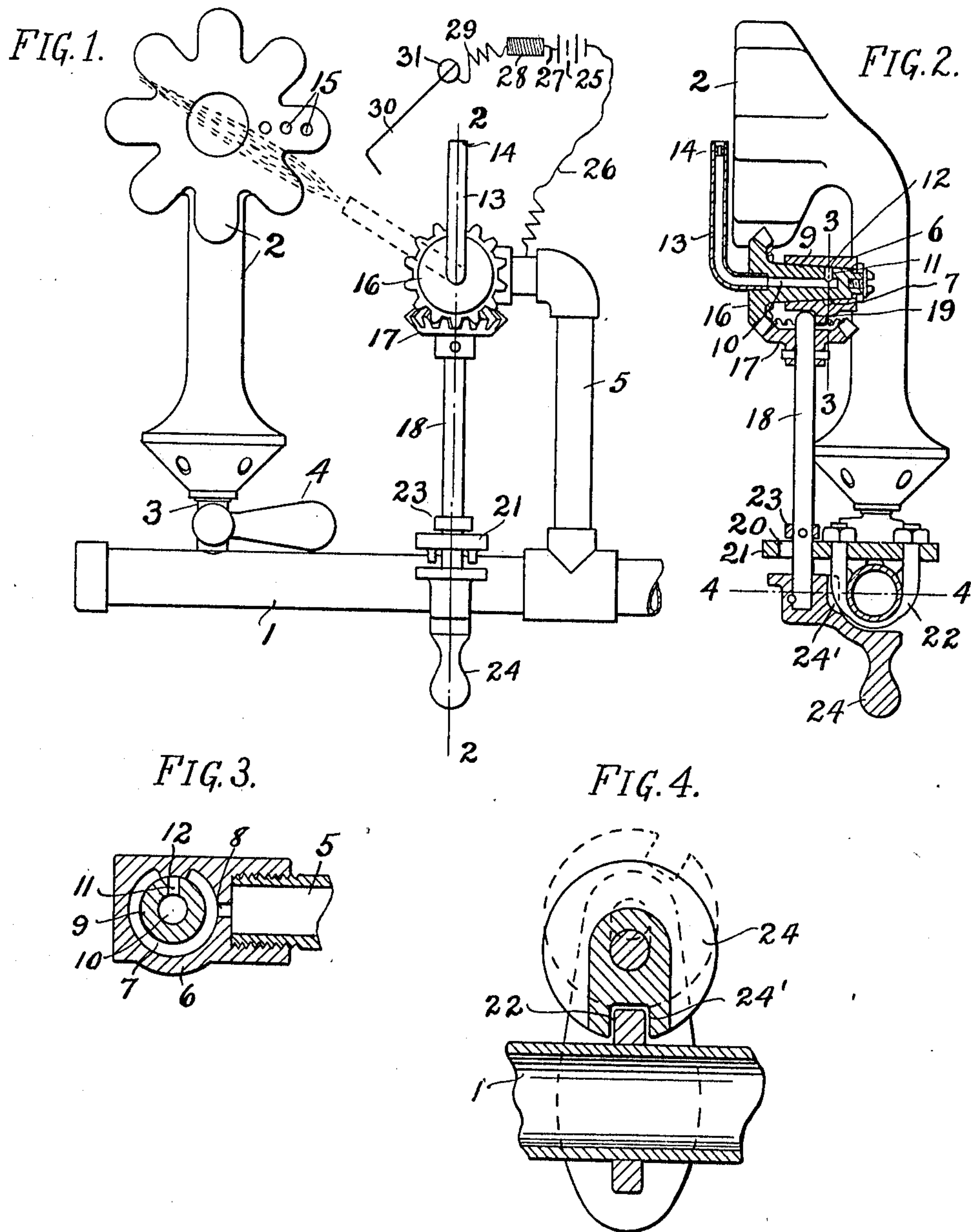


C. B. STILWELL.
GAS IGNITER.
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984,315.

Patented Feb. 14, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES B. STILWELL, OF WAYNE, PENNSYLVANIA.

GAS-IGNITER.

984,315.

Specification of Letters Patent.

Patented Feb. 14, 1911.

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To all whom it may concern:

Be it known that I, CHARLES B. STILWELL, a citizen of the United States, residing at Wayne, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Igniters, of which the following is a specification.

My invention is a gas igniter designed particularly for lighting the burners of gas stoves. Its leading purpose is to produce a gas flame that can be swept over the burner, to ignite the jets issuing therefrom, and then put out, all by the simple operation of a handle.

The characteristic features of my invention are fully disclosed in the following description and the accompanying drawings in illustration thereof.

In the drawings, Figure 1 is a plan view of apparatus embodying my invention; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2, and Fig. 4 is a sectional view taken on the line 4—4 of Fig. 2.

The apparatus with which my improvements are combined, as illustrated in the drawings, comprises the gas supply pipe 1, the burner 2, the duct 3 connecting the pipe with the burner, and the valve 4 for controlling the duct. A branch pipe 5 connects the pipe 1 with a valve casing 6 containing a circular channel 7 having an inlet 8 communicating with the pipe 5. Revolvable in the casing is a valve 9 containing a channel 10 having an inlet 11 adapted to be moved alternately into registration with the channel 7 and the bearing 12 which closes it. A pipe 13 is fixed to the valve 9, in communication with the passage 10, and has a nozzle 14 projecting transversely to the axis of the valve and adapted to be revolved thereby in a plane parallel to that of the holes 15 of the burner.

A beveled pinion 16 on the valve 9 is engaged by a beveled pinion 17 on a shaft 18. This shaft has an end projecting through the pinion thereon into engagement with a bearing 19 on the casing 6 while the opposite end of the shaft extends through an elongated aperture 20 in a bearing 21, which is fastened to the pipe 1 by a clevis 22. A collar 23 on the shaft is adapted to engage the bearing 21 to prevent the shaft from

being drawn back and a crank or handle 24 is fixed to the outer end of the shaft to revolve it, the body of the crank having therein the recess 24' adapted for engaging the clevis 22.

A source of electric energy, as a battery 25, is connected by a wire 26 with the pipe 5 and by a wire 27 with an induction coil 28. The coil has a wire 29 connected with the spring contact 30 by the binding screw 31 and the outer terminal of the contact lies in the path of revolution of the nozzle 14.

When it is desired to light the burner, the valve 4 is turned and gas flows thereto from the pipe 1. Then the crank 24 is lifted, to disengage it from the clevis 22, and revolved, whereupon the pinions 17 and 16 revolve the valve 9 to connect the passages 7 and 10, through which gas escapes to the nozzle. As the nozzle revolves it wipes the contact and creates a spark which ignites the gas flowing from the nozzle, the flame thus formed being swept over the burner to ignite the gas escaping therefrom. The burner having been lighted, the valve is brought back to its original position, with the inlet 11 closed by the bearing 12, and the recess 24' of the handle drops into engagement with the clevis 22, whereby the igniting mechanism is locked.

Characteristic features of importance will be seen in the fact that the valve 9 is locked in the closed position automatically, by the engagement of the notch 24' with the clevis 22, when the handle 24 is in its lowermost position, and that by lifting the handle to revolve it the recess is disengaged to unlock the valve. Furthermore the extension of the channel 7 throughout the greater part of a circle secures a supply of gas to the nozzle 14 to maintain the lighting flame throughout an extended arc of the revolution of the pipe 13 and several burners in its path of revolution can be lighted thereby.

Having described my invention, I claim:

1. The combination with a conduit, of a revolvable valve, a pinion fixed thereto, a nozzle carried by said valve, a pinion engaging said pinion first named, a shaft fixed to the second named pinion and revolvable in a bearing in which it is transversely movable, fixed to said shaft a member having a recess therein, and means for engaging said recess when said valve has been revolved to a predetermined position.

2. The combination with a gas burner, of
a revoluble valve having a passage closed
and opened in different positions thereof, a
nozzle revolved with said valve and com-
5 municated with by said passage, a sparking
mechanism for igniting gas escaping from
said nozzle, mechanism comprising a handle
for revolving said valve, and means where-
by said mechanism is automatically locked
10 when said valve is in position to close said

passage and automatically unlocked on mov-
ing said handle to revolve said valve.

In witness whereof I have hereunto set
my name this 20th day of February, 1909,
in the presence of the subscribing witnesses. 15

CHARLES B. STILWELL.

Witnesses:

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