

No. 725,656.

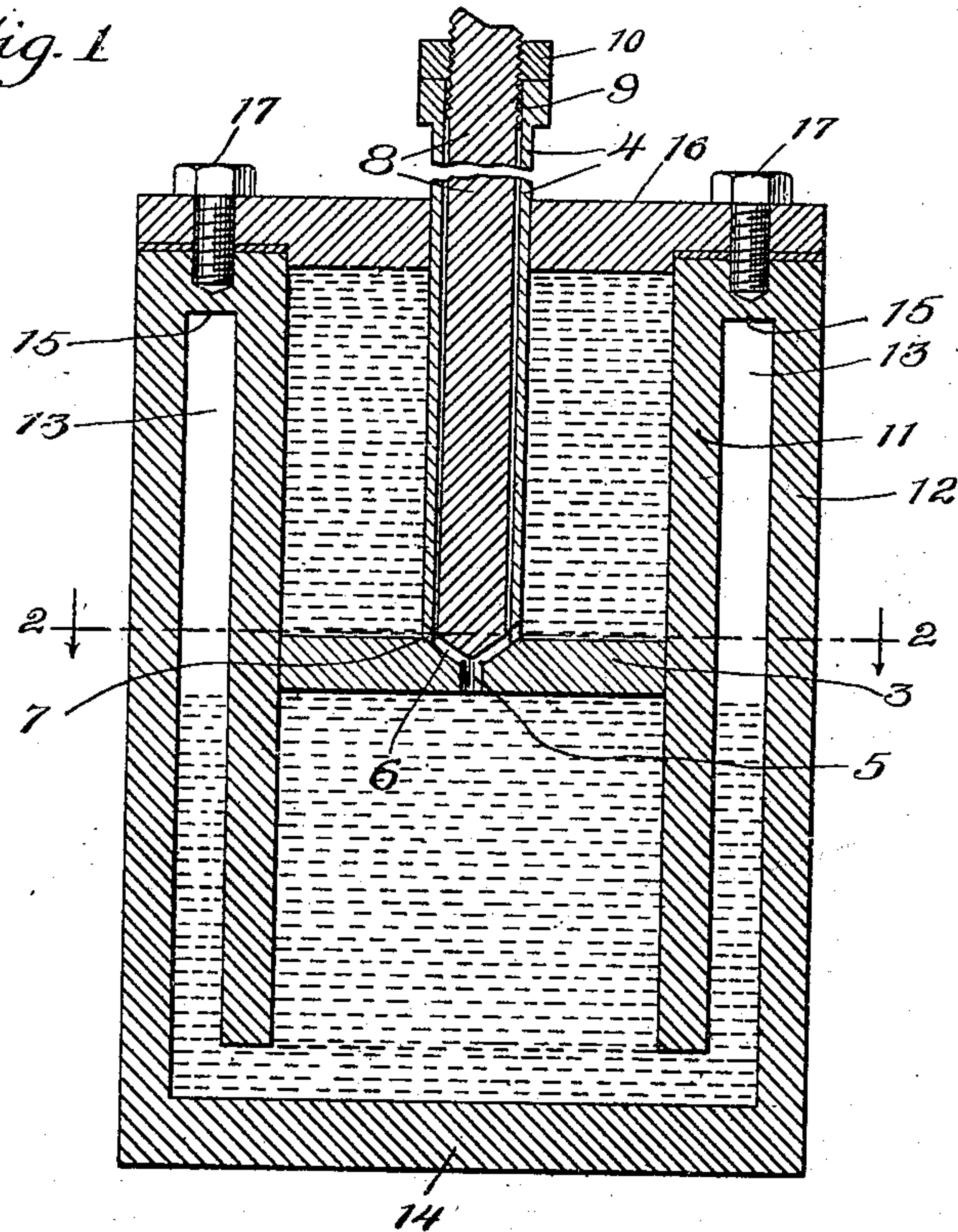
PATENTED APR. 21, 1903.

W. C. BEAUVAIS.  
DASH POT.

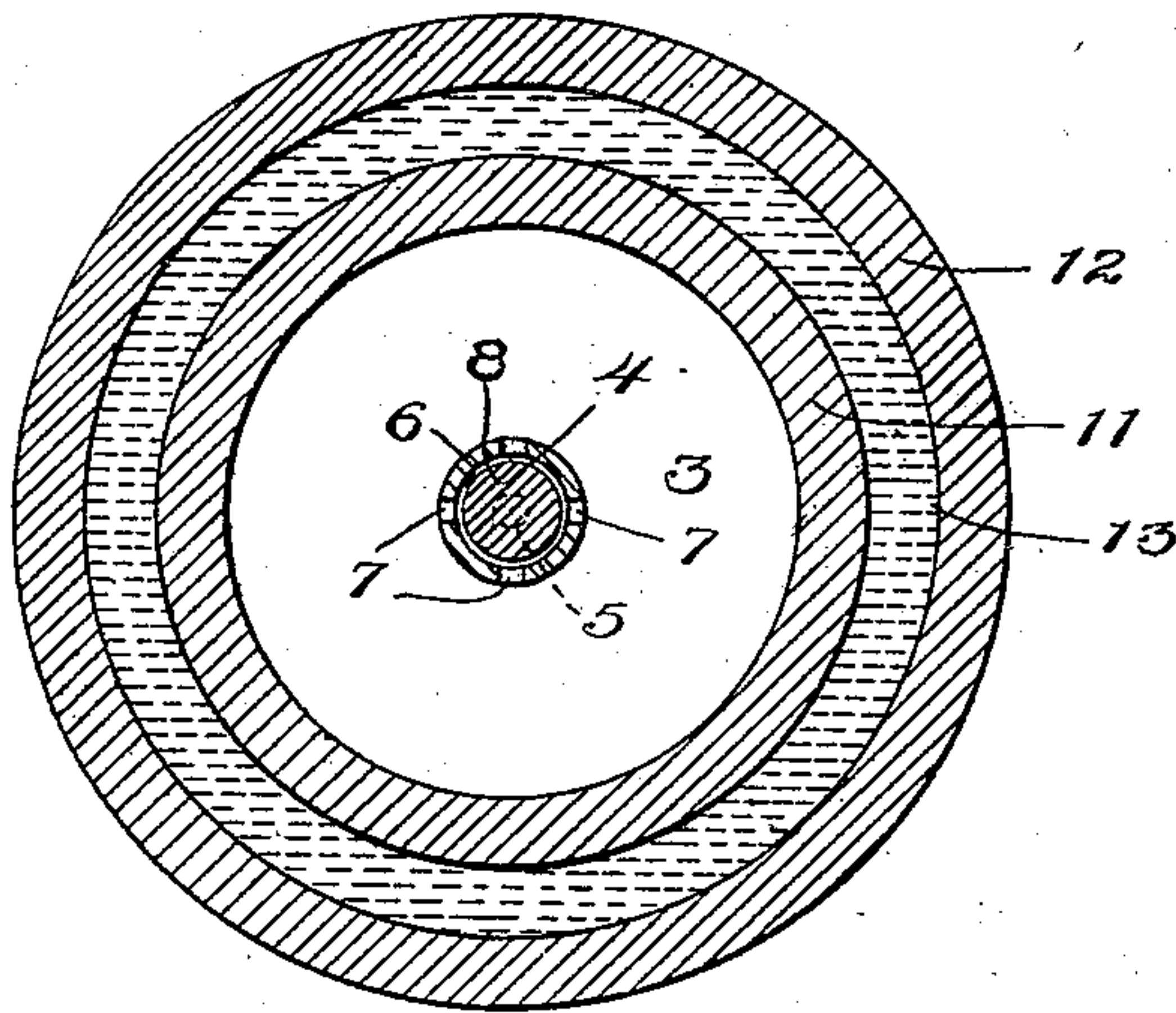
APPLICATION FILED AUG. 4, 1902.

NO MODEL.

*Fig. 1*



*Fig. 2.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

WILLIAM COLLIER BEAUVAIS, OF NEW ORLEANS, LOUISIANA.

## DASH-POT.

SPECIFICATION forming part of Letters Patent No. 725,656, dated April 21, 1903.

Application filed August 4, 1902. Serial No. 118,244. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM COLLIER BEAUVAIS, a citizen of the United States, residing in New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Dash-Pots, of which the following is a specification.

This invention relates to the construction of dash-pots used with the governors of slow-running Corliss engines, and is especially valuable where the load on the engine is heavy at times and light at other times. Of course it may be used in other places where the requirements are similar.

The object of the invention is to prevent the governor from "hunting," as it is called—that is to say, from moving unevenly or in a jerky or irregular manner.

The object of my invention is obtained by providing the dash-pot with an air-chamber in which a body of air is imprisoned by the oil through which the piston travels, the oil having access to the air-chamber at the bottom and acting alternately to compress and release the air at each full stroke of the piston. The air-chamber is preferably an annular one and surrounds the dash-pot.

The nature of the invention will be more fully understood from the description given below and from the accompanying drawings, in which—

Figure 1 is a vertical section of my improved dash-pot, and Fig. 2 is a section on the line 2 2 of Fig. 1.

In said drawings, 3 represents the piston of the dash-pot, attached to the tubular stem 4. The piston has a central oil-passage 5, communicating with a flaring recess 6, which allows the oil to move through the piston, and ports 7 are provided in the stem and communicate with the recess 6. The stem is adjustably attached to an operating-rod 8, extending up to the governor and also extending down within the stem to the bottom thereof, where it acts as a valve to regulate the capacity of the ports 7. The relative adjustment of the stem and rod may be obtained in any suitable way—as, for instance, by threading the rod at 9 and threading the stem interiorly, so it may engage the thread 9—and the adjustment may be rendered secure by the jam-nut 10.

The piston traverses the cylinder 11, which

is always full of oil, in the usual manner, the speed of the movement depending on the size of the ports 7. Cylinder 11 is open at the bottom and is placed inside another cylinder 12, an annular chamber 13 being formed between the two. Cylinder 12 has a bottom 14, and the chamber 13 is closed at the top, as shown at 15. Having no outlet at the top, it will be seen that the air in the chamber 13 will be trapped by the oil. A cover 16 is placed over cylinder 11 and may be secured by screws 17, and the piston-stem passes through such cover.

The chamber 13 communicates at its bottom with the piston-chamber, and preferably this communication is established by suspending cylinder 11 in cylinder 12, above the bottom of the latter, as indicated in the drawings. In this manner free opportunity is given the oil to move from one cylinder to the other in accordance with the direction of movement of the piston. When the piston moves down, it creates pressure upon the oil below it and forces more or less of it into the annular air-chamber, so that it compresses the imprisoned air in the upper part of the latter. The imprisoned air is thus caused to exert a gradually-increasing resistance to the piston, so that its stroke ends gradually and without jar or shock. When the piston moves up, it will gradually relieve the compression on the air and after relieving it will tend to create a vacuum in the air-chamber, and thereby to retard or gradually slow the up-stroke.

I claim—

1. The dash-pot having a closed air-chamber communicating with the piston-chamber at the bottom and containing a body of air trapped in the air-chamber by the oil from the piston-chamber, the piston having a restricted passage permitting the oil to move through it, substantially as specified.

2. The dash-pot consisting of the piston, the piston-cylinder, and an air-chamber, the piston-cylinder being filled with oil and communicating at the bottom with the bottom of the air-chamber, and the oil being free to move from one side to the other of the piston through a restricted passage, substantially as specified.

3. The dash-pot consisting of the cylinder

charged with oil on both sides of the piston,  
a piston moving in said cylinder and having  
an oil-passage through it, and a closed air-  
chamber communicating with the cylinder  
5 below the piston, substantially as specified.

4. The dash-pot provided with an air-cham-  
ber exterior to its piston-chamber and com-  
municating with the bottom thereof, said air-  
chamber having no opening for the admission  
10 or escape of the air, substantially as specified.

5. The dash-pot employing both air and a  
body of oil as the cushioning agents, the air  
being confined in a closed chamber by the oil,  
and the oil being moved by the piston, sub-  
stantially as specified.

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