

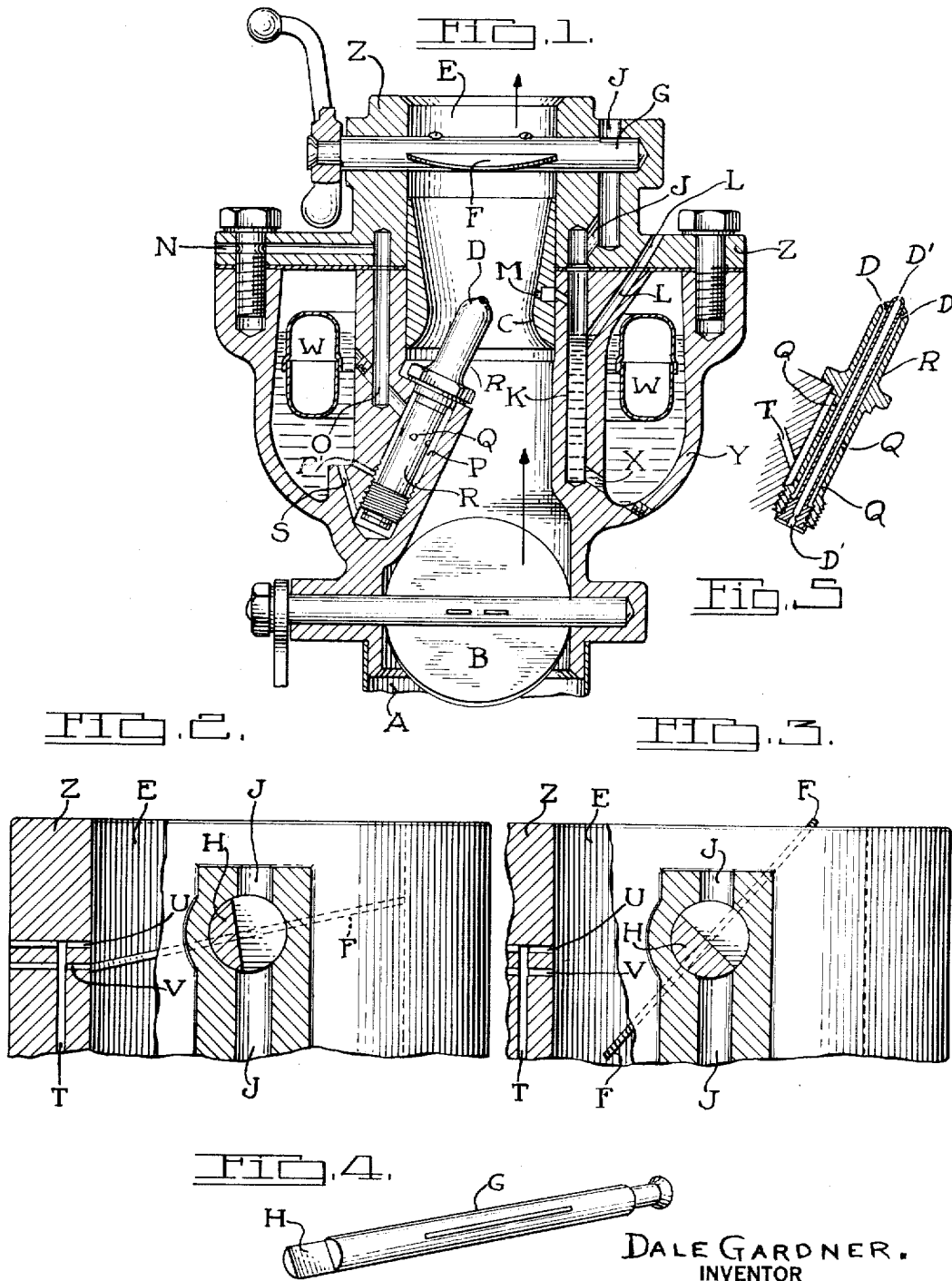
Oct. 6, 1931.

D. GARDNER

1,825,788

CARBURETOR

Filed Feb. 24, 1930



DALE GARDNER,
INVENTOR

BY

Stanley M. Dale

ATTORNEY

UNITED STATES PATENT OFFICE

DALE GARDNER, OF DETROIT, MICHIGAN, ASSIGNOR TO GEORGE M. HOLLEY, OF
DETROIT, MICHIGAN

CARBURETOR

Application filed February 24, 1930. Serial No. 430,498.

The specific object of this invention is to provide an improved power jet which will not require any additional moving elements.

Fig. 1 shows in cross-sectional elevation all the essential details of a carburetor.

Figs. 2 and 3 show to an enlarged scale the novel feature of this invention.

Fig. 4 shows in perspective the throttle rod which is made so as to control the power jet.

Fig. 5 shows section through the main fuel nozzle.

The carburetor is made in two halves, an upper one Z and a lower one Y. A is the air entrance, B is the choke valve therein, C is the Venturi tube into which the power jet M discharges. The main nozzle R discharges into the Venturi C through the outlets D—D. The mixture so formed discharges through the mixture outlet E in which is located the throttle valve F. The nozzle D contains an inner nozzle D1 which is fed through S direct from the float chamber Y, in which is located the float W. (Also float mechanism not shown). The nozzle R is vented to the atmosphere through a passage N—O which delivers air to an annular well P in which the nozzle R is located and which communicates with the float chamber through the passage P1. Adjacent to the throttle valve F and in advance thereof are the twin low speed fuel outlets U—V fed from the low speed fuel passage T, which communicates with the lower portion of the well P as shown in Fig. 5.

The power jet M is fed from the float chamber Y through the passage X. The passage K communicates with the nozzle M at a point above the fuel level in Y, and with the atmosphere through the restricted passage L, which enters K at a point below the fuel level in Y. The large air vent J also communicates with the passage K when the throttle is closed (Fig. 2) but when the throttle is opened to permit the car to exceed 40 miles per hour, the passage J no longer communicates with the atmosphere. The throttle shaft G is provided with a flattened portion H which acts as a valve controlling the flow of air through the passage J.

Operation.—When the throttle is closed and

until the throttle is opened to permit the car to exceed say 40 miles per hour, the engine operates on an economical mixture as controlled by the various air vents and orifices associated with the nozzle D. After the throttle is opened so that the speed on the level exceeds the 40 miles per hour the restriction in J is such that there is a flow of air down L which aspirates fuel from the passage K and discharges it through M into the mixture chamber. Of course by filling the valve H the fuel jet can be adjusted to come in at 50 miles per hour so that an economical mixture is maintained right up to 50 miles per hour.

On the other hand it may be desirable to have the power jet come into operation at 30 miles per hour in which case the valve H must be made so as to cut off the passage J earlier in the rotation of the throttle.

In view of the recent protests of the Federal courts against multiplicity of claims covering simple inventions only two claims are made, it being understood however that reasonable equivalents are covered by these claims.

What I claim is:

1. In a carburetor having a constant level fuel supply reservoir, an air entrance, a mixture chamber, a fuel nozzle fed from said reservoir, a mixture outlet and a throttle valve therein, an indefinite power jet located so as to discharge into the mixture chamber, a fuel passage through which said power jet communicates with said fuel reservoir, a passage leading from the atmosphere to said power jet, valve means in said passage controlled by said throttle so that the atmospheric passage is gradually restricted and finally eliminated as the throttle is opened for the purpose described, a second passage leading from the atmosphere into the fuel passage between the power jet and the float chamber at a point below the level in said fuel reservoir.

2. In a carburetor having a constant level fuel supply reservoir, an air entrance, a mixing chamber, a fuel nozzle fed from said reservoir, a mixture outlet, a throttle shaft, a throttle valve mounted thereon in said mixture outlet, an independent power jet located

so as to discharge into the mixing chamber, a fuel passage through which said power jet communicates with said fuel reservoir, a passage leading directly from the atmosphere to said power jet, adapted to kill the action of the mixing chamber depression thereon, valve means in said passage integral with said throttle shaft whereby the atmospheric passage is gradually restricted and finally eliminated as the throttle is opened for the purpose described, a second passage leading from the atmosphere into the fuel passage between the fuel nozzle and the float chamber at a point below the level in said fuel reservoir.

In testimony whereof I affix my signature.
DALE GARDNER.

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CERTIFICATE OF CORRECTION.

Patent No. 1,825,788.

Granted October 6, 1931, to

DALE GARDNER.

It is hereby certified that error appears in the printed specification of the
above numbered patent requiring correction as follows: Page 1, line 82, claim
1, for the word "indefinite" read independent; and that the said Letters Patent
should be read with this correction therein that the same may conform to the
record of the case in the Patent Office.

Signed and sealed this 22nd day of March, A. D. 1932.

(Seal)

M. J. Moore,
Acting Commissioner of Patents.

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