

(No Model.)

D. DALY.  
GAS BURNER.

No. 496,350.

Patented Apr. 25, 1893.

Fig. 1.

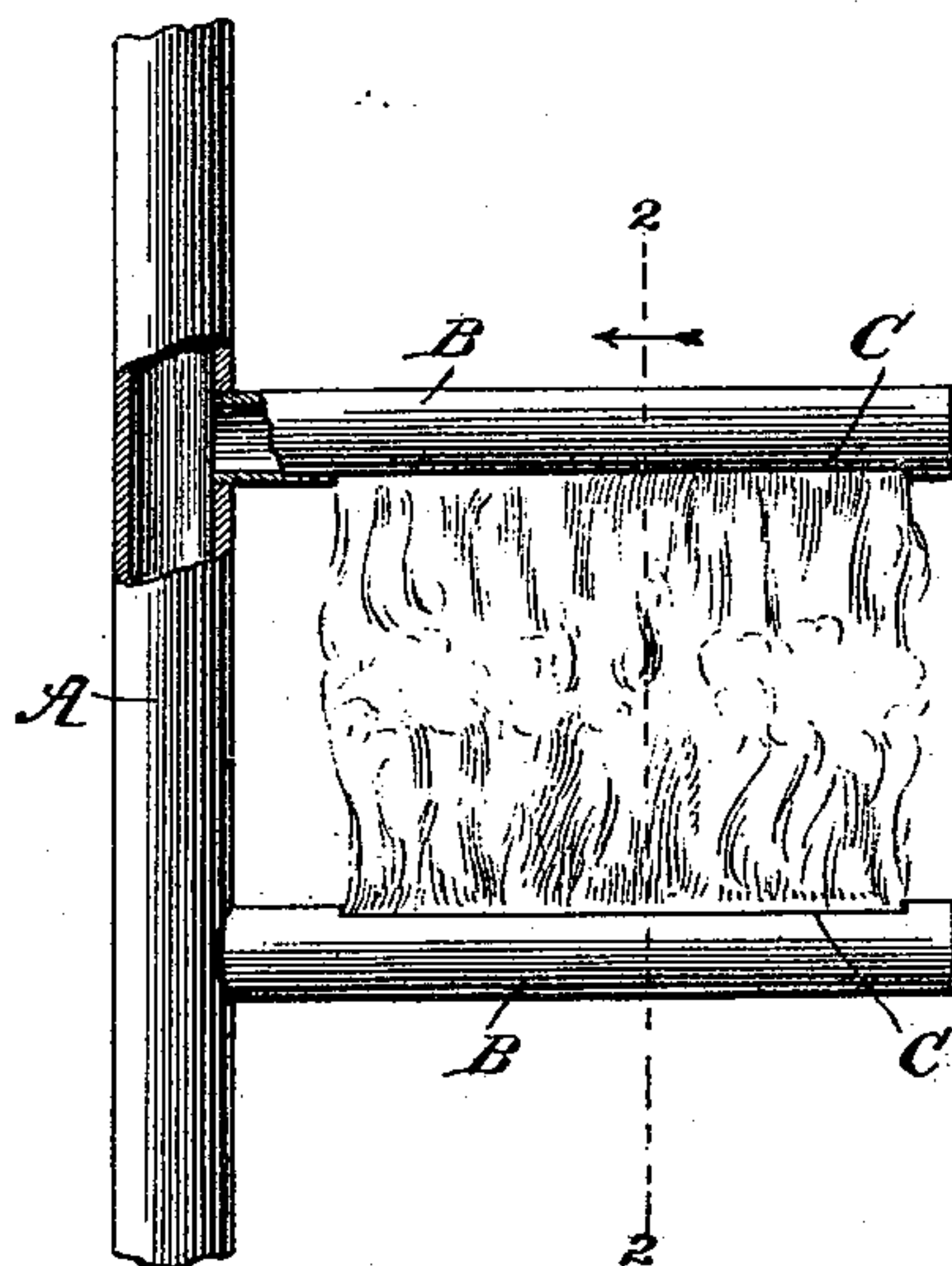
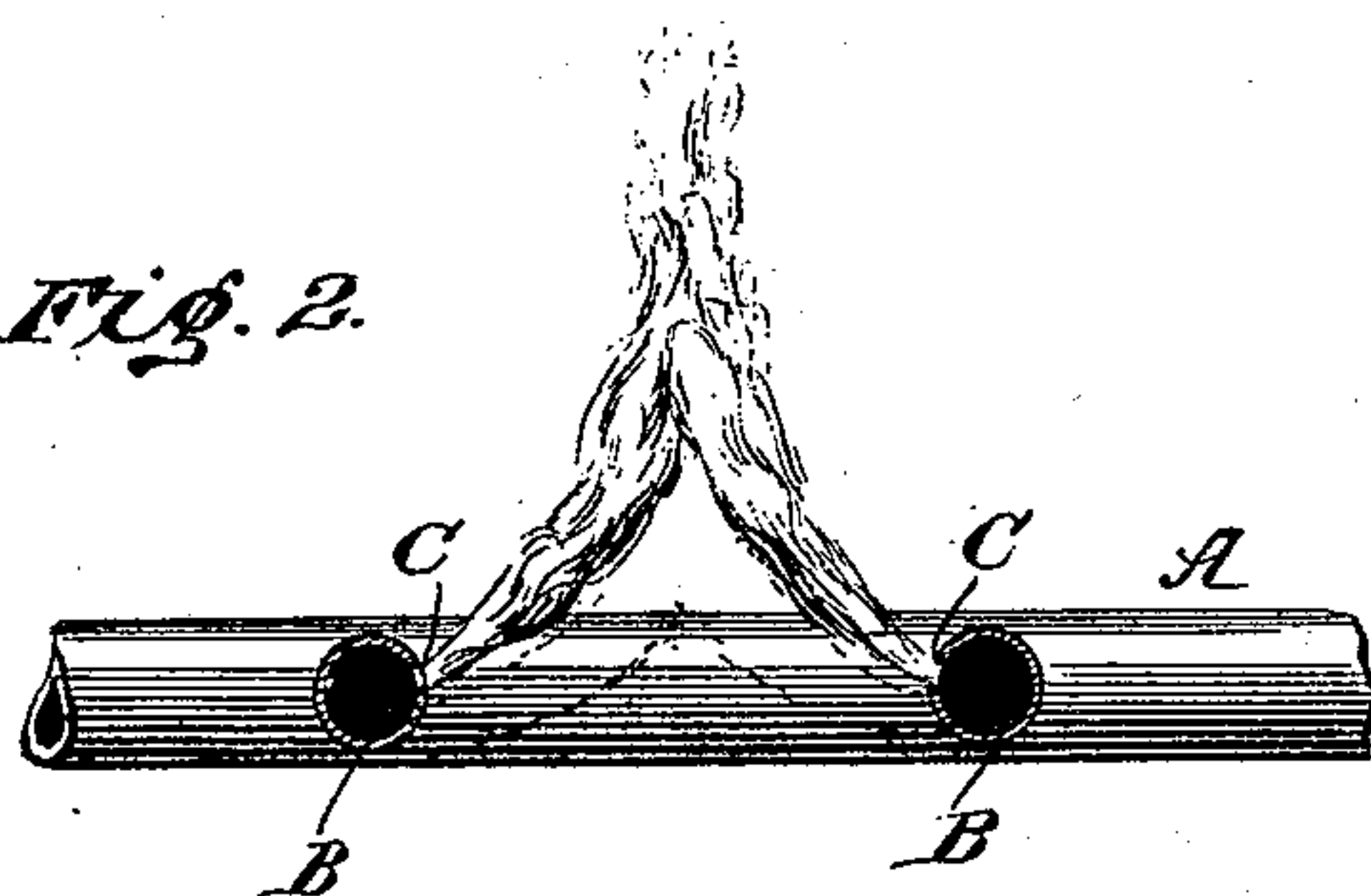


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 496,350, dated April 25, 1893.

Application filed September 5, 1892. Serial No. 445,061. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL DALY, of Maysville, in the county of Mason and State of Kentucky, have invented a new and useful  
5 Improvement in Gas-Burners, of which the following is a specification.

My invention is an improved gas burner and consists in the novel constructions and combinations of parts as hereinafter described  
10 and pointed out in the claims.

In the drawings Figure 1 is a plan view of my improvement parts being broken away and others shown in section, and Fig. 2 is a cross section on line 2—2 of Fig. 1.

15 The improved burner comprises two approximately parallel tubes or sections having in their adjacent faces the longitudinally extended gas outlets or slots arranged opposite each other, so that the gas issuing will  
20 come together and merge in a single flame.

Referring to the drawings the pipe A may represent a part of a main or other gas supply. To this pipe A are connected the tubes B opening at their inner ends to receive  
25 gas and closed at their outer ends. Slots C are formed in the adjacent faces of the tubes and are extended longitudinally as shown. By preference I support the tubes B so that they may be turned to vary the  
30 relation of the slots C in the two tubes. This is accomplished in the construction shown by threading the short tubes into the pipe A as shown in Fig. 1. By turning the tubes B, the slots may be adjusted to vari-  
35 ous relative positions as indicated in full and dotted lines in Fig. 2. These tubes B are set comparatively near each other so that the gas issuing from their longitudinal outlets will impinge and merge and spread out  
40 into a single solid flame. The commotion and suction produced by the currents of gas coming together in a flame serve without any special, separate construction to mix the air with the gas and a hot heating flame is  
45 produced. The amount of air drawn in may be varied by varying the distance between the tubes and also by so varying the angle at which the gas impinges. By turning the

tubes to set the slots farther or nearer apart the amount of air is also in a measure controlled. 50

While by setting the tubes sufficiently apart to suck in considerable air a hot heating flame is produced, it will be understood that if a luminous flame is desired the tubes 55 should be placed so near together that practically little or no air will be fed up into the flame. By merging the gas in a single flame and mixing the air at the point of impingement or juncture I avoid the burning back 60 of the flame and the consequent injury to the burner tubes.

While I prefer to arrange the tubes B parallel it is obvious that a slight variation or departure from such parallelism would not 65 necessarily involve a departure from my invention as the tubes might be arranged to slightly converge toward one end if desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters 70 Patent, is—

1. An improved gas burner consisting of two tubes or suction having their adjacent sides approximately parallel and provided in said sides with longitudinally extended 75 gas outlets facing each other and arranged comparatively near together whereby the gas discharged from said outlets will curve upwardly and, meeting, merge in a single flame, substantially as and for the purposes set 80 forth.

2. An improvement in gas burners composed of two approximately parallel rotary tubes provided in their adjacent sides with longitudinal slots, said tubes being arranged 85 near together whereby the gas sections issuing from both outlet slots will merge in a single flame and operate to feed air to said flame below and between the gas sections, all substantially as described whereby the 90 relation of the slots may be varied to vary the amount of air fed in by suction and so vary the quality of the flame all substantially as and for the purposes set forth.

3. An improved gas burner comprising two 95 approximately parallel tubes or sections hav-

ing in their inner or adjacent sides longi-  
tudinally extended gas outlets or slots fac-  
ing each other, the sections being arranged  
sufficiently near each other to cause the  
5 sheets of gas issuing from their outlets to  
meet midway between the outlets and merge  
in a single flame sufficiently long to produce

an upward suction or draft below the merged  
flame substantially as set forth.

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