

(No Model.)

2 Sheets—Sheet 1.

W. A. BARTLETT.
PNEUMATIC CANNON.

No. 294,353.

Patented Mar. 4, 1884.

Fig. 62.

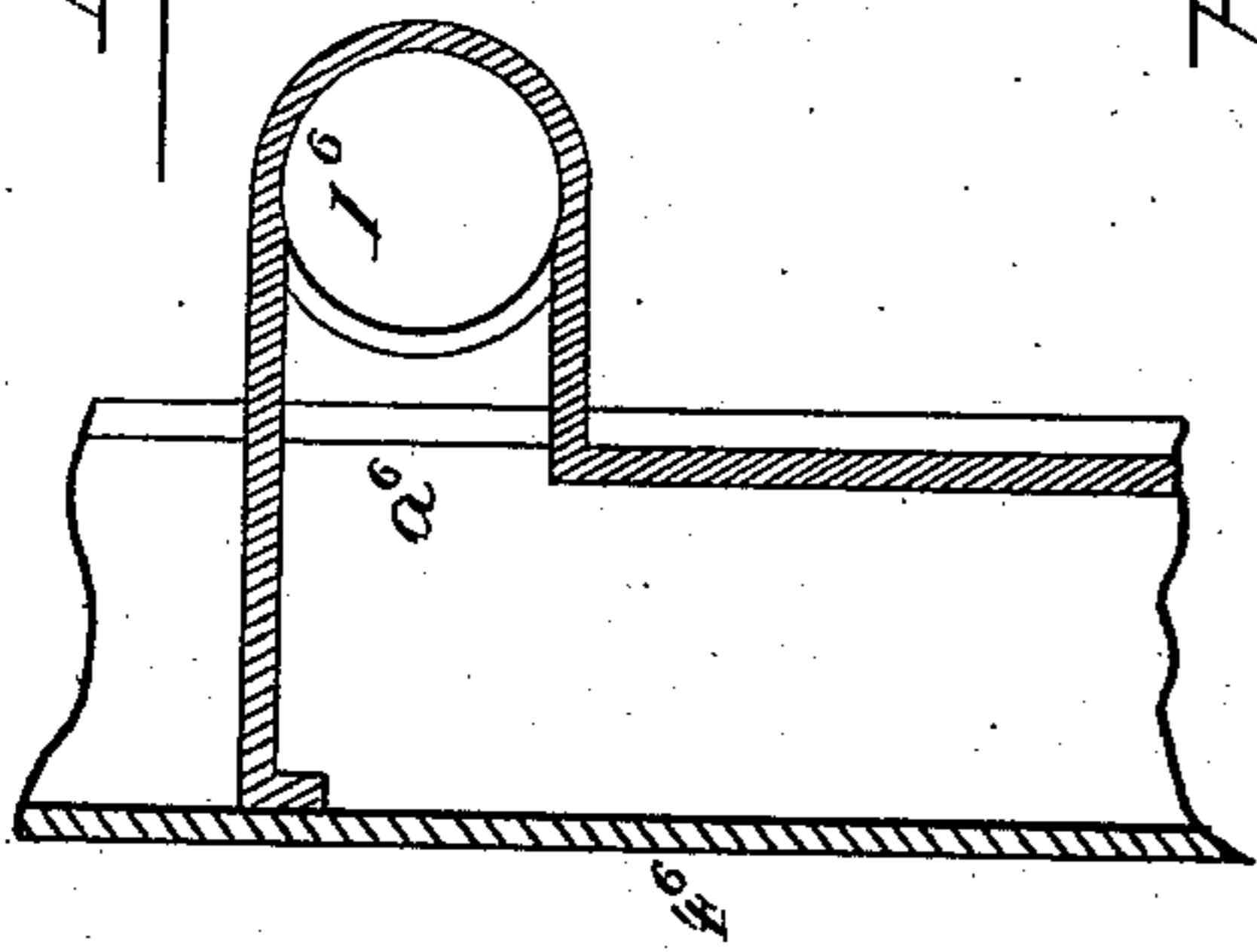


Fig. 63.

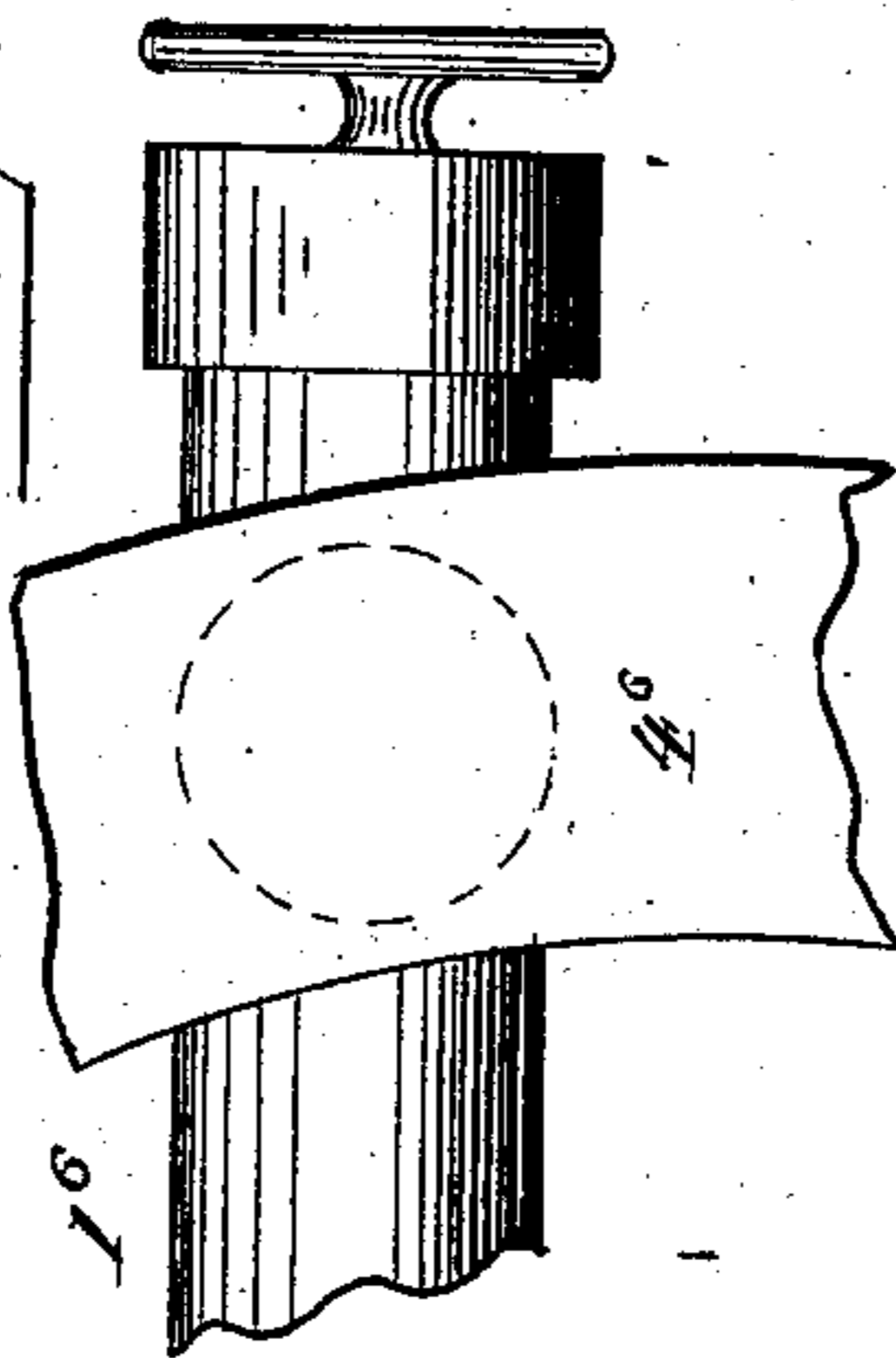


Fig. 65.

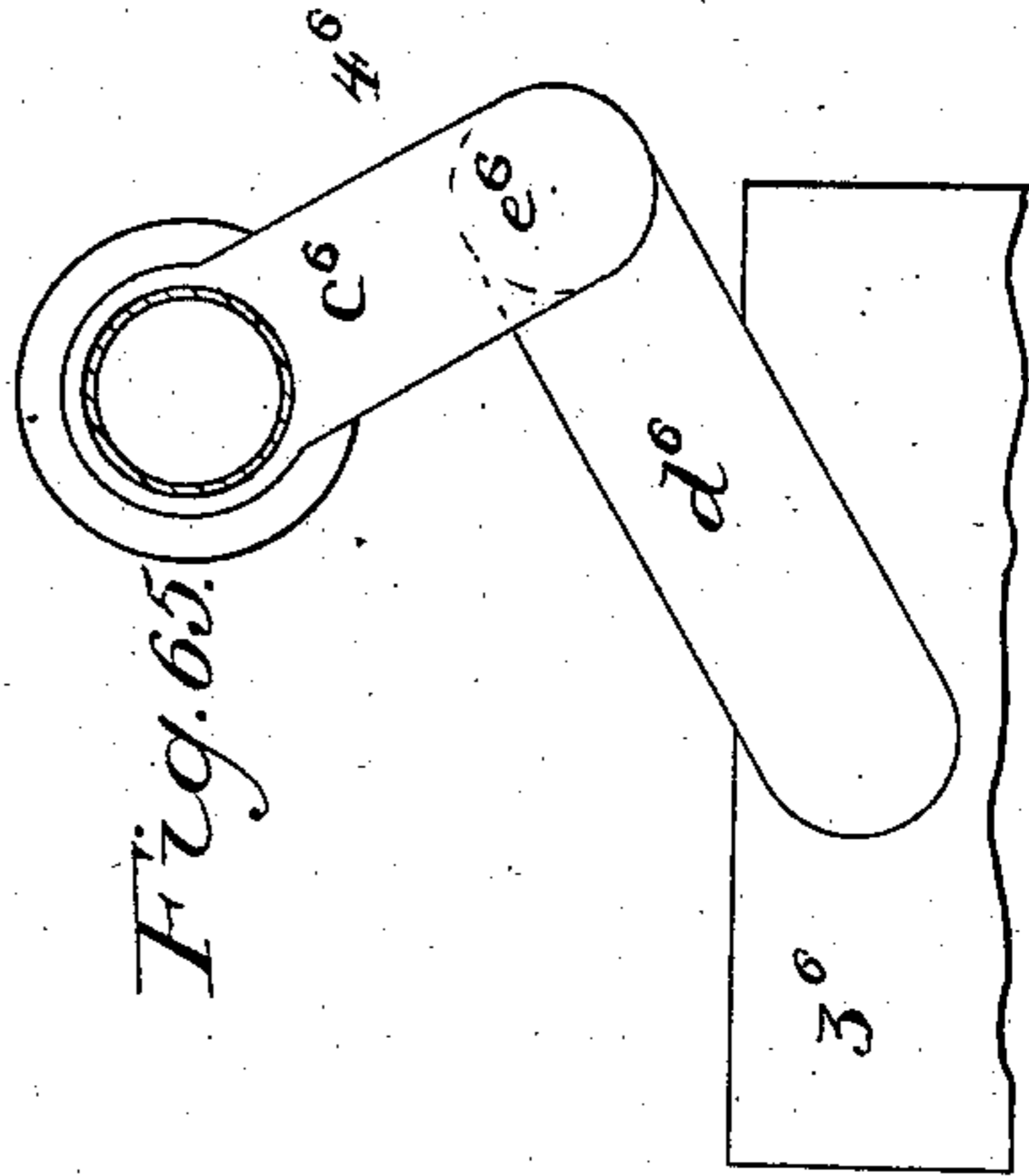


Fig. 61.

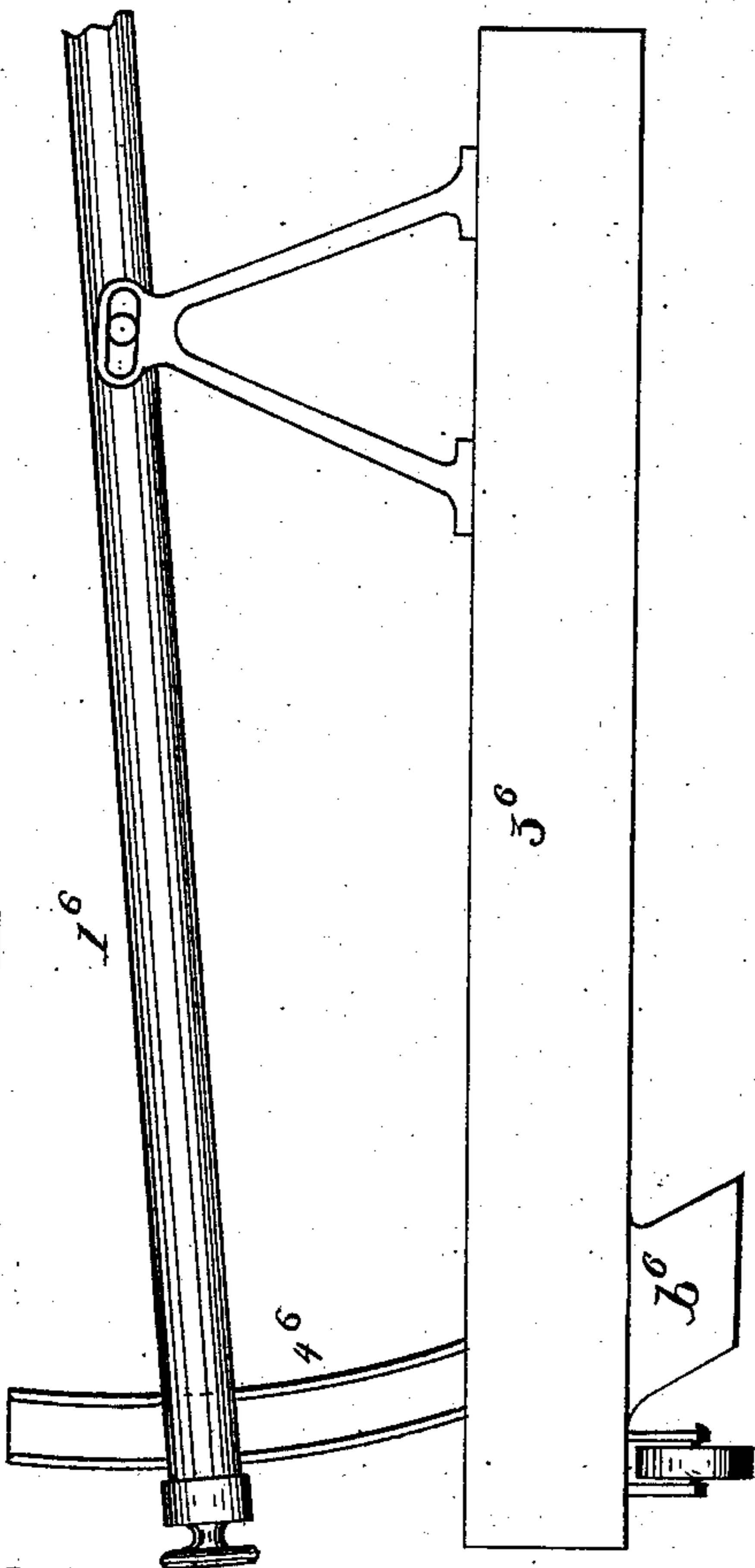
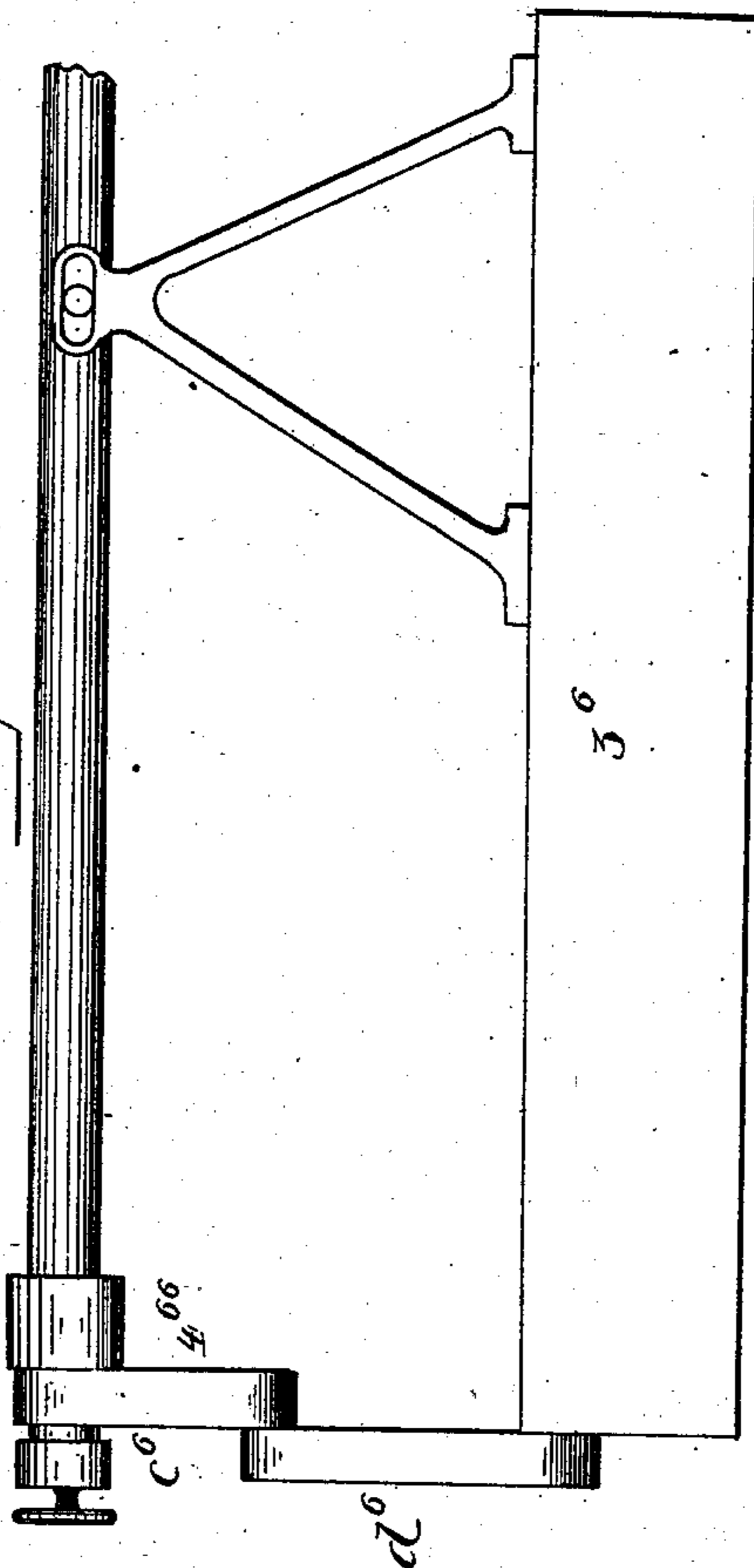


Fig. 64.



WITNESSES.

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Wallace A. Bartlett

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2 Sheets—Sheet 2.

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Fig. 67.

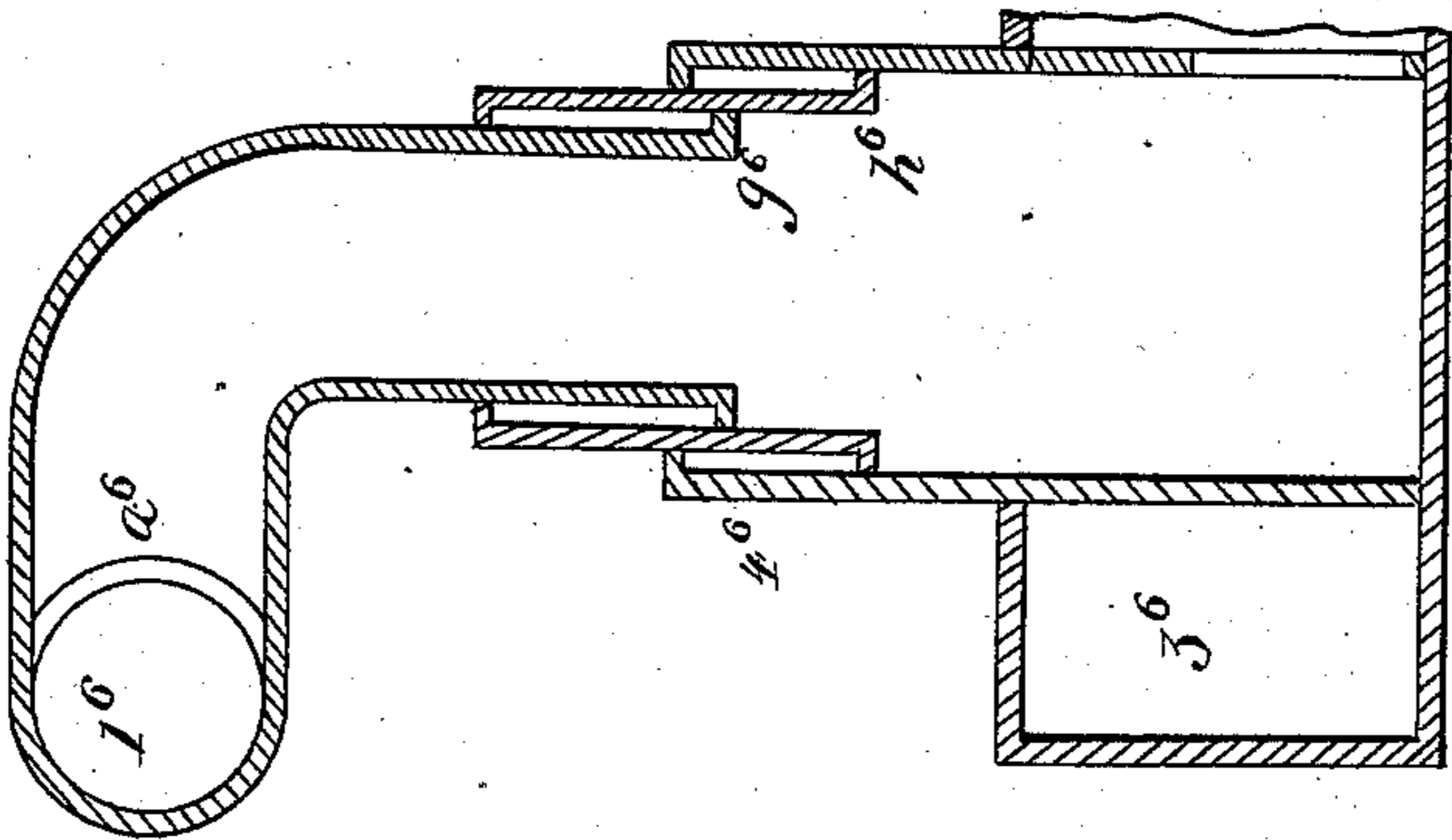


Fig. 66.

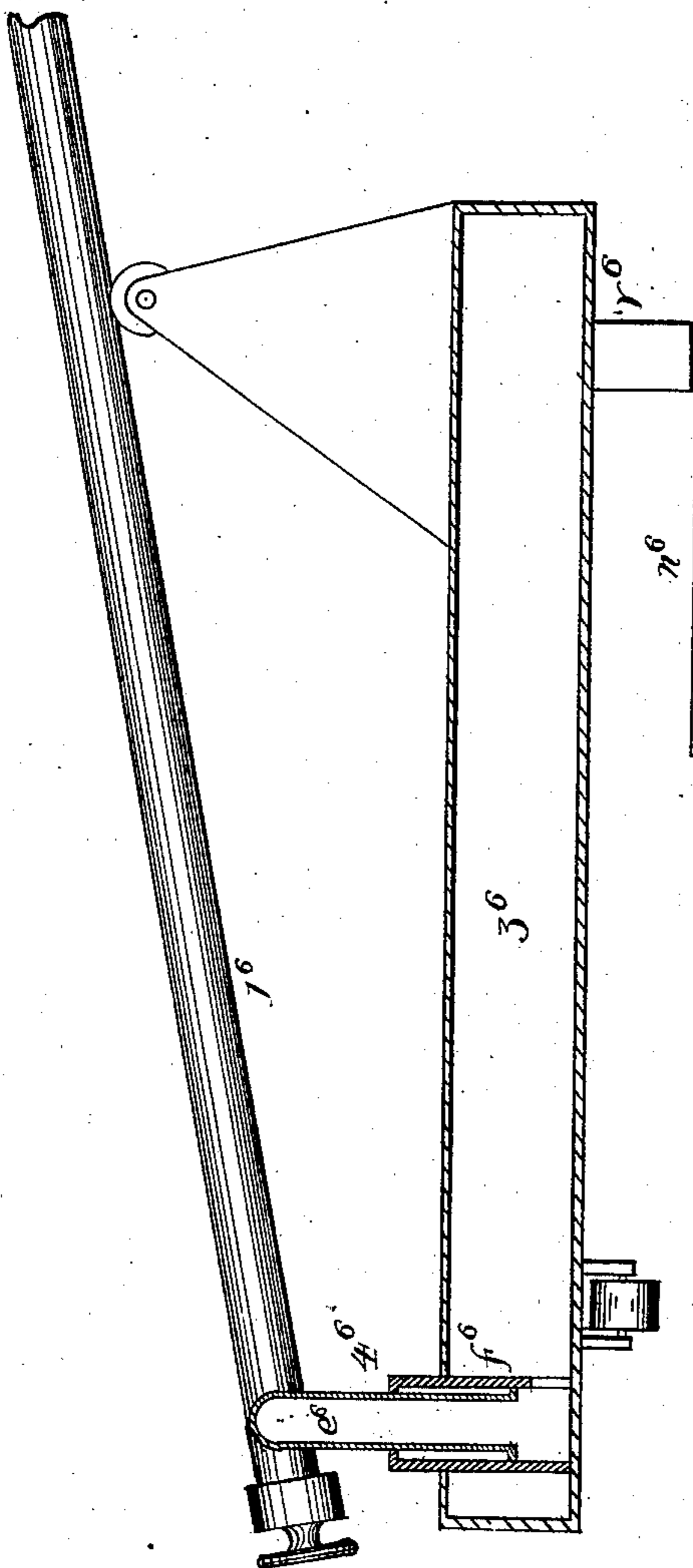


Fig. 69.

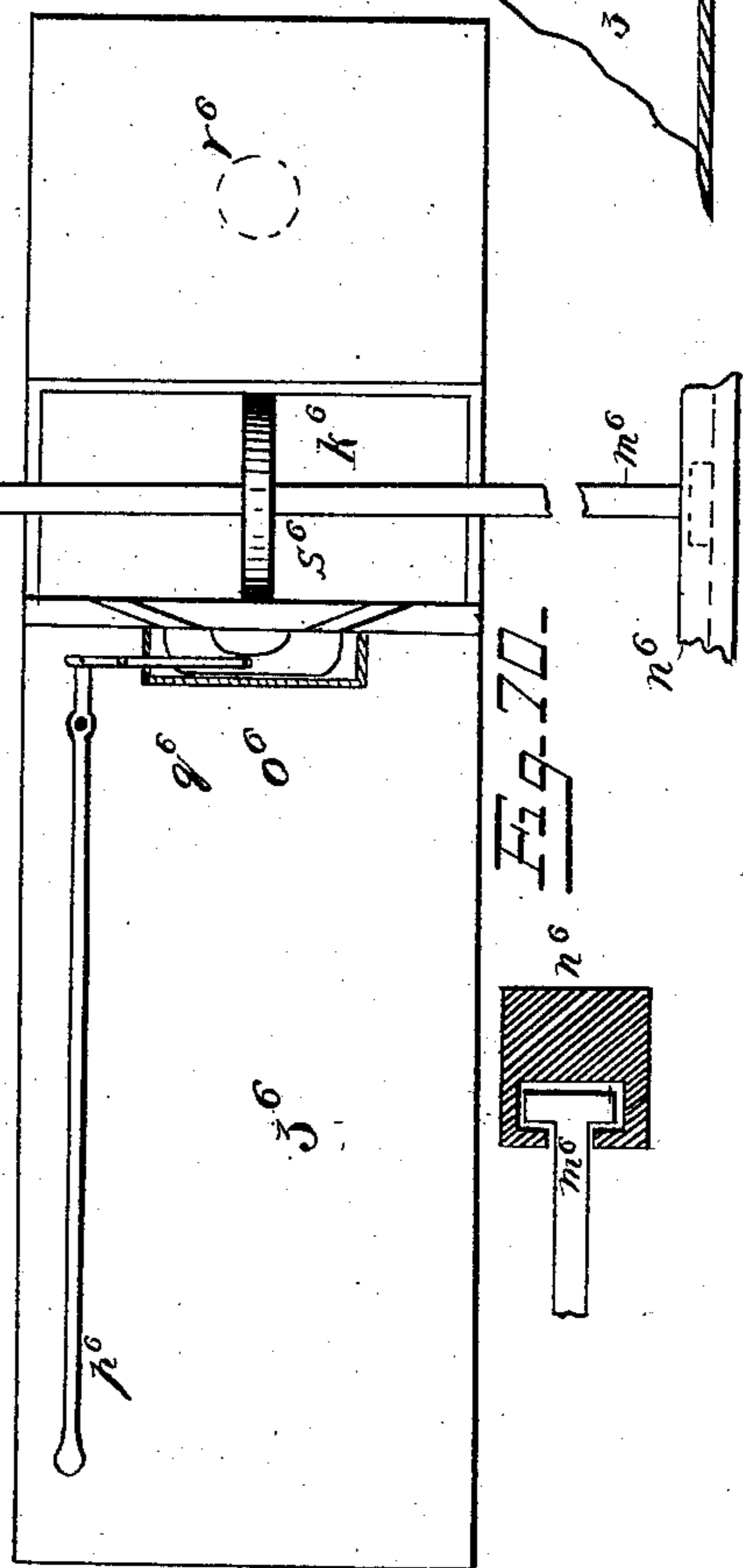
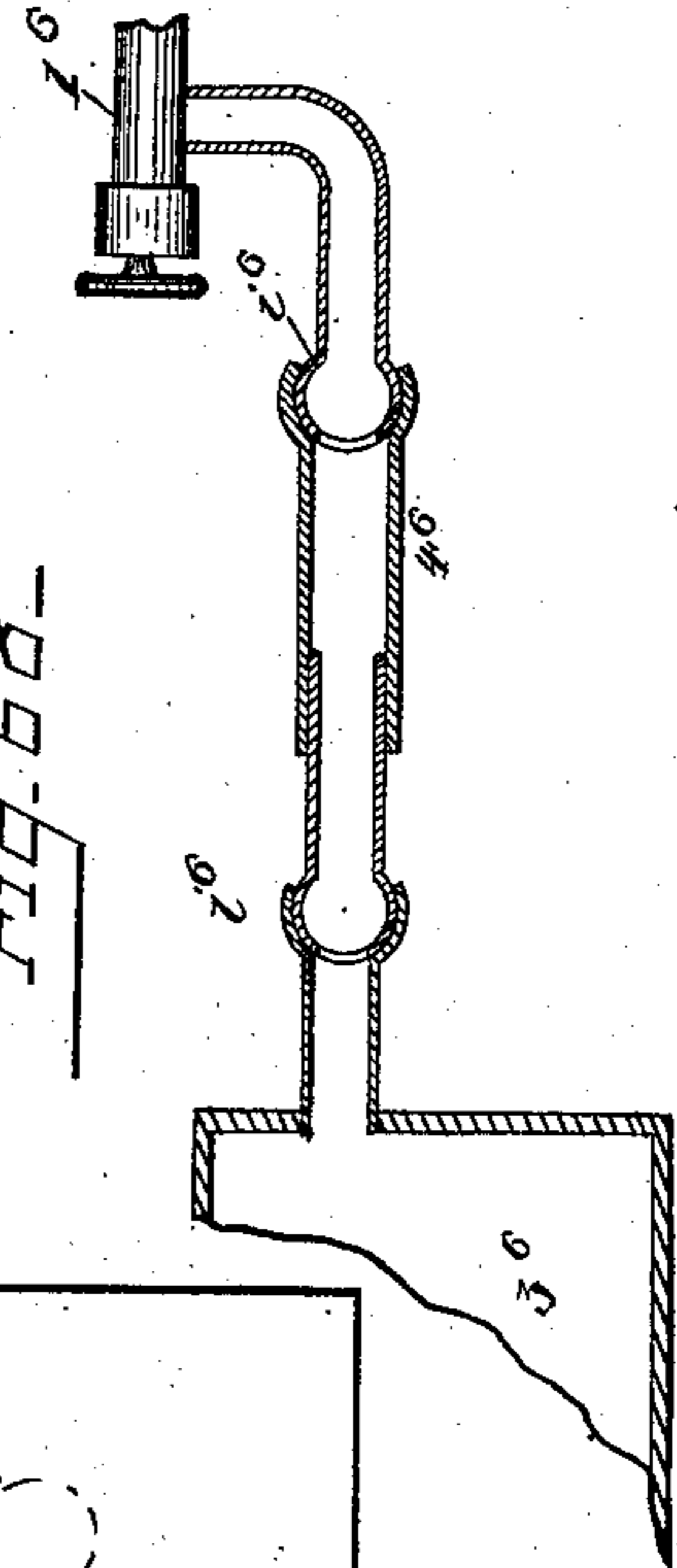


Fig. 70.

Fig. 68.



Witnesses
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UNITED STATES PATENT OFFICE.

WALLACE A. BARTLETT, OF WASHINGTON, DISTRICT OF COLUMBIA.

PNEUMATIC CANNON.

SPECIFICATION forming part of Letters Patent No. 294,353, dated March 4, 1884.

Application filed January 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, WALLACE A. BARTLETT, residing at Washington, in the District of Columbia, have invented certain new and useful
5 Improvements in Pneumatic Cannon, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to pneumatic cannon, or similar guns in which the projectile is driven
10 by the pressure of air or gas from a source of supply outside the bore of the gun.

The invention consists in the mechanism by which air or gas is conveyed from the flask to the bore of the gun; also, in mechanism by
15 which the flask is moved with relation to its pivot.

The object of the invention is to produce a gun from which dynamite projectiles may be thrown without danger of bursting in the gun.

20 In the drawings, Figure 61 is a side elevation of a gun, 1⁶, mounted on a carriage and having a curved telescopic supply-pipe, 4⁶. Fig. 62 is a cross-section of a portion of the supply-pipe. Fig. 63 is an elevation of a portion of
25 the breech and supply-pipe, the reverse of Fig. 61. Fig. 64 is an elevation showing a modified form of supply-pipe. Fig. 65 is a rear elevation of the same. Fig. 66 is an elevation and section of a further modification of the
30 supply-pipe. Fig. 67 is a section of the same. Fig. 68 is a further modification thereof, shown in section. Fig. 69 is a plan, partly in section, of mechanism for moving the flask. Fig. 70 is a detail thereof.

35 In Fig. 61 the gun barrel or tube 1⁶ is trunnioned in a standard on flask 3⁶ in such manner as to have a compensatory movement for expansion or contraction. The supply-pipe 4⁶ is curved and communicates with the supply-
40 flask 3⁶. One side of the curved pipe, or it may be a section, is made to telescope into another portion, so that the passage-way to the gun-tube a⁶ may be raised or lowered. The curve of the pipe is determined by the distance of
45 the trunnions from the connection with the gun-tube at a⁶.

By reason of the telescopic arrangement of the supply-pipe, the gun may be trained vertically without interrupting the telescopic con-
50 nection to the flask. A projection, b⁶, may be

made below the flask, to give a greater range of movement.

The lazy-tongs arrangement of the supply-pipe shown in Figs. 64 and 65 is a modification of the above. The tube 4⁶ is made up of
55 two sections, c⁶, which is swiveled on the breech of the gun, and d⁶, which is swiveled to the flask, the two being swiveled together at e⁶. The breech-closing mechanism, of any ordinary
60 construction, closes a passage through the upper section, c⁶, in line with the breech of the gun.

Figs. 66 and 67 show another form of telescopic supply-pipe 4⁶. In this case the pipe communicates with the gun-tube through the
65 aperture a⁶ near the breech. The gun is permitted to have a longitudinal movement with reference to the trunnion-supports. The upper section of pipe e⁶ telescopes into f⁶, which communicates with the flask. The upward
70 pressure of gas on shoulders g⁶ h⁶ may be utilized for raising the breech of the gun.

In Fig. 68 the sections of the telescopic pipe are jointed together by ball-and-socket joints i⁶. The flask 3⁶ may or may not form the carriage
75 or support for the gun. In each case the admission of gas to the gun from the flask is to be controlled by suitable valves, as shown in other applications filed of even date herewith, to which reference is made.

I have shown and described mechanism by
80 which the gun may be trained vertically by the pressure of the gas in the flask, in this and other applications before referred to. For traversing the gun by the same power, I apply a cylinder, k⁶, to the flask 3⁶, a little way from
85 the point r⁶, at which said flask is pivoted. This cylinder has a pivotal motion around the tube, by which air is admitted thereto, as at o⁶. A lever, p⁶, serves to operate slide-valve q⁶, which controls the admission of air to the cylinder.
90 The cylinder k⁶ has a piston, s⁶, which has a rod projecting at each end of the cylinder, as at m⁶ m⁶. This rod has cross-heads m⁶, which can slide in ways n⁶, so that as the cylinder is compelled to move either way with reference
95 to the piston the piston-rod may slide in the ways n⁶ and compensate for the circular movement of the carriage.

It will be understood that all unnecessary details have been omitted from the drawings, 100

the same being more fully described, as well as the operation of the gun, in the applications of even date hereinbefore referred to.

I claim—

5 1. The combination, with a gun-tube and gas-flask, of a supply-pipe connecting the two, said supply-pipe being in sections having a movement relatively to each other, substantially as described.

10 2. The combination, with an air-flask and gun-tube, of a telescopic supply-pipe connecting the two, substantially as described.

15 3. The combination, with a gun-tube mounted as described, so as to be free to move lengthwise, of a gas-flask and a telescopic supply-pipe connecting the two, substantially as stated.

20 4. The combination, with a gas-flask and gun-tube mounted thereon, of a telescopic supply-pipe connecting the two, said pipe be-

ing provided with a bearing-surface, by means of which the gas-pressure may be utilized to raise the breech of the gun.

5. The combination, with the gas-flask and the gun mounted thereon, and a pipe connect- 25 ing the flask with the gun-tube, of mechanism, substantially as described, whereby the gas-pressure in the flask may be utilized to traverse the gun.

6. The combination, with a gas-flask and 30 gun mounted thereon, of a telescopic supply-pipe connecting the two, and a projection from the gas-flask into which a portion of said telescopic tube may enter.

In testimony whereof I affix my signature in 35 presence of two witnesses.

WALLACE A. BARTLETT.

Witnesses:

PHILIP HAWLEY,

C. W. BROWN.