SAMUEL WHITNEY.

Improvement in Apparatus for Carbureting Gas and Air.

No. 115,798. Patented June 6, 1871.

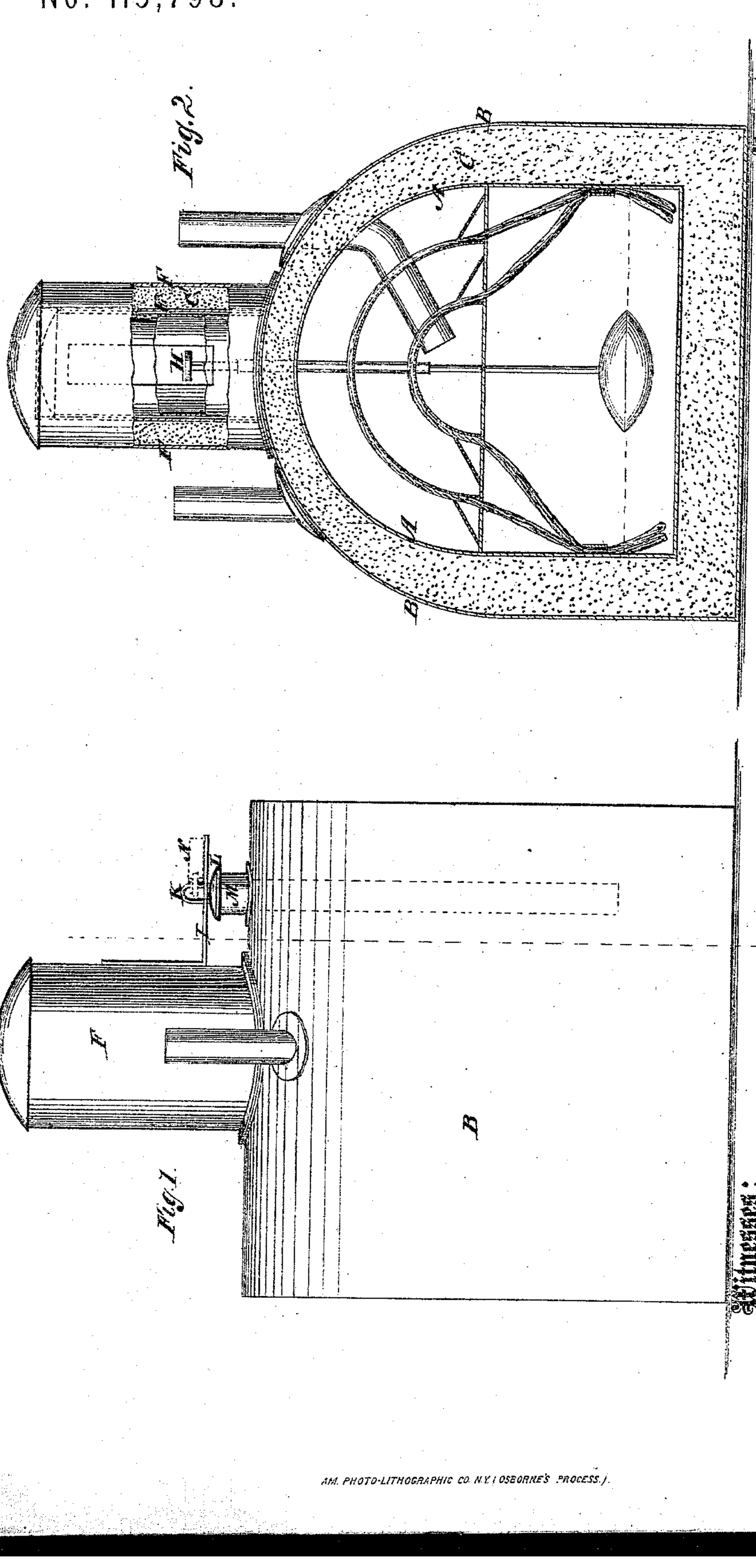

Fig. 1.

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

SAMUEL WHITNEY, OF FLUSHING, NEW YORK.

IMPROVEMENT IN APPARATUS FOR CARBURETING GAS AND AIR.

Specification forming part of Letters Patent No. 115,798, dated June 6, 1871.

To all whom it may concern:

Be it known that I, SAMUEL WHITNEY, of Flushing, Queens county, in the State of New York, have invented a new and Improved Gas Carbureting and Carbonizing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in the carbureting and carbonizing machines used for improving the burning qualities of coal-gas, and applicable to gas-generating apparatus; and it consists in combining with the said machines, of whatever kind, an exterior jacket of sheet metal or other suitable substance, and a packing between it and the ordinary shell of the machines of gypsum or plaster of Paris, as a better means of protecting against accidents either by fire or such as might puncture the shell and allow the gas to escape. It also serves to close any small holes or imperfect places in the shells of the machines, and to equalize the temperature, which is highly essential to the efficient operation of such machines.

Figure 1 is a side elevation of a Woodward gas-carbonizer with a jacket and filling applied to it according to my invention, and Fig. 2 is a transverse sectional elevation of the same taken on the line *x x* of Fig. 1.

A is the shell of the machine as ordinarily constructed. B is the exterior shell which I apply, and C the lining of gypsum or plaster of Paris. E is the shell of the dome; F, the jacket therefor; and G, the lining. This jacket B is made of tin, galvanized sheet-iron, or other suitable metal, and conformably as near as may be to the shape of the shell A of the carbureter or carbonizer, and sufficiently larger in its dimensions in every way to provide an intermediate space for the said packing. The unions, feed-tube, and dome of the Woodward gas-carbonizer, and any similar or other projecting fixtures or parts from the top, sides, or bottoms of any other carbonizer or carbureter pass through the jacket by means of holes accurately punched or otherwise formed in the proper places for that purpose, and are surrounded and partially covered by the filling or packing between the jacket and the shell of the carbonizer. The jacket F for the dome is made so as to be readily raised up for inspection of the gauge H, and it is provided with a slotted projecting arm which will drop down over the yoke K in the top or plug L of the supply-pipe M, so that a padlock or other fastening, N, being engaged with the yoke after the dome is put in position, will secure it in place and also secure the cap L against being opened. The dome may, if desired, be supplied with narrow windows of glass or mica, front and rear, and opposite to those of the dome of the carbonizer, as preferred.

By this jacket and filling the carbonizers or carbureters which use inflammable hydrocarbons are rendered entirely safe and free from danger, as the gypsum or plaster of Paris is capable of resisting a great degree of heat, and it is not liable to be injured by a severe blow from a sharp instrument; nor is it likely to be in any way injured, even by hard usage or accident in transportation, so as to cause any leakage whatever; also, by reason of the gypsum or plaster-of-Paris filling or packing, the benzole or other hydrocarbon used in the instrument inclosed is better preserved and better kept at a nearly uniform temperature, thus fully overcoming the effect of unequal temperature, and at same time is a neat, compact, and light filling.

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

1. Gas carbureters or carbonizers and gas-generating apparatus, provided with exterior protecting cases or jackets arranged to provide space between them and their shells, and the said spaces packed with gypsum or plaster of Paris, substantially as specified.

2. The jacket for the dome, arranged detachably with the other part and provided with the slotted arm for operation with the cap of the supply-pipe, substantially as specified.

The above specification of my invention signed by me this 21st day of December, 1869.

SAMUEL WHITNEY.

Witnesses:

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