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T.M.192

"AM" GASOLINE COCK.

Manufactured by E. Martin, Oullins, France.

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the files of the National
Advisory Committee
for Aeronautics.~~

February, 1923.

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"AM" GASOLINE COCK.*

The "AM" cock was designed specially for gasoline pipes on vehicles using internal combustion engines (airplanes, airships, automobiles, tractors, battle "tanks," boats, etc.).

It has a body A containing a special valve B. This valve is fitted to its seat and slides in a guide C. Between the two inner faces of the valve B there is an eccentric circular cam on the operating stem D. This stem can be operated from the outside with the aid of a firmly attached handle. The stem is held in position by the head E screwed into the body and it is made tight by means of an "AM" flexible metal stuffing box gland.

Functioning.- When the handle is turned to the left, the cam pushes the valve against its seat and closes it. This closing is remarkably tight, due to the special guiding device. On turning the handle to the right, the cam pushes against the rear plate, thus opening the orifice. The opening is effected without a recall spring, so that the valve cannot fail to work.

The use of the "AM" stuffing box on the stem of the cock serves several purposes:

1. It insures tightness with reference to the outside.
2. It prevents accidental loosening, from the effect of the vibrations, and the rotation of the stem.
3. It enables adjustment of the ease of operation, by tightening the gland more or less.

* Manufactured by E. Martin, Oullins, France. (A. Moulet, agent, 21 Rue La Fontaine, Paris, France.)

The cock operates with only a quarter of a turn, without the aid of a rapid pitch screw, which assures the maximum rapidity and facilitates distance control. For this purpose, the handle ends in a small knob, which can be used to make a ball and socket joint.

Construction. - The body of the cock is made of a light alloy and is perfectly tight. The head is cut entirely out of drawn metal, as likewise all the other parts. All parts composing the cock are very carefully made, so as to insure perfect assembling and long wear.

The "AM" cock is provided with flexible metal joints to facilitate the connecting of pipes. Its advantages may be summed up as follows:

1. Absolute tightness, even after long use;
2. Sure functioning, jamming impossible (no conical grinding); effective operation in either direction (no recall spring);
3. Adjustable ease of operation;
4. Total effect in a quarter of a turn; possibility of operating at a distance, by simple device;
5. Straight passage; no inside bend, no gas pockets to be feared, large cross-section of passage;
6. Not affected by vibrations; elastic packing;
7. Lightness and strength: 60% saving of weight in comparison with other commercial types;
8. Neatness of appearance; small size;

9. All the qualities resulting from the use of the "AM" flexible metal joint, which forms the body of the mechanism and which dispenses with rubber tubing.

The "AM" distributor or three-way cock is designed on the same principle. It has two valves in one, applied alternately to their seats, as also a perpendicular pipe without valve.

It follows from this arrangement that the two valves can be : one open and the other shut or both open at the same time, but both cannot be completely shut at the same time.

This renders impossible the interruption of the fuel flow through inadvertence, such interruption requiring the operation of a separate cock.

The "AM" cock comprises two models:

Series "T" for joining two tubes end to end;

Series "R" for joining a tube to a tank or to any other part of the system. Series R is subdivided into two types, according to whether the liquid flows from the "AM" joint or into it. We have a stock on hand, which enables us to deliver promptly the sizes listed. "AM" cocks are ordinarily delivered in separate boxes, each box containing spare joints. On request, they may be delivered in boxes of ten of the same size. This box contains spare joints, a key for tightening the joints and a key for regulating the stuffing-box gland.

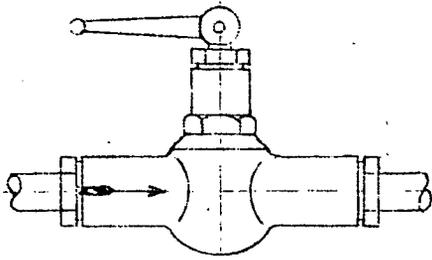
N.B. When not otherwise specified, the handle turns over the flexible metal joint in Series "R" and over the end from which the liquid flows in series "T." For dimensions, ask for drawing No. 1373.

In ordering, specify type for series "R."

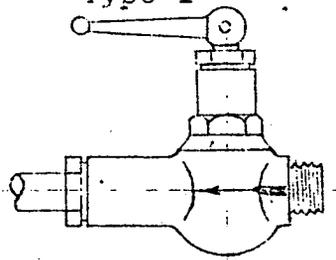
Special cocks : Prices on request.

Translated by the National Advisory Committee for Aeronautics.

Series "T"

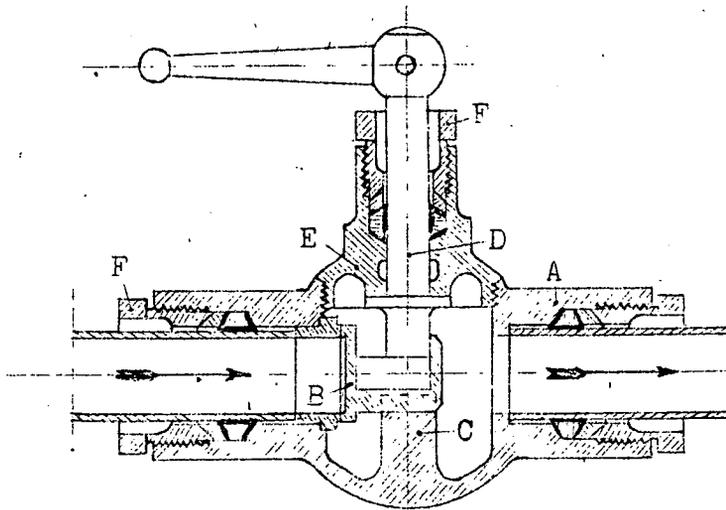
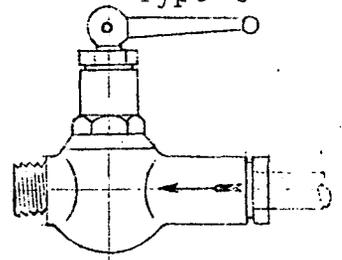


Type 1

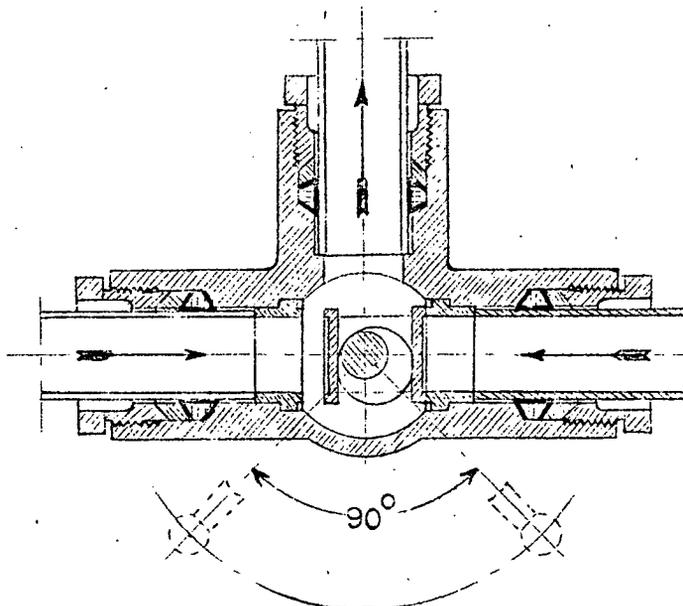


Series "R"

Type 3



The "AM" cock



The "AM" three way cock