

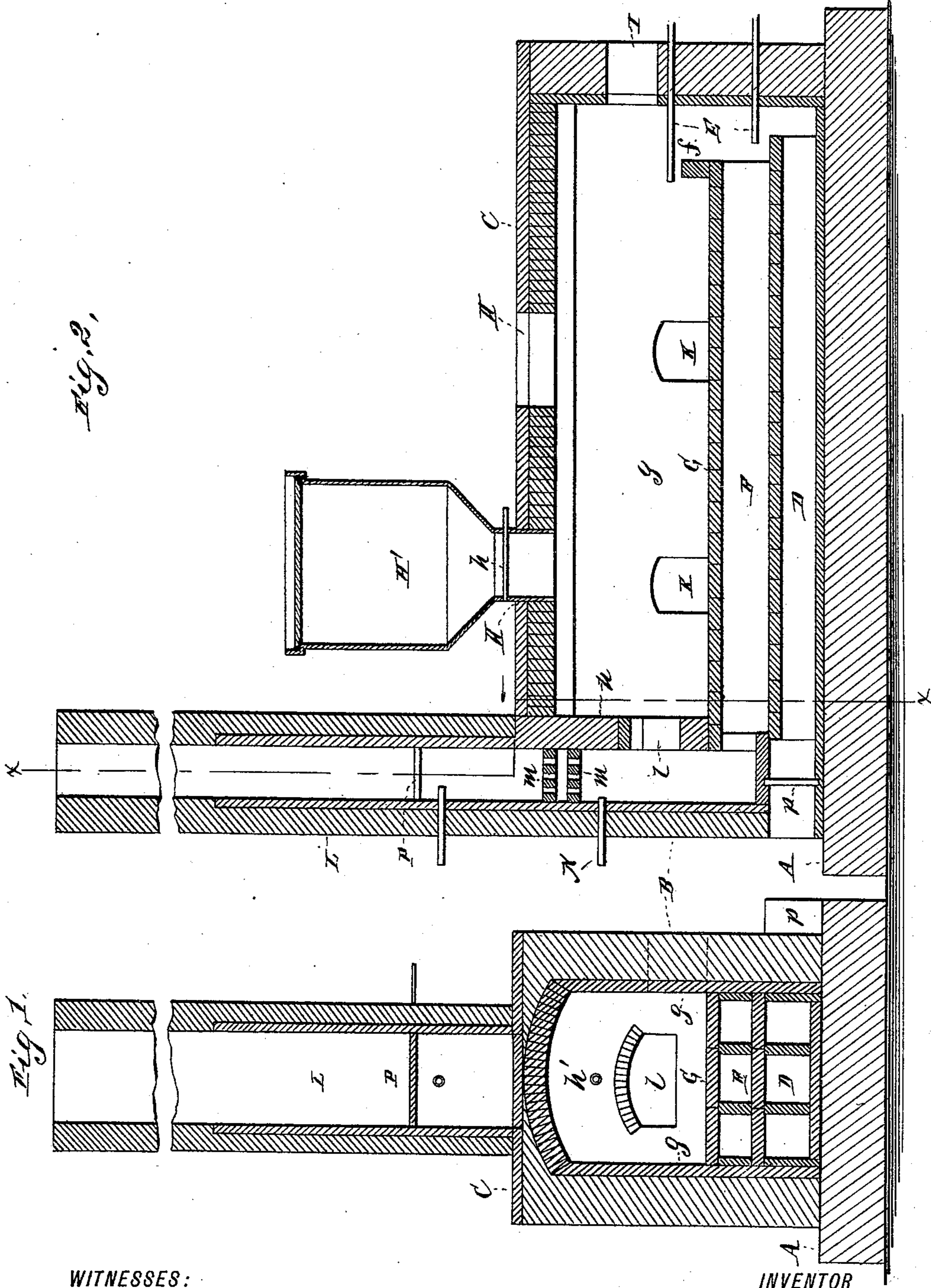
(No Model.)

2 Sheets—Sheet 1.

S. W. DIXON.  
CREMATION FURNACE.

No. 461,327.

Patented Oct. 13, 1891.



WITNESSES:

*Paul Taylor*  
*Phil. Massi.*

INVENTOR

*Samuel W. Dixon*

BY

*E. W. Anderson*

*his* ATTORNEY.

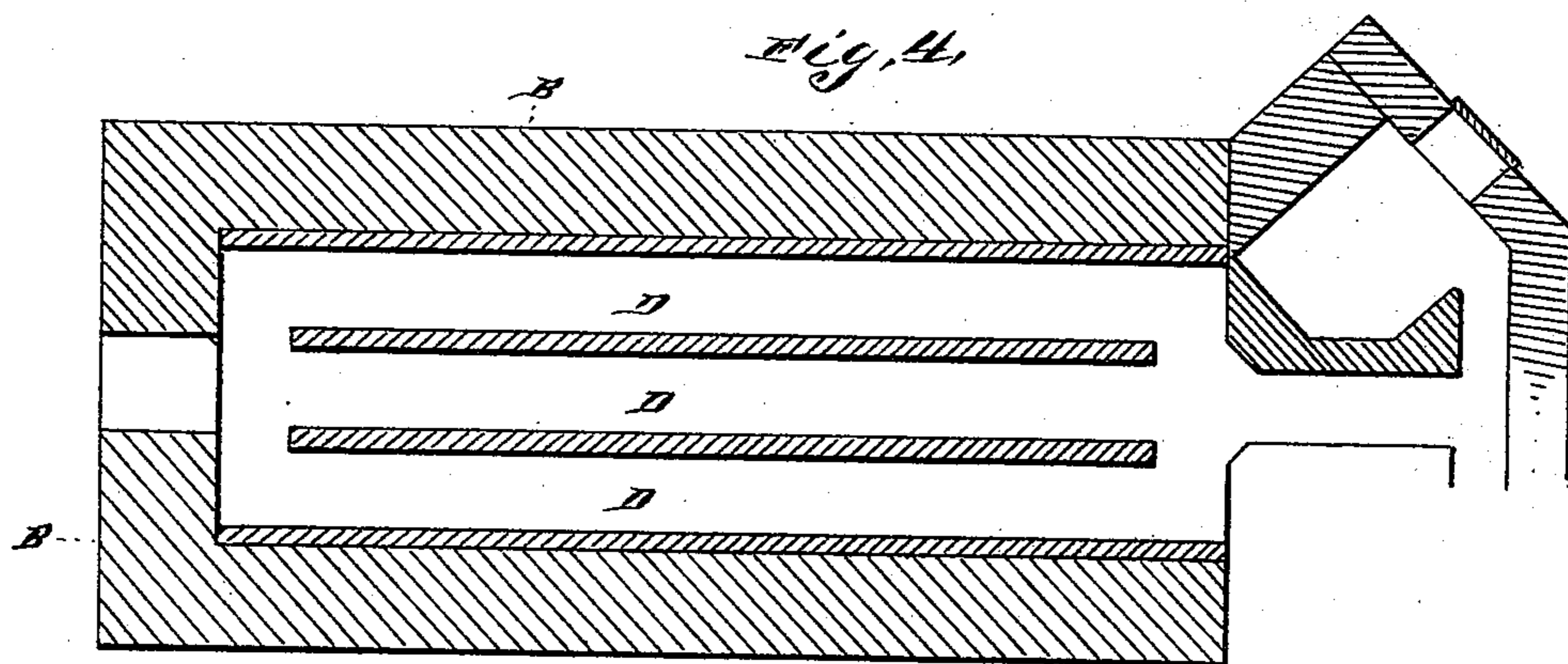
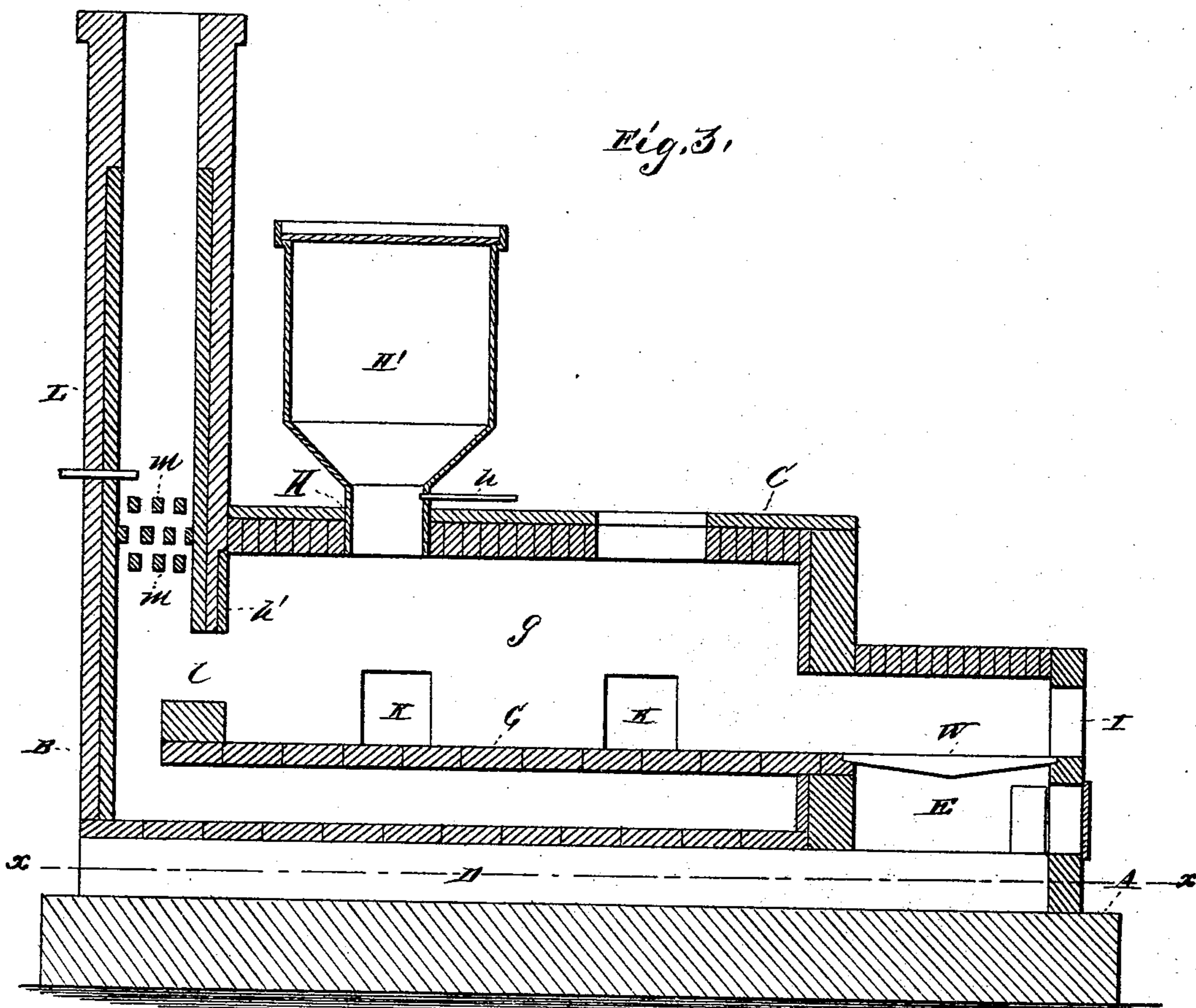
(No Model.)

2 Sheets—Sheet 2.

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CREMATION FURNACE.

No. 461,327.

Patented Oct. 13, 1891.



WITNESSES:

*Charles L. Payson*  
*Phillips*

INVENTOR

*Samuel W. Dixon*

BY

*E. W. Anderson*

*his* ATTORNEY.

# UNITED STATES PATENT OFFICE.

SAMUEL W. DIXON, OF FINDLAY, OHIO.

## CREMATION-FURNACE.

SPECIFICATION forming part of Letters Patent No. 461,327, dated October 13, 1891.

Application filed February 13, 1891. Serial No. 381,332. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL W. DIXON, a citizen of the United States, and a resident of Findlay, in the county of Hancock and State of Ohio, have invented certain new and useful Improvements in Cremation-Furnaces; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical section on line *x x*, Fig. 2. Fig. 2 is a vertical longitudinal section. Fig. 3 is a vertical longitudinal section of a modification, and Fig. 4 is a horizontal section of Fig. 3 on the line *x x*.

This invention has relation to improvements in cremation-furnaces; and it consists in the construction, combination, and arrangement of parts hereinafter set forth.

The object of the invention is to provide a furnace of this character whereby dead bodies, garbage, night-soil, and all other refuse material reducible by combustion may be thoroughly and quickly consumed, and, further, to provide the furnace with a device for consuming or destroying all scent given off by the combustion.

In the accompanying drawings, illustrating the invention, A represents the foundation, preferably of limestone or brick, B the side and end walls, and C the top.

D D, &c., are passages or flues above the foundation A, and are lined with fire-proof material. These passages or flues are for the purpose of conducting atmospheric air into the furnace, which during its passage is brought to a high temperature by the heated walls of said flues, so that when it comes in contact with the natural-gas burner or fire-chamber at E it forms perfect combustion. A portion of the heated air from the burners or fire-chamber passes through the passages or flues F, which are located directly over flues D, thereby heating the walls of the latter and at the same time bringing the floor of the furnace proper G, directly over the flues F, to a high temperature. Hot air and flame are also carried through the passage *f* into the

furnace G. The bottom of this furnace, as stated, is formed by the superior surface of the flues F. It will thus be seen that the matter to be consumed takes fire in two ways: first, by coming in contact with the highly-heated floor of the furnace, and, second, by the fire from the burner or fire-chamber at E. The furnace proper is provided with the retaining-walls *g* to hold the material in place.

H H are apertures or openings in the top of the furnace for the admission of the material to be consumed, and are preferably provided with the hoppers H' H', which are preferably provided with an adjustable bottom *h* to govern the admission of said material. The top periphery of each hopper is bent outward and a groove formed, into which a cover accurately fits, said cover being provided with a rubber packing, and when placed in position water may be poured into the groove, making an air-tight joint and preventing the escape of all odors. These hoppers are made of sufficient size to serve as a reservoir for the material to be consumed.

I is an opening at one end of the furnace for the purpose of permitting the entrance of any matter which would inconveniently be admitted through aperture H.

K K are apertures provided with doors, (not shown,) and are so placed as to permit the ashes to be withdrawn from the combustion-chamber G.

A stack or chimney L is built at one end of the crematory, and the wall of the chimney abutting against the roof of the furnace is continued downward, and an extension *h* of fire-brick or fire-proof material is formed. By means of this extension *h* the escaping gases are obliged to pass into the stack or chimney through the passage *l*, the flues F also opening into said stack. In the said stack L, at its lower end and a little above the passage *l*, is arranged a series of rows, preferably two, of fire-proof material in the shape of bricks or regular blocks *m m*, and a natural-gas burner N placed in a position to bring them to a white heat. Where a fire-box is employed instead of natural gas, these blocks may be heated by the fire therein. The products of combustion in the chamber G, passing into the stack below these heated bricks or blocks and around and between

them, will have all odor and scent destroyed, so that no odor will be perceptible at the mouth of the stack.

5 The chimney is lined with fire-brick for some distance from its bottom and is provided with a damper P to regulate the draft.

The admission of cold air into the furnace may be regulated by the doors or dampers p in the passages D, and this regulation of the 10 draft is necessary, as the temperature may be reduced by the too rapid admission of air.

In Fig. 3 I have shown the furnace provided with a fire-box W, instead of the natural-gas burners shown in Figs. 1 and 2; but 15 the operation is substantially the same in both constructions.

It is well known that air must be brought to a highly-heated condition before perfect combustion can be obtained, and this is at- 20 tained by the construction above shown and described. It will also be found that where fuel is employed instead of the gas a great saving thereof will be effected by this means of heating the air before introducing it into 25 the furnace.

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

30 1. In a furnace, a series of longitudinally-extending cold-air passages D above the base or foundation and leading to the fire-box or burner, a series of flues F above said air-passages, a furnace over said flues, a smoke-stack or chimney, said flues F leading into said

stack, and a passage from said furnace also 35 leading into said stack, substantially as specified.

2. A furnace having the air-passages leading to the fire-box or burner, the hot-air flues thereover and underneath the floor of the fur- 40 nace proper, a smoke-stack or chimney into which said flues lead, a passage from the furnace also leading into said stack, a scent-consumer in said stack above said passage, and means for heating said consumer, substan- 45 tially as specified.

3. The crematory having a series of air-passages extending beneath the heating-chamber, and the furnace proper located over said heating-chamber, whereby both the air in 50 the said passages and the floor of said furnace are brought to a high temperature by the heat in said chamber, substantially as specified.

4. The combination, with the air-passages, 55 their regulating-dampers, the heating-chamber, and the furnace proper, of the chimney or stack having the smoke and odor consuming furnace, the conducting-passage thereto, and the regulating-damper, substantially as 60 described.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL W. DIXON.

Witnesses:

JOHN RUTHRUMFF,  
JASON BLACKFORD.