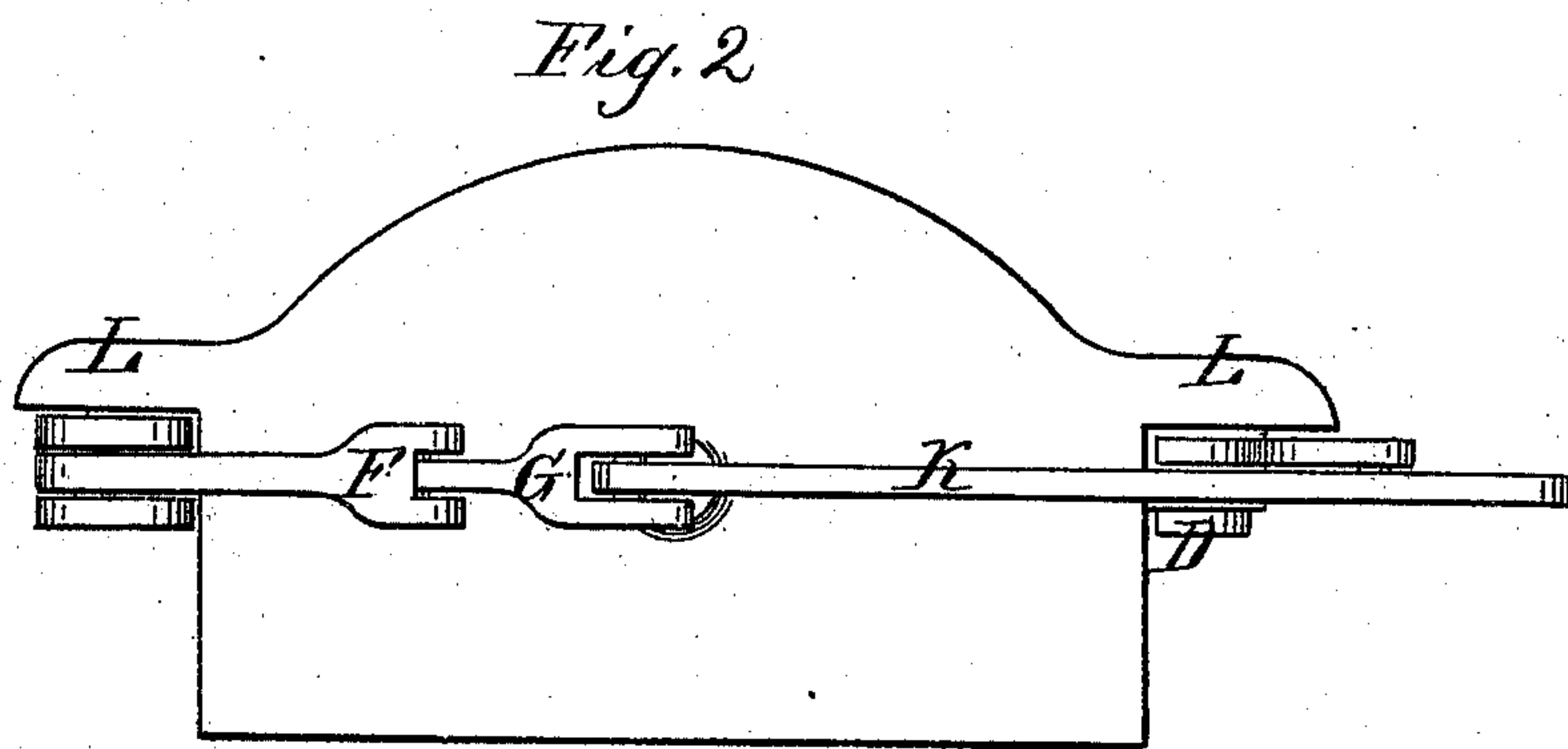
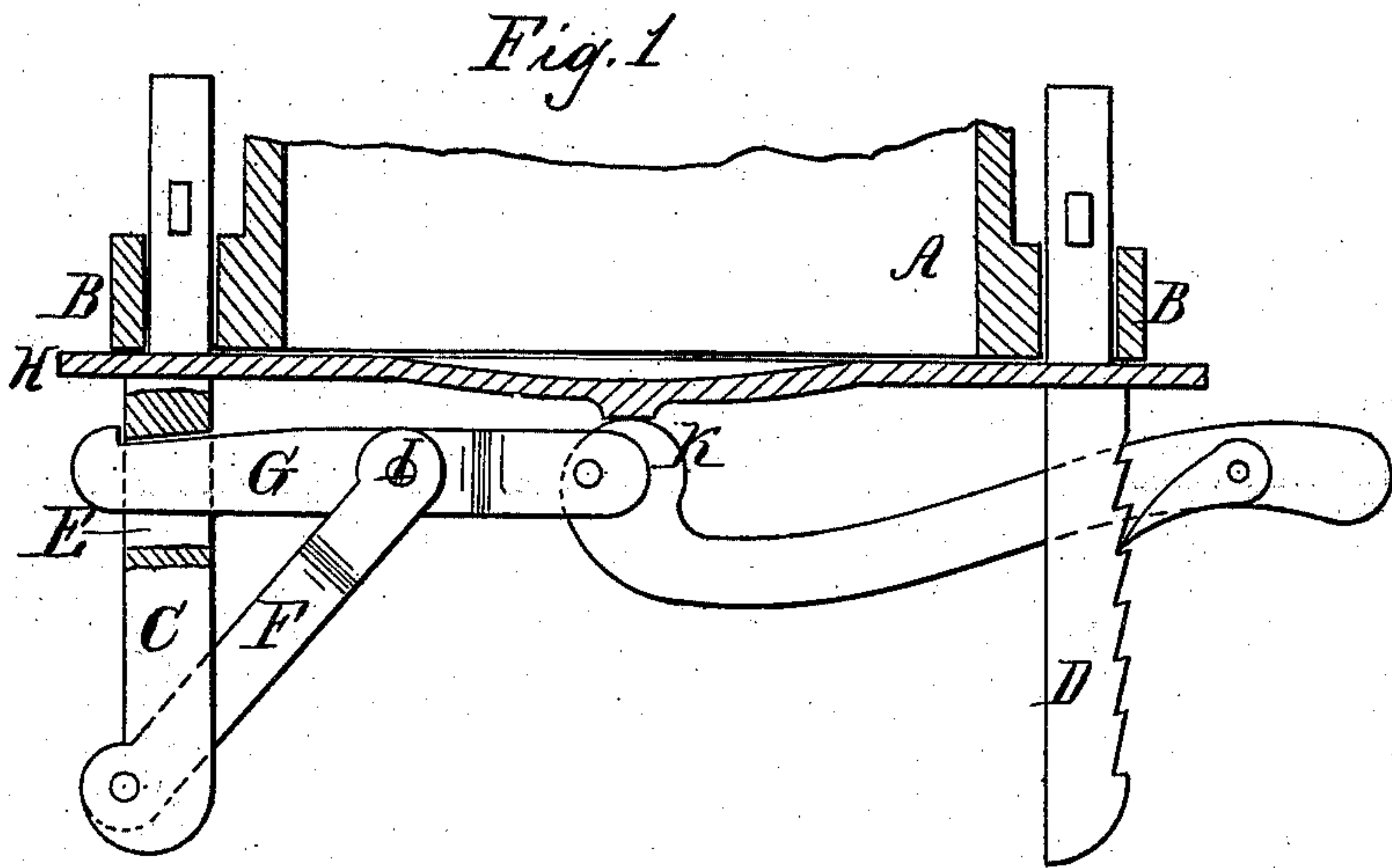


*A. Fulton,*  
*Binder for Gas Retorts.*  
*No. 90,162. Patented May 18. 1869.*



*Witnesses*  
*John F. Brooks*  
*Geo. W. Mabey*

*Inventor*  
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*Wm. B.*



# United States Patent Office.

ANDREW FULTON, OF ALBANY, NEW YORK.

*Letters Patent No. 90,162, dated May 18, 1869.*

## IMPROVED BINDER FOR CLOSING GAS-RETORTS.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that I, ANDREW FULTON, of Albany, in the county of Albany, and State of New York, have invented a new and improved Binder for Lids of Gas-Retorts; 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 drawings, forming part of this specification.

This invention relates to improvements in apparatus for securing the lids of gas-retorts, designed to provide a simple and efficient clamping-apparatus, which may be conveniently operated for opening and closing the retorts.

It consists in an arrangement of clamping-levers, supported in arms projecting from lugs formed upon the retort, near the mouth, as hereinafter more fully specified.

Figure 1 represents a horizontal section of a part of a retort and lid, showing my improved clamping-apparatus applied to it, and

Figure 2 represents a front elevation of the same.

Similar letters of reference indicate corresponding parts.

A represents the mouth of a retort, which, according to my improvement, is provided with slotted lugs B, preferably cast thereon, in which the arms C D are arranged to project from the front thereof.

The arm C is slotted at E; and a link, F, jointed to it at the outer end.

G represents a lever, having a hooked end, for en-

gaging the shoulder at the bottom of the slot E, and to which the link F is jointed at I.

This lever extends to about the centre of the front of the retort, when adjusted to the position for clamping the cover thereto, and supports thereat the end of a cam-lever, K, the free end of which is provided with a spring-pawl, arranged to engage in a series of notches in the arm D.

The lid of the retort is cast with lugs L, for supporting it on the arms D C, in front of the retort. It is also provided with a boss in the centre, against which the crank bears, when the lever thereof is pressed inward and secured by the spring-pawl, thereby clamping the lid to the retort.

To remove the lid, the pawl is disengaged, and the cam-lever swung outward, to relieve the pressure of the cam on the lid.

This will permit the hook-headed lever G to be disengaged from the slot in the arm C, and both the levers G and K to be swung around on the link F and arm C, away from the lid, permitting the ready removal thereof.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The combination, with the retort, of the arms C D, link F, levers G K, all arranged substantially as specified.

Witnesses:

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B. C. HUMPHREY,  
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