

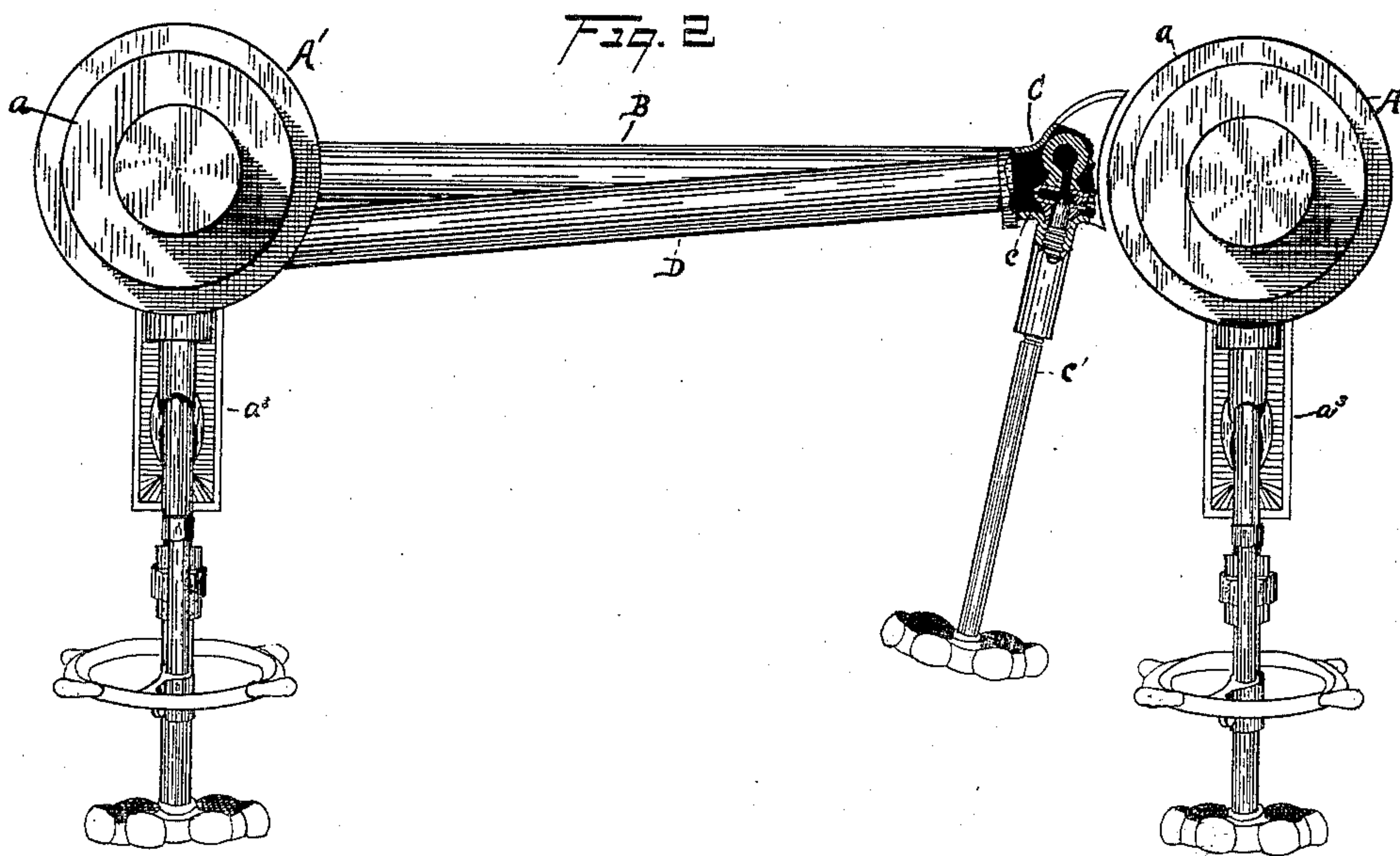
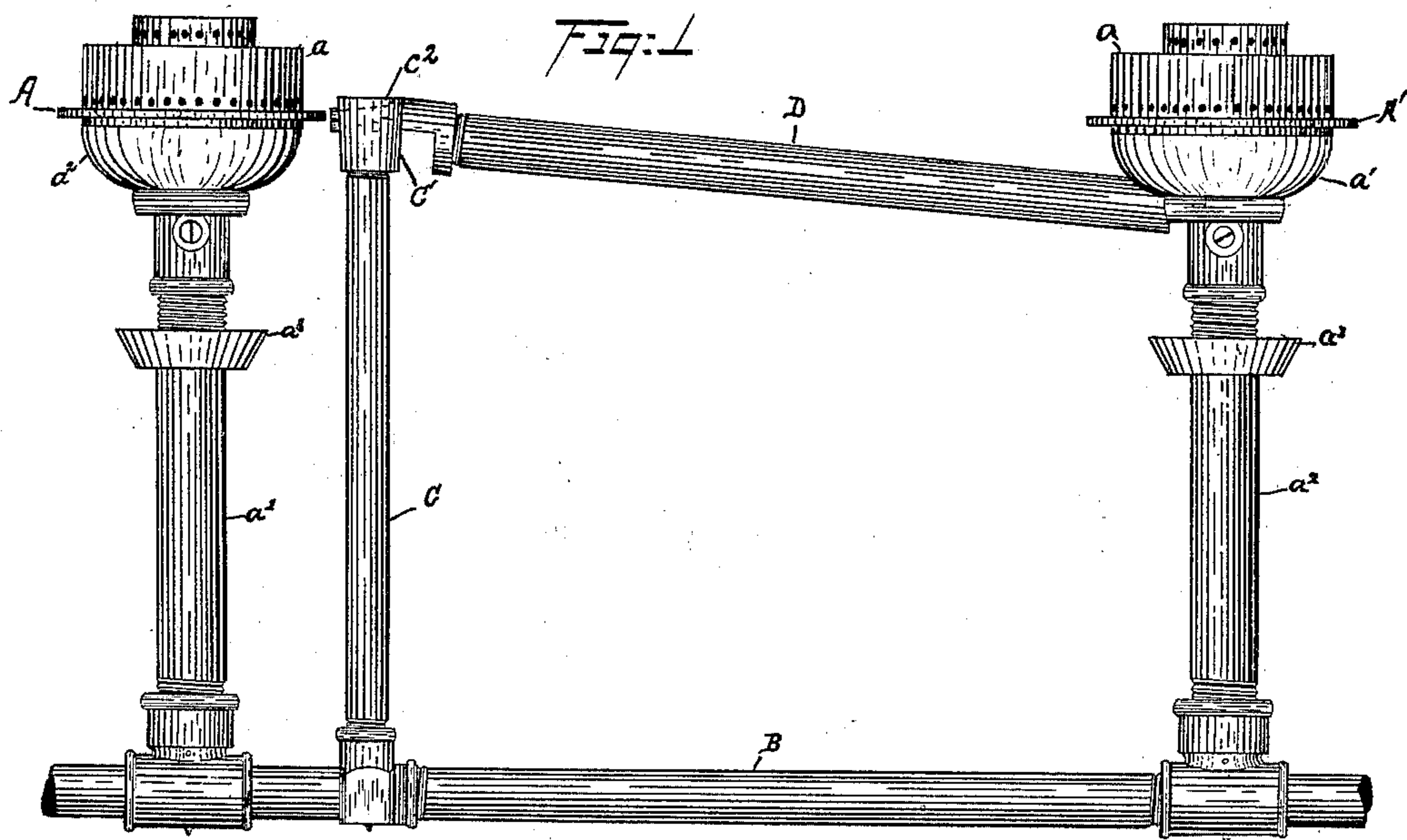
(No Model.)

2 Sheets—Sheet 1.

G. B. McCLELLAND.
VAPOR BURNER STOVE.

No. 409,221.

Patented Aug. 20, 1889.



WITNESSES

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(No Model.)

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Fig. 3.

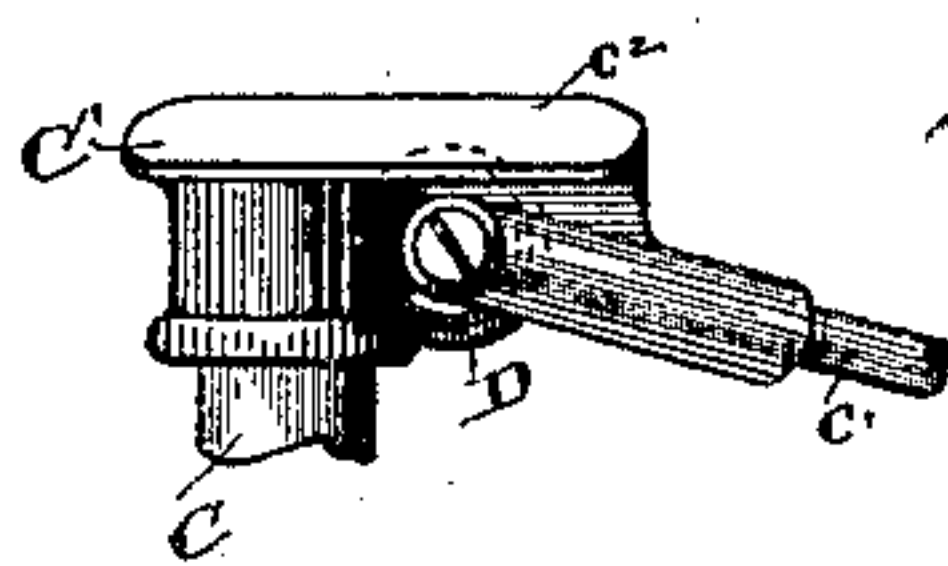
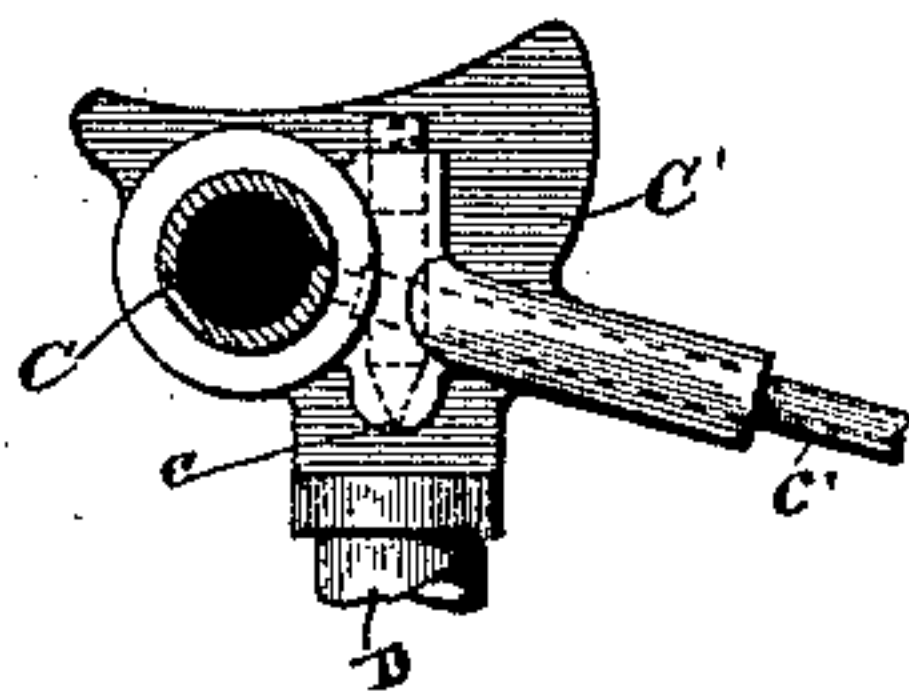


Fig. 4.

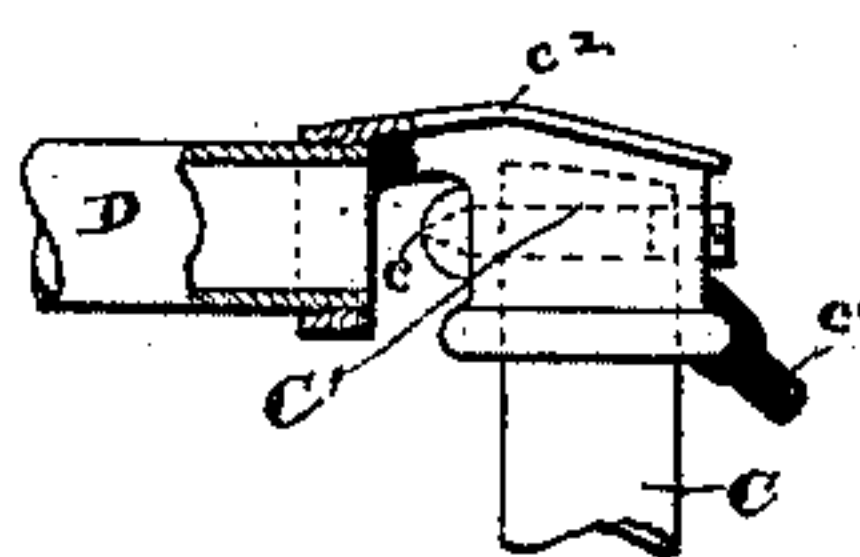


Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE B. McCLELLAND, OF CLEVELAND, OHIO.

VAPOR-BURNER STOVE.

SPECIFICATION forming part of Letters Patent No. 409,221, dated August 20, 1889.

Application filed December 2, 1887. Serial No. 256,782. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. McCLELLAND, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain
5 new and useful Improvements in Vapor-Burner Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in vapor-burner stoves having two or more burners in which is located in close proximity to the primary or central burner a separate or
15 secondary generator, the latter being heated by jets of flame from the primary burner, such secondary generator being provided with valve and jet-orifice and having attached a tube for conveying vapors from the same to a
20 so-called "outside" burner, and where such vapor is lighted to produce the initial heat for such outside burner in place of a lighting-cup. Any number of such secondary gener-
25 ators may be arranged in proximity to the primary burner according to the number of outside burners employed on the stove, to the end that although the outside burners are entirely independent of the central or primary
30 burners and may have their own respective lighting-cups, so as to be operative in case the central burner be disabled, the initial heat may be supplied to all or any of such outside burners by using only the lighting-cup of the
35 central or primary burner.

With these objects in view my invention consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is
40 a side elevation. Fig. 2 is a plan, partly in section, only so much of a vapor-burner stove being shown as is necessary in illustrating my invention; and Figs. 3, 4, and 5 are detached views of the generator C' and adjacent parts.

45 A represents the primary or central burner, and A' one of the so-called outside burners, any number of which latter may be employed according to the size of the stove. The central and outside burners may be alike, and al-
50 most any of the different varieties in common use will answer the purpose, each burner hav-

ing cone *a*, generator *a'*, stand-pipe *a*², and lighting-cup *a*³, together with the necessary valves, the different stand-pipes being con-
55 nected with supply-pipe B.

C is a stand-pipe connected with pipe B. Pipe C connects with generator C', the latter having a jet-orifice *c* and valve *c'* for controlling the discharge of this orifice. An up-
60 wardly-projecting rib or flange *c*² of this generator is in position to be impinged by jets of flame from cone *a* of burner A. Tube D is attached to generator C' in position to receive the discharge of jet-orifice *c*. This tube dis-
65 charges under and against generator *a'* of burner A'. The lighting-cup of the primary burner A is used to develop the initial heat at this burner, and after the latter has been lighted a few moments enough heat will have
70 been imparted to generator C' to vaporize the gasoline in the latter. This vapor by means of valve *c'* is discharged through tube D, and is lighted by a match or other means at the discharging end of this tube to supply the
75 initial heat for the outside burner. When the outside burner by such means has been sufficiently heated, its own valve is opened and the burner is operated by its own heat in the usual manner, after which valve *c'* may be closed. Usually the lighting-cups are the most ob-
80 jectionable feature of a vapor-burner stove on account of the smoke, odor, and the time required in starting the burner by such means. To overcome such difficulty as far as possible
85 by using only one lighting-cup, the outside burners have sometimes been of the non-generating variety, heat being supplied by gases drawn from the central burner. With such construction if the central burner becomes in-
90 operative the outside burners cannot be used and the whole stove becomes inoperative.

With my improved construction each burner being provided with generator and lighting-cup can be operated independent of the other burner, and at the same time so long as the
95 primary burner remains operative only one lighting-cup need be employed in starting any or all of the burners.

There are various devices for conducting a jet of flame from one burner to another for
100 lighting purpose; but such lighting devices are of different construction and for entirely

different purpose from my improved device for supplying initial heat to the outside burners.

What I claim is—

- 5 The combination, with two burners of the generating variety, of a generator located in position to receive heat from the first burner, said generator being provided with tube for conveying gas to the second burner for sup-

plying initial heat to the latter, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 28th day of October, 1887.

GEORGE B. McCLELLAND.

Witnesses:

CHAS. H. DORER,
ALBERT E. LYNCH.