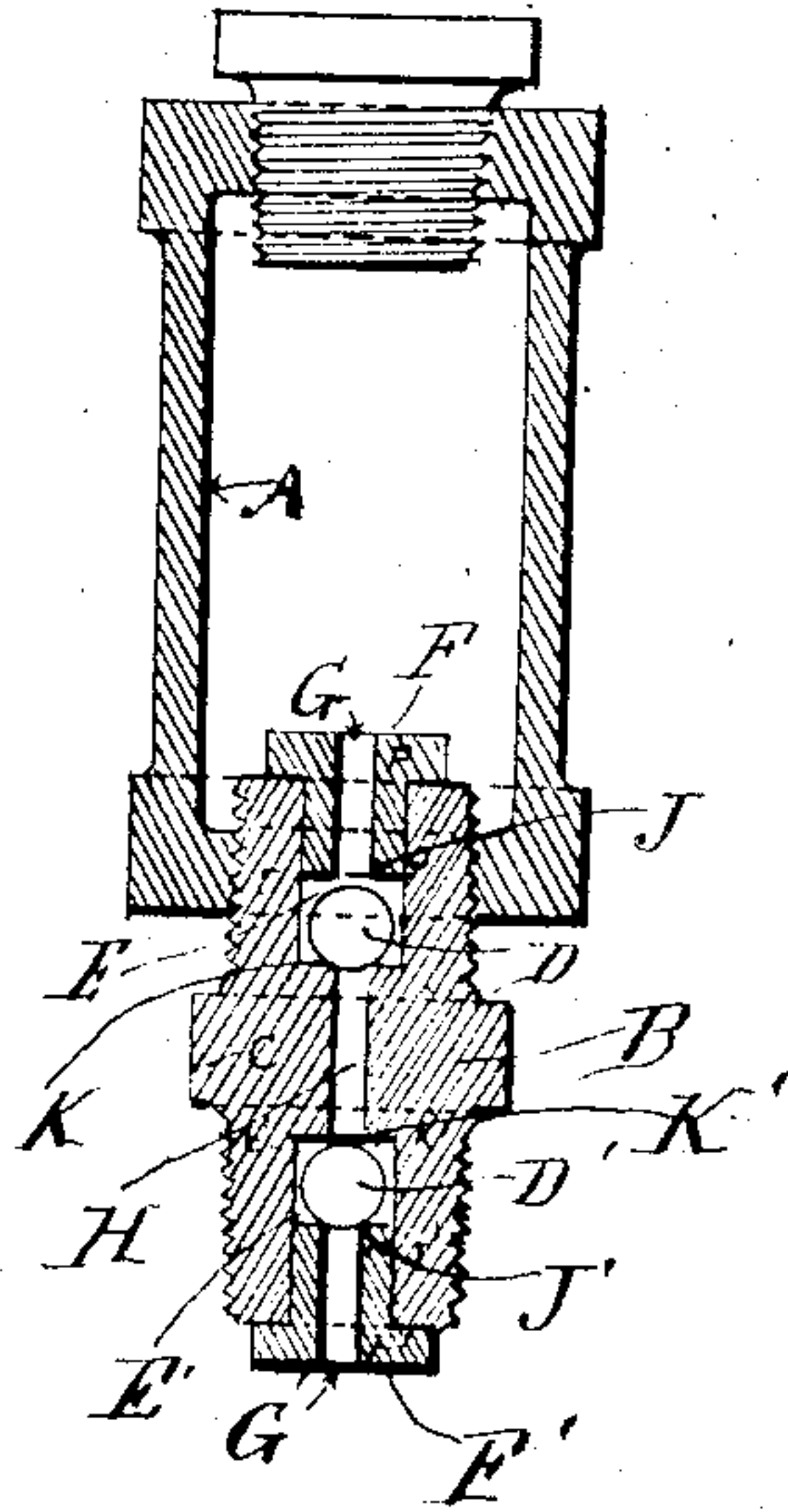


No. 832,388.

PATENTED OCT. 2, 1906

F. G. KELLOGG & A. E. TIMMIS.
LUBRICATOR.

APPLICATION FILED APR. 12, 1906.



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FORTUNATUS GALBREITH KELLOGG AND ARTHUR EDWARD TIMMIS, OF
TACOMA, WASHINGTON.

LUBRICATOR.

No. 832,388.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed April 12, 1906. Serial No. 311,325

To all whom it may concern:

Be it known that we, FORTUNATUS GALBREITH KELLOGG, a citizen of the United States, and ARTHUR EDWARD TIMMIS, a subject of the King of Great Britain, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Lubricators, of which the following is a specification.

Our invention has relation to automatic lubricators for air-pump air-cylinders; and it consists in the novel constructions, combinations, and arrangements of parts hereinafter described and claimed, whereby a measured and regularly-intermittent supply of oil is fed to the air-cylinder by the action of suitable valves operated and controlled by the charge and exhaust strokes of the piston.

Referring to the accompanying drawing, the figure illustrated is a sectional view of the assembled lubricator, consisting of oil cup and cap and valve-body fitted with two ball-valves, valve-chambers, and intermediate passages.

In the drawing, A designates the oil-cup, and B a valve-body. The latter consists of a thimble threaded on both ends and formed with a central narrow passage H, connecting two larger recesses in which are fitted the stems of headed plugs F F', having central channels or passages G G' for the oil. Between the inner ends of the plug and inner ends of the recesses chambers E and E' are provided, and in each is a ball-valve D D', respectively, having room for slight vertical movement. The oil is worked through from the oil-cup to the air-cylinder through passage G into chamber E, past ball-valve D, through passage H, into chamber E', past ball-valve D', through passage G', into pipe-elbow that leads to air-cylinder. The ball-valves D and D' are so arranged that at each charge-stroke of the air-piston they are unseated from valve-seats K and J' and are seated against valve-seats J and K', and at each exhaust-stroke they are resealed onto valve-seats K and J', the lift of the ball-valves D and D' being sufficient to allow of a

small quantity of oil passing each valve at each stroke of the piston. For instance, the valves D and D' being in the position of repose the valve-seats K and J' are closed and no oil can pass; but valve-seat J being open the oil from oil-cup A is able to run down through passage G and fill chamber E. The first charge-stroke unseats ball-valves D and D' from valve-seats K and J', seating them against J and K', thereby allowing the oil in chamber E to pass valve-seat K into passage H, where it is held by ball-valve D' on valve-seat K'. The first exhaust-stroke reseats ball-valves D and D' unto valve-seats K and J', thereby allowing the oil in passage H to pass valve-seat K' and fill chamber E', and the oil in oil-cup A is again allowed to pass valve-seat J and refill chamber E. At the next charge-stroke the ball-valves D and D', being again unseated from valve-seats K and J' and being seated against valve-seats J and K', the oil in chamber E' is allowed to pass valve-seat J' through passage G' to the air-cylinder, and the oil in chamber E is allowed to pass valve-seat K and refill passage H, and so on with each charge and exhaust stroke of the air-piston the passages and chambers are emptied and refilled, and a small quantity of oil is sucked down into the air-cylinder.

What we claim as new, and desire to secure by Letters Patent, is—

In a lubricator for air-cylinders the combination with the oil-cup, and the valve body or thimble having a central unobstructed oil-passage, and valve-chambers at the outer ends thereof, of ball-valves, arranged in said chambers and adapted to open and close ports to produce an intermittent flow of oil to the air-cylinder, each of said balls operating independently of the other and depending upon, and wholly operated by the exhaust and charge strokes of the cylinder.

Tacoma, April 4, 1906.

FORTUNATUS GILBREITH KELLOGG.

ARTHUR EDWARD TIMMIS.

In presence of—

J. A. BJERGE,

G. FRANK MATTHEWS.