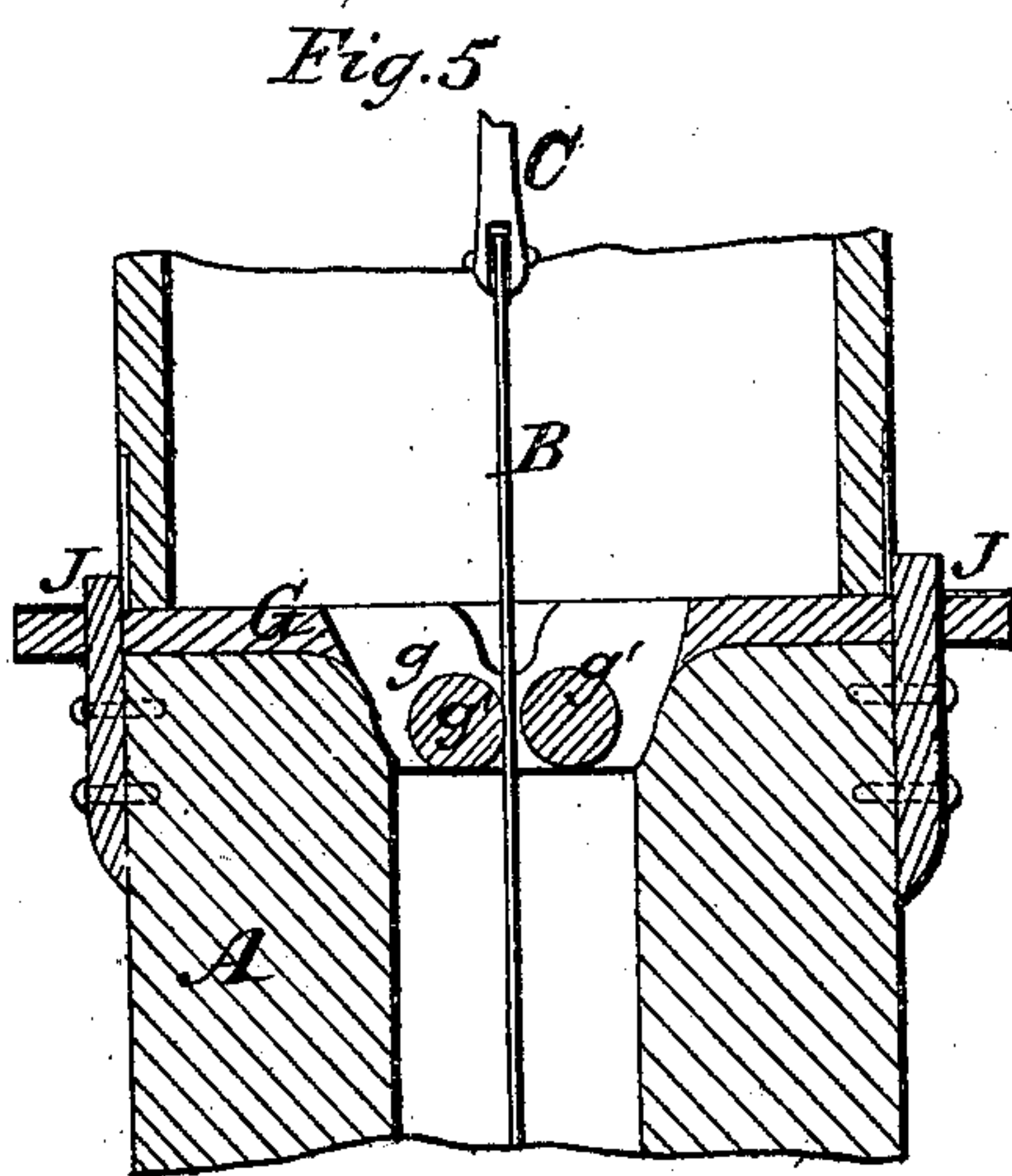
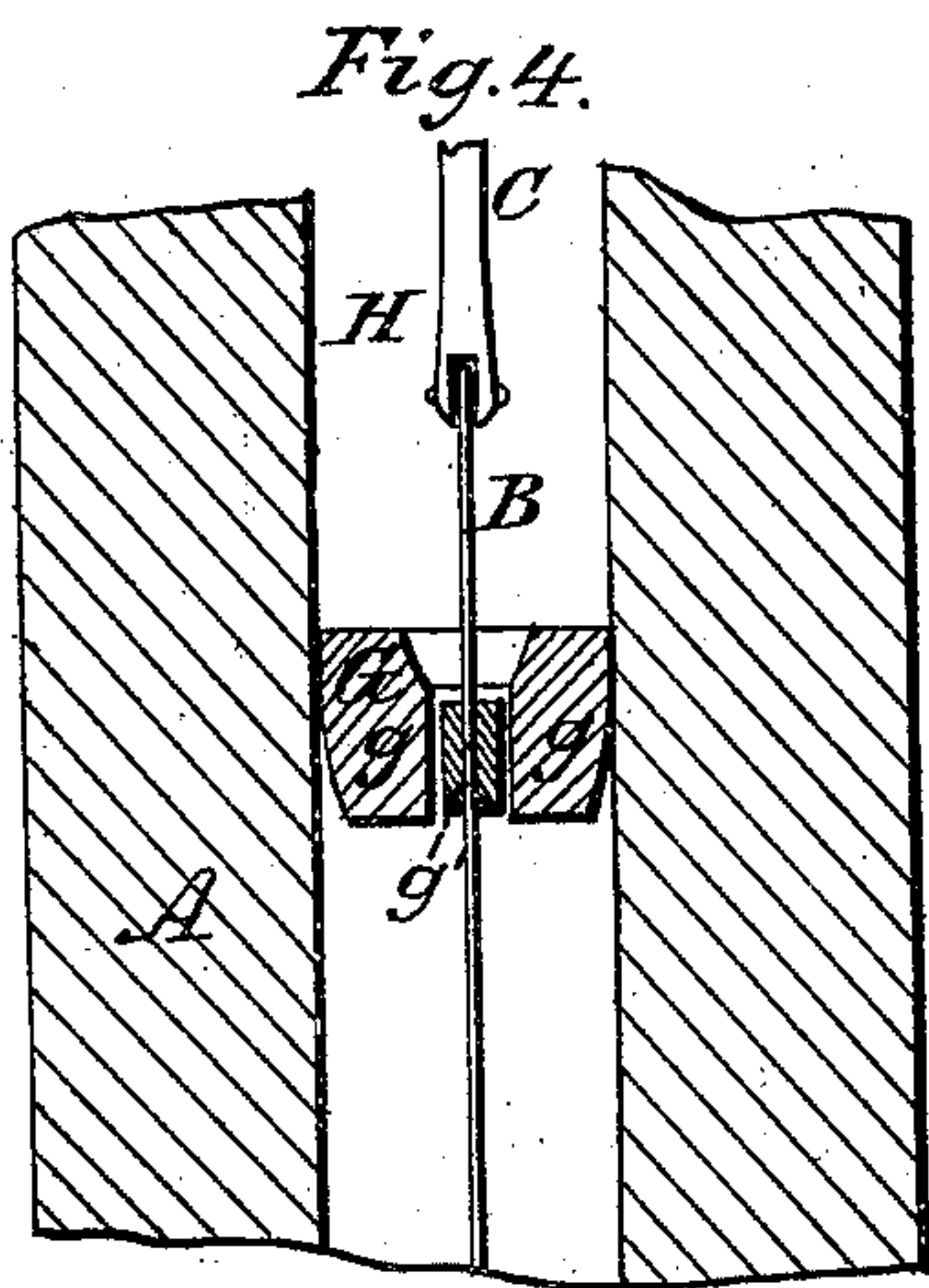
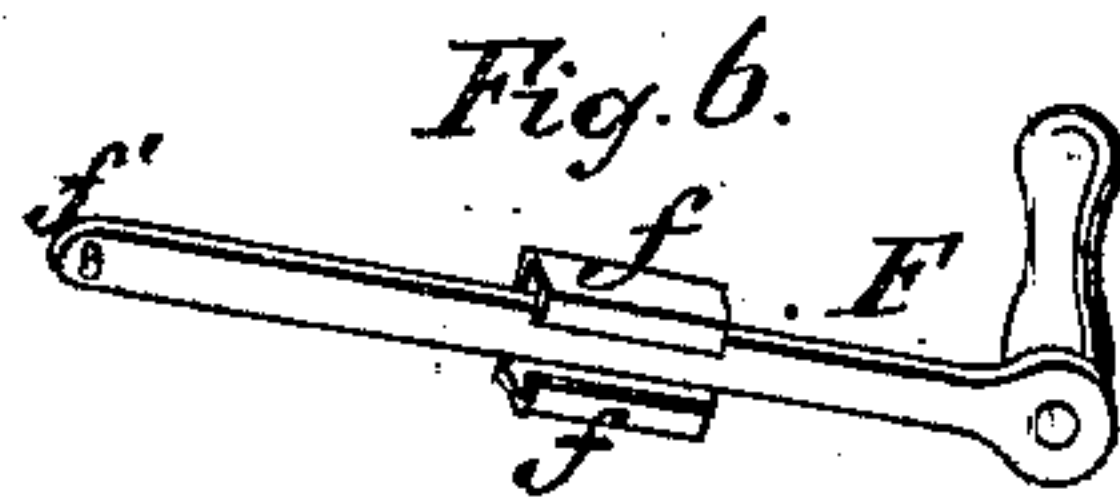
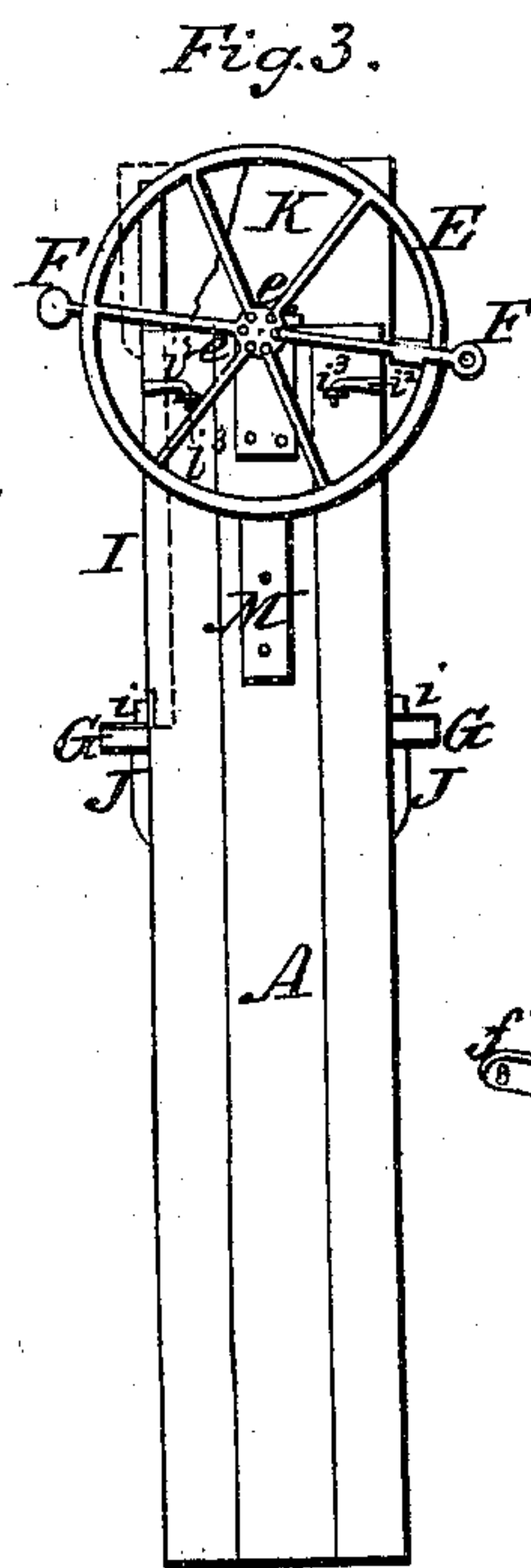
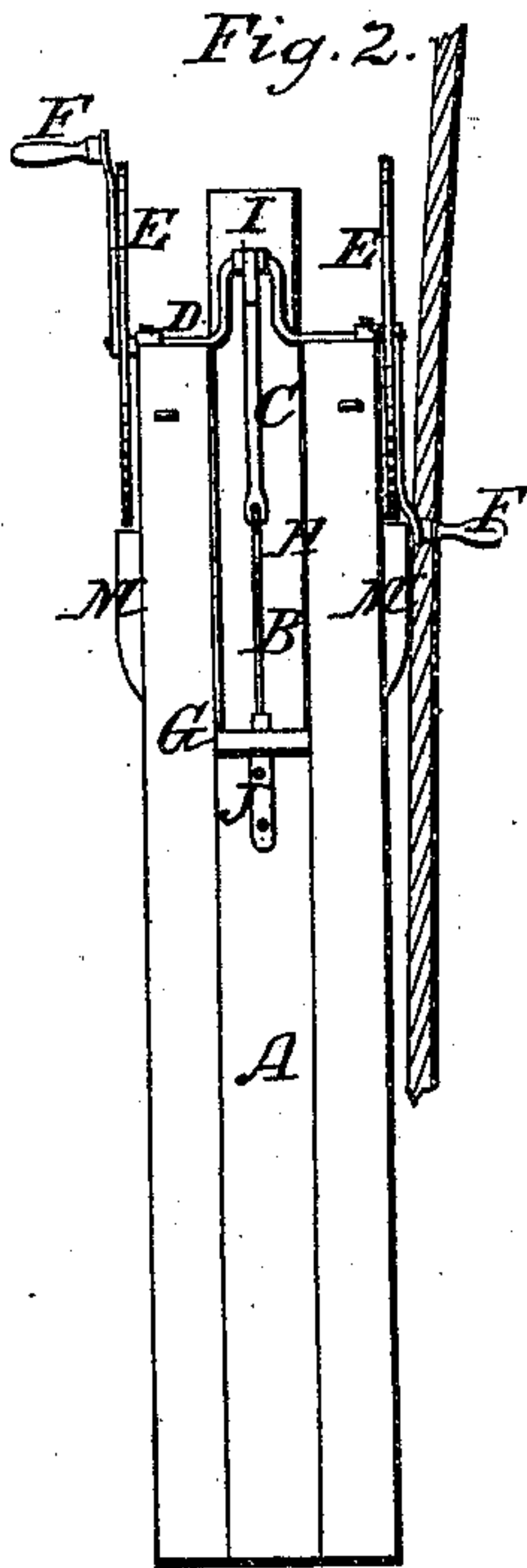
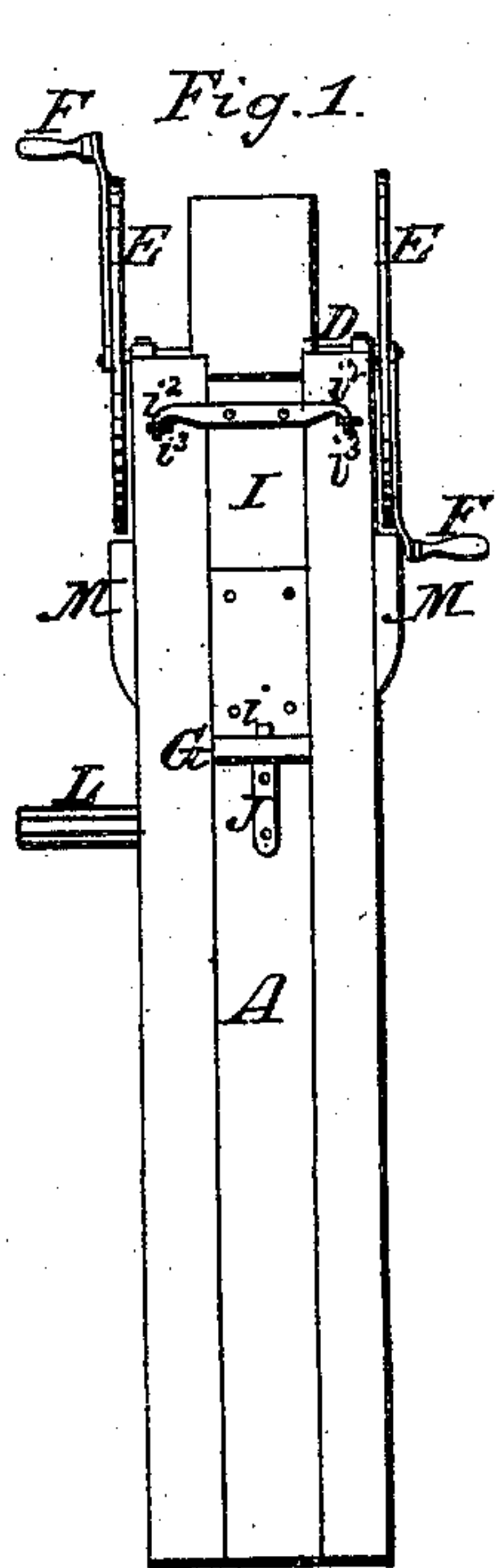


*S. B. Ward,*  
*Pump.*

*No. 86,612.*

*Patented Feb. 2. 1869.*



*Witnesses.*  
*Jacob Henry.*  
*Louis Prodnay.*

*Inventor.*  
*Sam. B. Ward.*  
*by Giedersheim & Co.*  
*Attys.*



# United States Patent Office.

SAMUEL B. WARD, OF DRUMMONDTOWN, VIRGINIA.

Letters Patent No. 86,612, dated February 2, 1869.

## IMPROVEMENT IN PUMPS.

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, SAMUEL B. WARD, of Drummondtown, in the county of Accomac, and State of Virginia, have invented certain new and useful Improvements in Pumps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which are made a part of this specification, and in which—

Figure 1 is a side elevation of a pump illustrating my invention.

Figure 2 is a similar view, with one of the detachable side pieces, hereinafter referred to, removed.

Figure 3 also is a side elevation, the line of vision being at right angles to that of fig. 1.

Figures 4 and 5 are fragmental sectional views.

Figure 6 is a detached sectional view, showing the mode of applying the detachable handles to the operating-wheels.

Similar letters of reference indicate corresponding parts in the several figures.

The subject of this invention is a pump which, without being designed for or limited to the performance of any specific service, is especially adapted for pumping water from vessels.

In the drawings—

A may represent the pump-stock or barrel;

B, the piston-rod; and

C, a pitman, connecting said rod with the crank shaft, or rod D.

To one end, or to each end of the shaft D, may be applied a wheel, E, which, being rotated by means of the handle or handles F, imparts motion to the piston, through the medium of the rods C and B.

G is a plate, resting upon shoulders at the bottom of the openings H H which are formed in the sides of the pump-stock, at the upper end thereof, for the accommodation of the slides or movable pieces I I.

The plate G is held in position by the engagement of the aperture, in its opposite ends, with the pins J J, and pieces I I are provided with flanges *i i*, which also engage with the pins J J, while the lower ends of said pieces I I rest upon the plate G.

The plate G is provided with lugs *g g*, which serve as bearings for the guide-rollers *g' g'*, between which the piston-rod B plays, and which serve to keep said piston-rod in a true vertical position as it reciprocates.

The pieces I I may be held in position by means of the flanges *i i*, in conjunction with the hooks *i<sup>2</sup> i<sup>2</sup>* and eyes *i<sup>3</sup> i<sup>3</sup>*, or they may be retained in place by a tongue and groove, or other connecting-joint, or by any other suitable means.

The pieces I I are employed to close the upper part of the pump after the plate G has been fixed in its place, as shown, and in this closure the pieces I may be assisted by the box-like cap K, which covers the top.

When the pieces I I are withdrawn, the guide-roller plate G may be removed, the openings H being large enough to permit its upward passage.

By this construction, the interior of the pump is made readily accessible for the repair of internal derangements.

The discharge-spout of the pump is shown at L.

The handles F are constructed in a peculiar manner, to adapt them to be detached when the pump is not in use, for the purpose of preventing them from obstructing the movements of ropes or lines aboard ship, or becoming entangled with the same.

The construction of the handles F is shown in fig. 6. It has two hooks, *f f*, which will fit over either one of the arms or spokes of the wheel E, and a pin, *f'*, to be inserted into one of the holes *e* in the central disk of the wheel E. There being a hook, *f*, at either side of the arm or spoke of the wheel E, when the handle F is applied thereto, the wheel may be turned by said handle in either direction. The hooks of the handle may be easily disengaged from the spoke of the wheel, and hence the handle can be detached at pleasure.

Below each wheel E there is fixed a guard, M, of wood or metal, each guard being merely a bevelled piece, so applied as to project horizontally beyond the outer face of the wheel above it. These guards are permanent fixtures, and they prevent the rope belonging to the rigging from catching between the wheels E and the pump-stock A.

Having thus described my invention,

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

1. The removable plate G, having guide-rollers *g g*, arranged and operating as herein described and represented.

2. The detachable pieces or slides I I, in combination with the plate G, substantially as and for the purpose set forth.

To the above I have signed my name, this 5th day of March, 1868.

SAMUEL B. WARD.

Witnesses:

JACOB MAURY,

ALEXR. A. C. KLAUCKE.