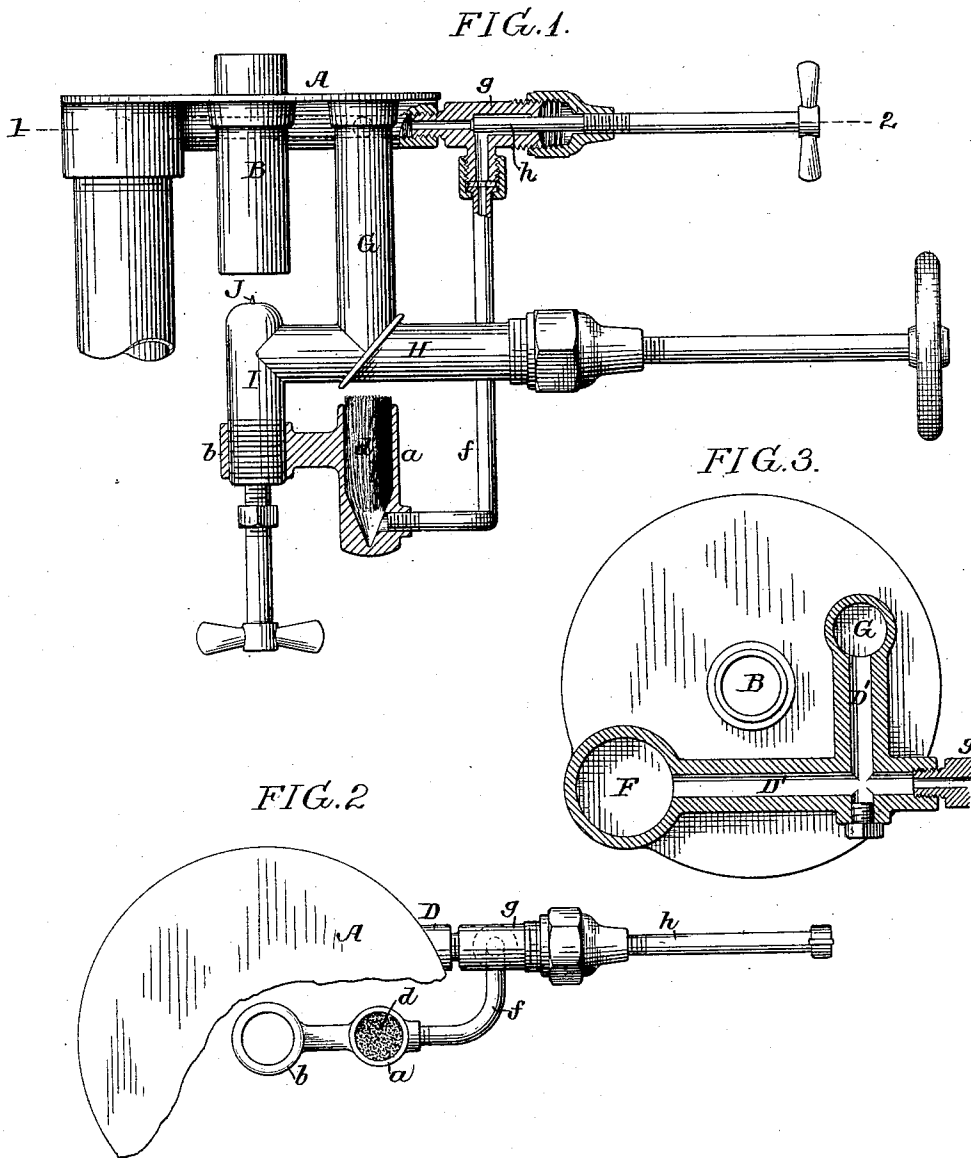


(No Model.)

H. E. F. BORZELL & E. E. BARDSLEY.
STARTING ATTACHMENT FOR GASOLINE BURNERS.

No. 489,284.

Patented Jan. 3, 1893.



WITNESSES:
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UNITED STATES PATENT OFFICE.

HARRY ELLSWORTH FREDERICK BORZELL AND EDWARD ELMER
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STARTING ATTACHMENT FOR GASOLINE-BURNERS.

SPECIFICATION forming part of Letters Patent No. 489,284, dated January 3, 1893.

Application filed June 9, 1891. Serial No. 395,736. (No model.)

To all whom it may concern:

Be it known that we, HARRY ELLSWORTH FREDERICK BORZELL and EDWARD ELMER BARDSLEY, both citizens of the United States, and both residents of Philadelphia, Pennsylvania, have invented certain Improvements in Starting Attachments for Gasoline-Burners, of which the following is a specification.

The object of our invention is to provide gasoline burners with an automatic attachment whereby the preliminary heating of the burner necessary in starting the same can be conveniently and safely effected. This object we attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1, is a side view, partly in section, of a well known form of gasoline burner with our attachment applied thereto; Fig. 2, is a plan view of the attachment with the burner broken away in order to show the same; and Fig. 3, is an inverted sectional plan view on the line 1—2, Fig. 1.

A represents the top plate of the burner having a central flue or passage B in which the ignited vapor or gas ascends, and on the under side of this plate is formed a right angled channel or passage D D' the portion D of the passage communicating with the oil supply pipe F, and the portion D' communicating with the depending pipe G which has at the lower end an elbow or branch pipe H, this pipe containing a suitable valve for permitting or cutting off the flow of vapor to the burner tube I which is connected to the inner end of the branch pipe H and contains a needle valve J whereby the escape of gas or vapor from the burner tube is regulated. Usually, gasoline burners of this class are provided with a dish or saucer into which a supply of oil is first poured and ignited so as to heat the various pipes sufficiently to vaporize the incoming supply of oil in starting the burner into action, but this method is objectionable because of its inconvenience and danger.

In carrying out our invention, therefore, we provide a supplementary burner *a* consisting of a tube carried by a bracket *b* screwed onto

the lower end of the main burner tube I, this tube *a* containing a wick *d* of asbestos or other incombustible material, and communicating at its lower end with a pipe *f* which is connected at its upper end to a valve chest *g* screwed into the outer end of the passage D of the burner in place of the plug which usually closes the end of said passage. The lower end of the burner tube *a* is conical, hence by pushing the wick *d* down into the tube with more or less force, the lower end of said wick may be more or less compressed, and its permeability thereby regulated as desired.

The chest *g* contains a valve *h* and in order to start the burner it is only necessary to open this valve *h* and light the oil at the top of the wick *d*, the valve in the branch pipe H remaining closed. The heat from the burner *a* heats the pipe G, and the burner plate and tubes to such a degree as to vaporize the oil and thus permit the opening of the main valve and the starting of the main burner, whereupon the valve *h* may be closed, or, if desired, the said valve may be permitted to remain open and the supplementary burner may remain lighted continually, this plan being especially advisable in cases where the main burner is used only at intervals as the supplementary burner thus serves to keep the main burner in condition for being instantly started without preliminary preparation.

In case the light of the supplementary burner is accidentally extinguished there can be no overflow of oil from said burner, as the flow to the same is so restricted by the valve *h* and wick *d* that the oil will be vaporized by the air as rapidly as it finds its way to the surface of said wick.

Having thus described our invention, we claim and desire to secure by Letters Patent:—

1. The combination of the main burner plate having the oil conveying passages on the under side, a valve chest screwed into the end of one of said passages, a supplementary burner communicating with said valve chest, and a valve for controlling the flow of oil to said supplementary burner, substantially as specified.

2. The combination of the main burner, the
supplementary burner consisting of a tube
with conical lower end, and a wick capable of
being forced downward in said tube so as to
5 compress its lower end, and a valved pipe for
supplying oil to said supplementary burner,
substantially as specified.

In testimony whereof we affix our signatures
in presence of two witnesses.

HARRY ELLSWORTH FREDERICK BORZELL.
EDWARD ELMER BARDSLEY.

Witnesses:

WILLIAM HENRY CRAUS,
WINFIELD S. BARDSLEY.