



Fig. 15. Exterior and Sectional Views of the Type B-3 Automatic Oil Cup

An oil port *d* of definite size is located in the stem and connects passage *b* to an annular feeding cavity *e* which is formed by a recess in the stem and the neat fitting sleeve, around it. This sleeve has two diametrically placed notches *c* at its lower end which connect chamber *a* with cavity *e*.

When the compressor makes its upward stroke, air is forced up through passage *b* and into the space above the oil in chamber *a*.

The lubricant in the cup will flow through the notches "*c*" into the space between the stem 3 and the sleeve 4 and rise in space *e* by capillary attraction and will then enter opening *d* to passage *b*, from which, on the downward stroke of the compressor, the lubricant is carried with the flow of the air from the chamber on top of the oil, through passage *b* into the compressor cylinder. This small amount of oil supplied regularly and reliably is ample to adequately lubricate the air cylinder.

Due to the ability of this type of lubricator to supply minute particles of oil in uniform quantities to the air cylinder of the compressor during each cycle of operation, one filling of its oil chamber will supply sufficient lubrication to the compressor air cylinder for the average trip of a locomotive.

A good grade of standard locomotive saturated steam valve oil only should be used in the air cylinders. Superheater oil is not recommended for air cylinder lubrication because it tends to restrict the air passages, causing the compressor to heat unduly and to wear faster than with the lighter valve oil recommended.

LUBRICATION—STEAM CYLINDERS. The steam cylinder lubricator (if used) should not be started until all condensation has escaped from the compressor and the drain cocks closed. After closing the drain cocks, start the lubricator to feed in ten or fifteen drops of oil as rapidly as possible, then regulate the feed to about two or four drops per minute *for each compressor*. No definite amount can be specified, as the amount of lubrication required depends on the work the compressor has to do, the quality of the steam, condition of compressor, and so on. Keep the lubricator feeding while the compressor is running.

A *swab*, well oiled, is essential on each piston rod.