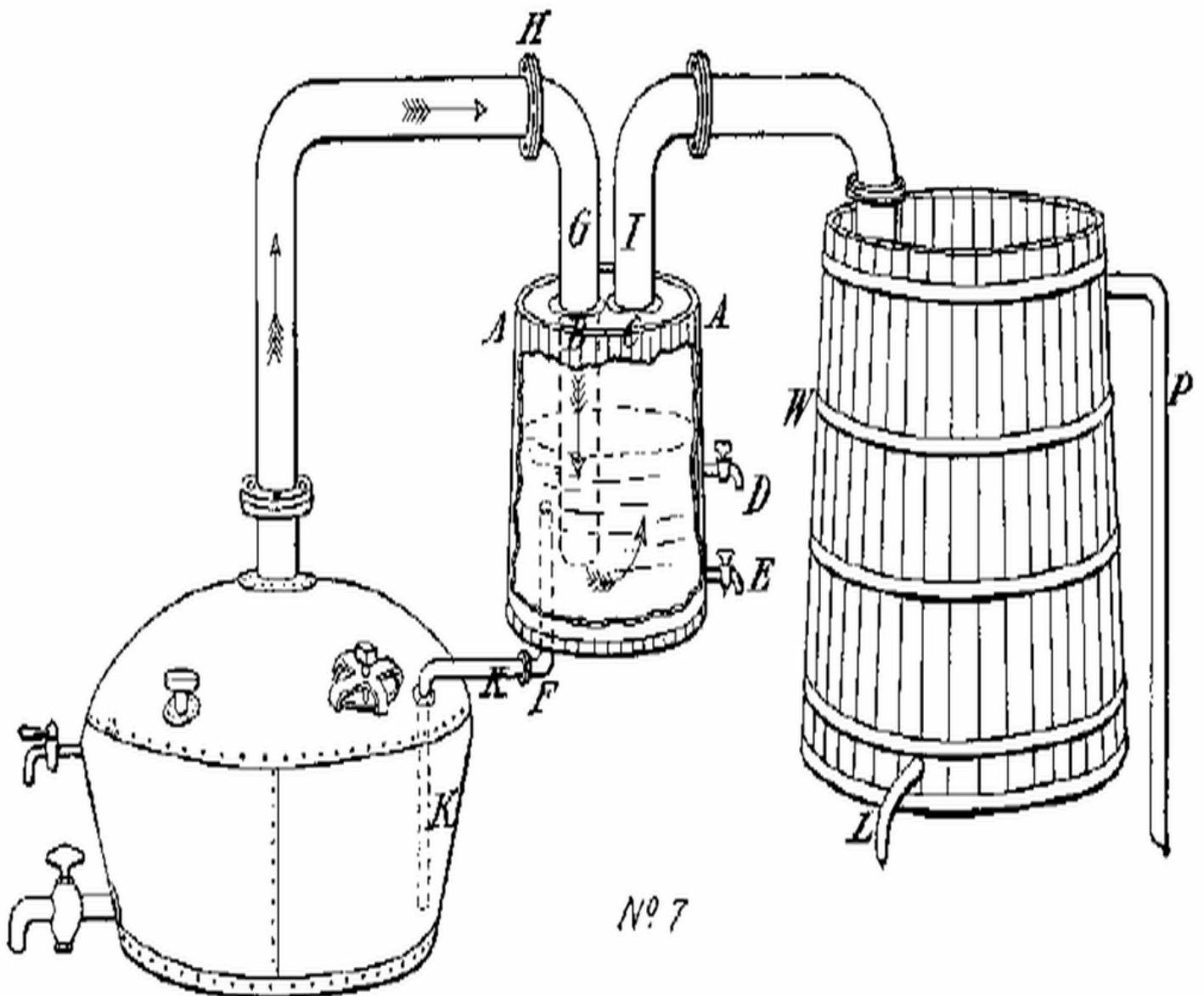


## THE DOUBLER

This appendage to the still is intended to double the alcoholic strength of the distilled liquor, and by this means to dispense with a second or third distillation. The action of the Doubler is to check the too rapid evaporation of water, by condensing and returning the condensed portion back into the still while allowing the vaporised alcohol to pass by and enter the worm. This is done in the following manner:

Build a stout two headed tub, of one and a half inch staves, and two-inch top and bottom. (See Diagram No7).



Length of staves four feet.

Breadth of tub, forty-two inches at the top by forty-six at the bottom.

Cut two four-inch holes B, C, in the upper surface; fit a four-inch collar flange to each. Insert a one-inch brass cock E in the side of the tub on a level with the bottom, and another D eight-inch above it. Run a two-inch pipe F through the bottom of the tub midway between the centre and the stave. Let this project eight inches inside the tub, so that the top may be on level with the upper side-cock. The lower end of this pipe is brazed to a collar flange, by means of which it may be connected with the still.

Run a four-inch copper pipe G through one of the collar flanges B, let the lower end descend to within three inches of the bottom of the tub and the upper end project twelve inches outward, and brazed to a collar flange H so that it may be connected with the breast of the still. The other four-inch opening C connected by four-inch pipe I with the worm contained in the worm-tub W.

The Doubler is placed midway between the still and the worm, its bottom being somewhat higher than the surface of the still, and four-inch inlet turned towards it. In this position the inlet G is connected with the centre of the breast of the still, and the outlet I, which is the open four-inch flange, is joined to the worm. The two-inch pipe K called the return, passes through the breast of the still near the edge and is carried downwards inside the still to within two inches of the bottom, and the apparatus is ready for use.

When about to run a charge, fill the Doubler up to the side-cock D with water. When heat is applied to the still, and the liquor which it contains vaporizes, it passes through the connecting pipe G from the still into the Doubler; here it meets a resisting force, in the shape of five inches water, through which it must pass or condense.

The first portion condenses and returns to the still through the two-inch return pipe K.

As the water in the Doubler becomes heated to the degree at which alcohol boils the alcoholic vapours pass through it, and are as it were filtered, leaving the heavier bodies to be returned into the still in a liquid form.

It will thus be seen that although it may take a little longer to run a charge, the product must be of a greater alcoholic strength.