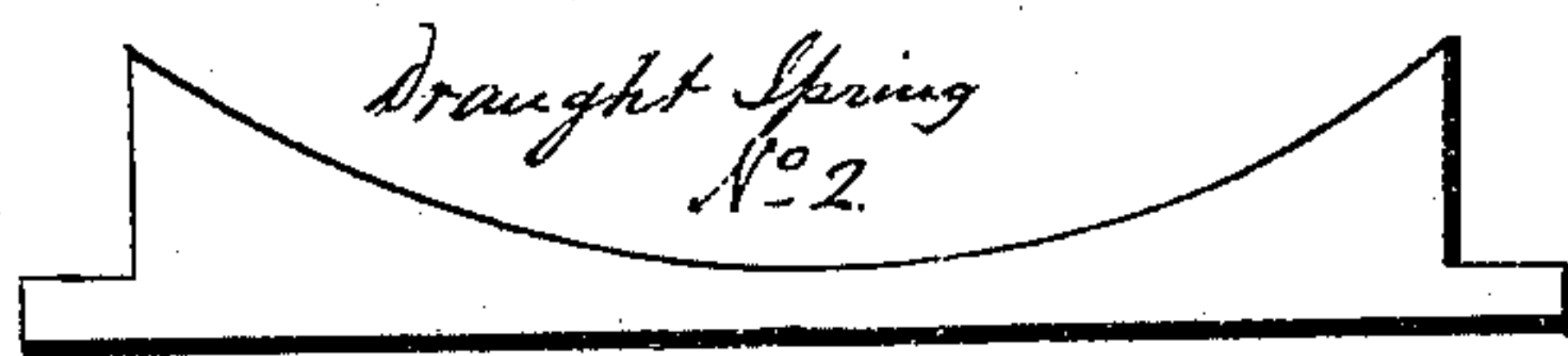
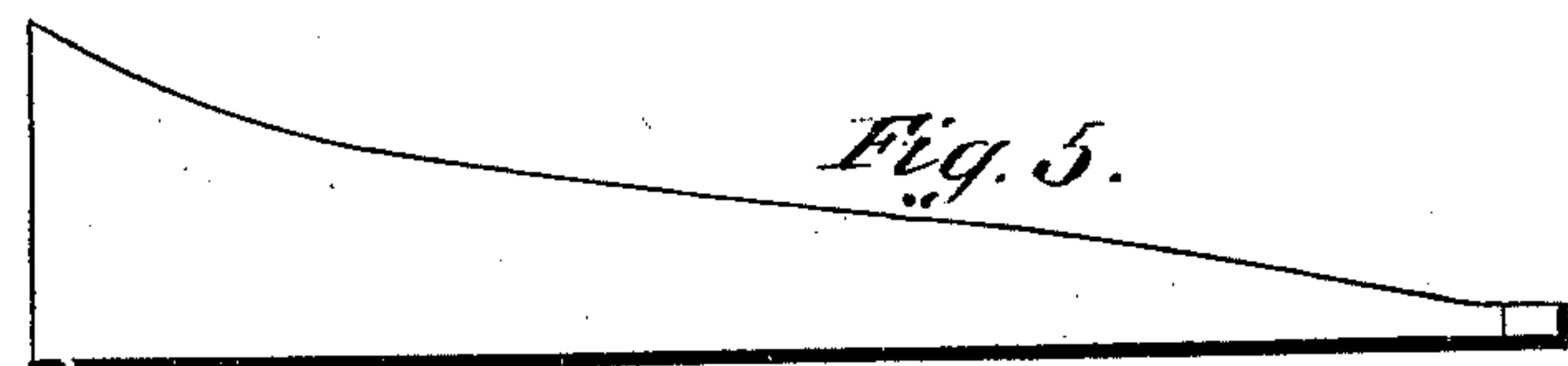
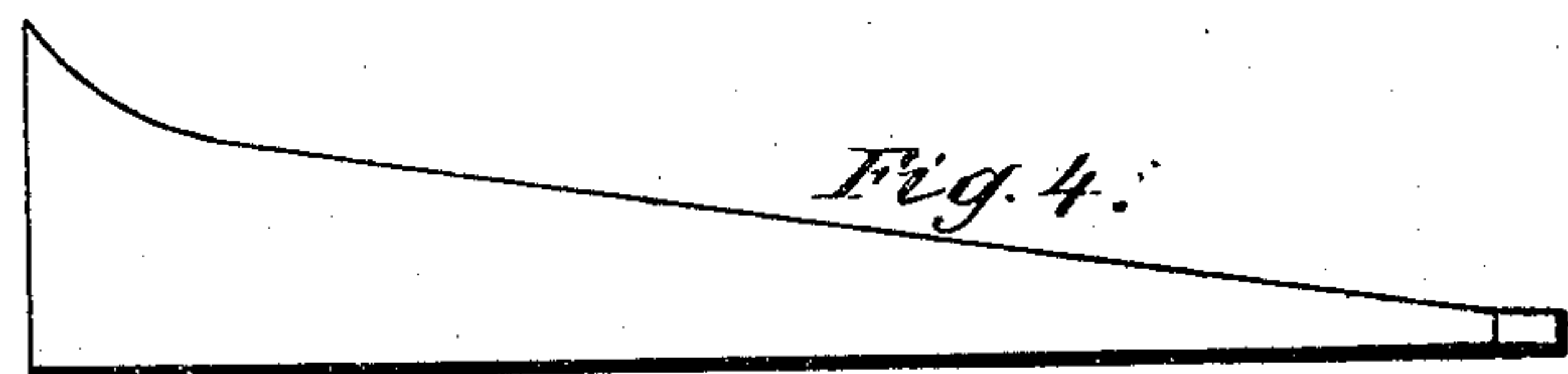
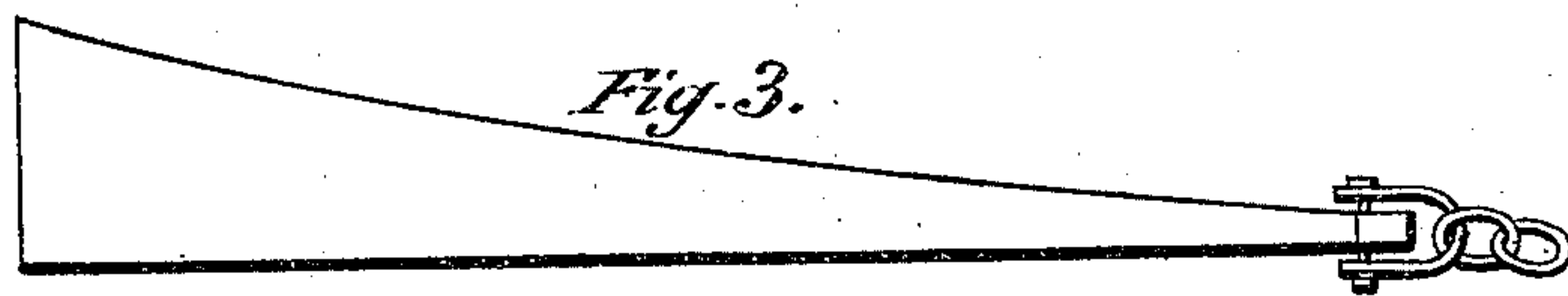
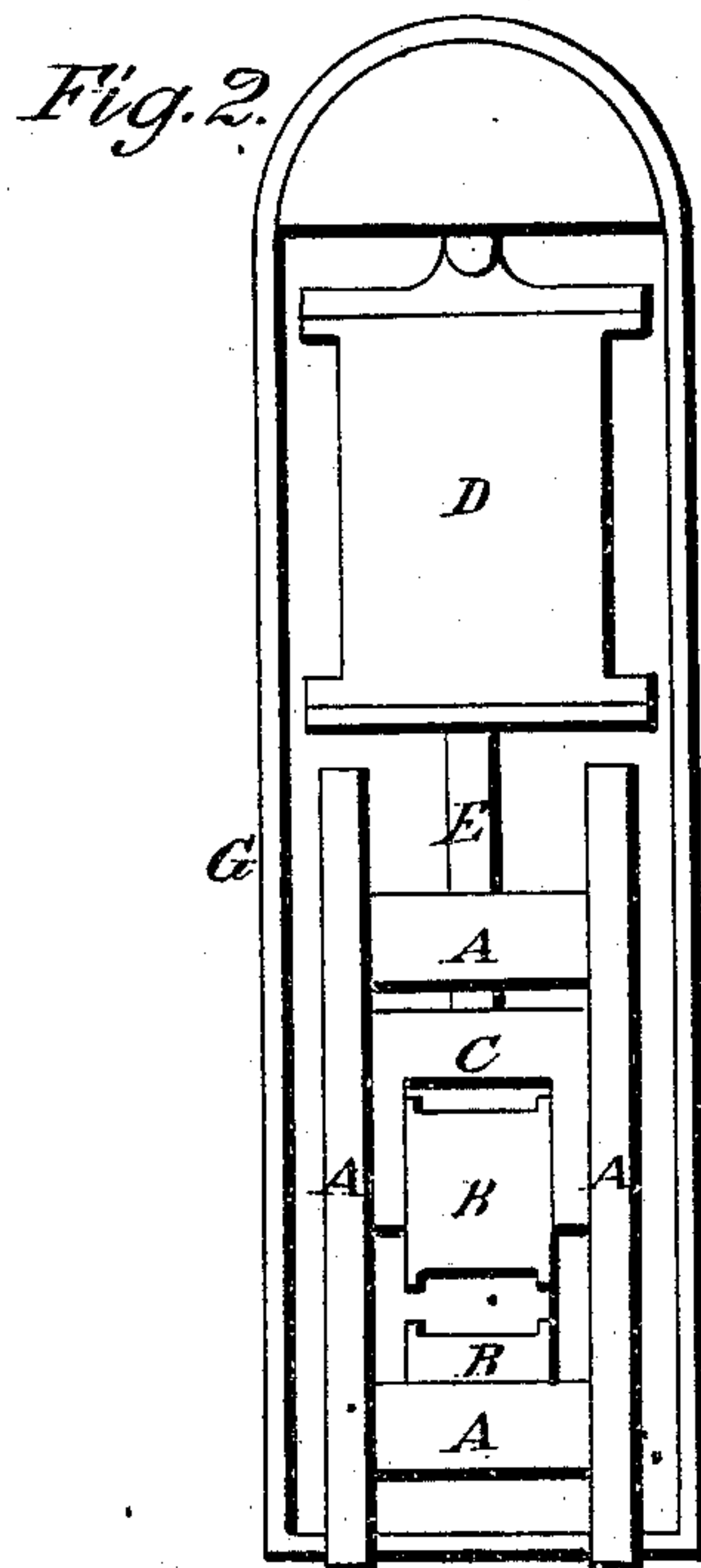
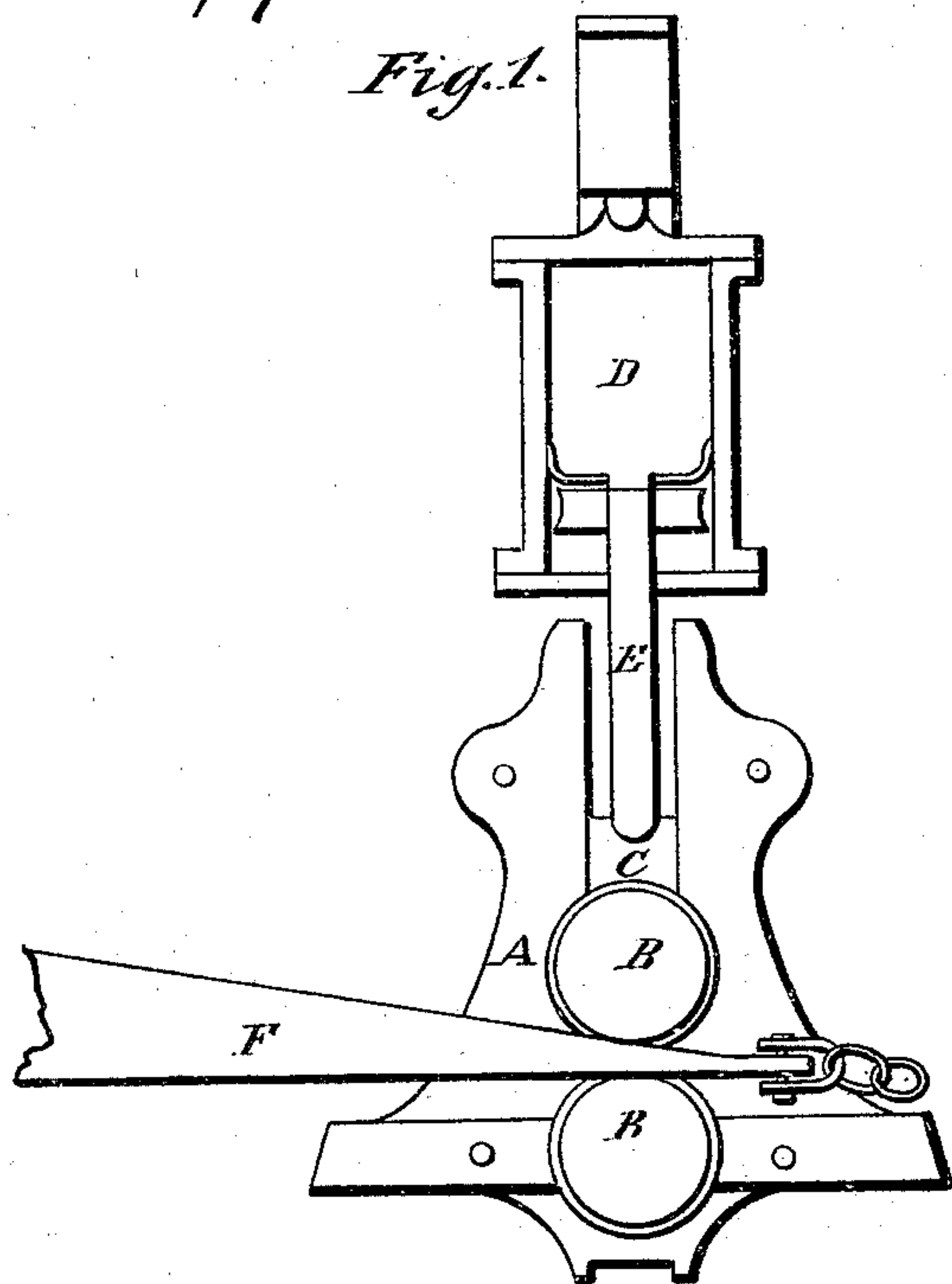


L. Bissell.
Elastic Coupling.
N^o 3,932. Patented Feb. 28, 1845.



UNITED STATES PATENT OFFICE.

LEVI BISSELL, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN THE APPARATUS FOR RELIEVING SHIPS' CABLES FROM SUDDEN AND VIOLENT STRAIN,
WHICH IS ALSO APPLICABLE TO OTHER PURPOSES.

Specification forming part of Letters Patent No. 3,932, dated February 28, 1845.

To all whom it may concern:

Be it known that I, LEVI BISSELL, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Machine, which I have named "Bissell's Relief-Spring for Ships' Cables and other Purposes where Springs on this Principle may be Useful," for the purpose of relieving the strain on ships' cables while lying at anchor in stormy weather, and for other purposes, as hereinafter described, of which the following is a full and exact description of its construction and method of application, reference being had to the annexed drawings, making part of this specification.

Figure 1 being a longitudinal section, and Fig. 2 an end view, of the machine.

The machine consists of a strong framework, A A, Figs. 1 and 2, of cast-iron, in which are fitted two strong steel rollers, B B, which turn freely on their journals, the lower roller being stationary and the upper one being fitted into a movable box, C, which moves freely up and down in the openings in the side pieces of the frame.

D is an atmospheric spring, similar to those now in use on railroad-cars, the piston-rod E of which rests on the box C, and may be made to press on it with any required degree of force.

F, Fig. 1, is an inclined plane or wedge, made of cast-iron, and faced on the upper and under sides with stout plates of wrought-iron.

G G, Fig. 2, is a frame of strong iron plates passing entirely round the machine and supporting the upper end of the spring.

When this machine is to be used on ship-board, it is firmly bolted down on the deck, and the narrow end of the plane is attached to the cable, with just sufficient slack between the machine and the windlass or capstan of

the ship to permit the plane to be drawn forward nearly its whole length. Then as the ship rises on a swell and draws on the cable the plane will be drawn forward between the rollers, and the pressure of the spring increasing as the plane moves on the cable will be relieved from the sudden and violent strain that it would otherwise be subject to, and all injury be prevented.

This machine may also be used in place of the common drop-press, the die being fitted to the broad end of the plane, and the force of the stroke regulated by the distance to which the plane is drawn out, or by the force with which the spring is made to act on the roller.

The inclined plane may be straight, as represented at E, Fig. 1, or it may be made with a curved upper surface in either of the forms represented in Figs. 3, 4, and 5; and steel springs, either spiral, elliptical, or of any other form, may be used in place of the atmospheric spring.

I propose also to apply this principle to the purpose of a draft-spring for railroad-cars, or for any other purpose where a draft-spring may be required, for which purpose I propose to make them in either of the forms represented in the drawings, and marked "Draft-spring No. 1" and "Draft-spring No. 2."

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

The combination of the inclined plane, rollers, and spring in the manner above described for any of the above-mentioned or for any other purpose to which the same may be applicable.

LEVI BISSELL.

Witnesses:

STEPHEN DOD,
STEPHEN R. HAINES.