

(No Model.)

2 Sheets—Sheet 1.

W. D. NELSON.

FEED WATER GREASE EXTRACTOR.

No. 366,864.

Patented July 19, 1887.

Fig. 1.

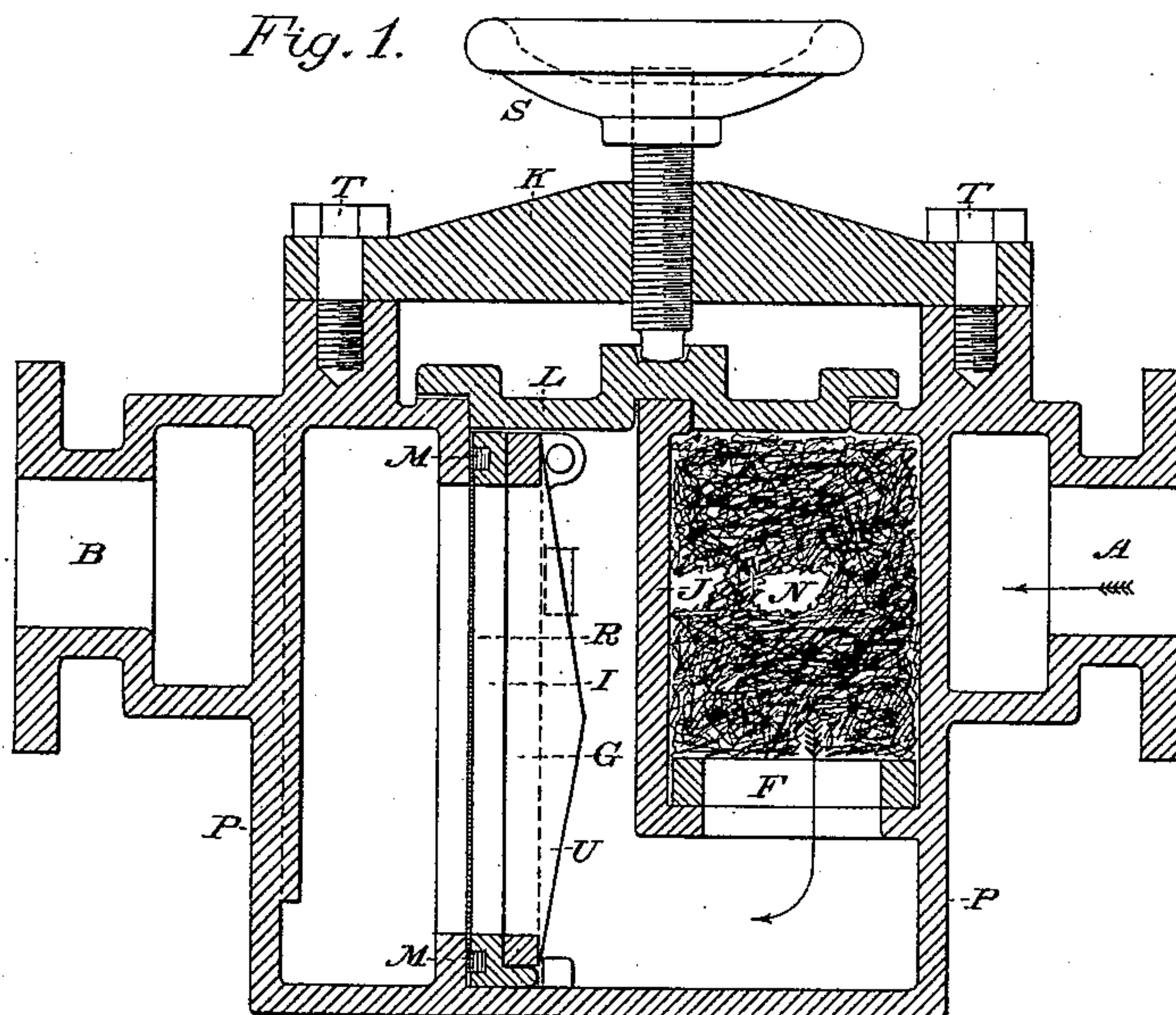
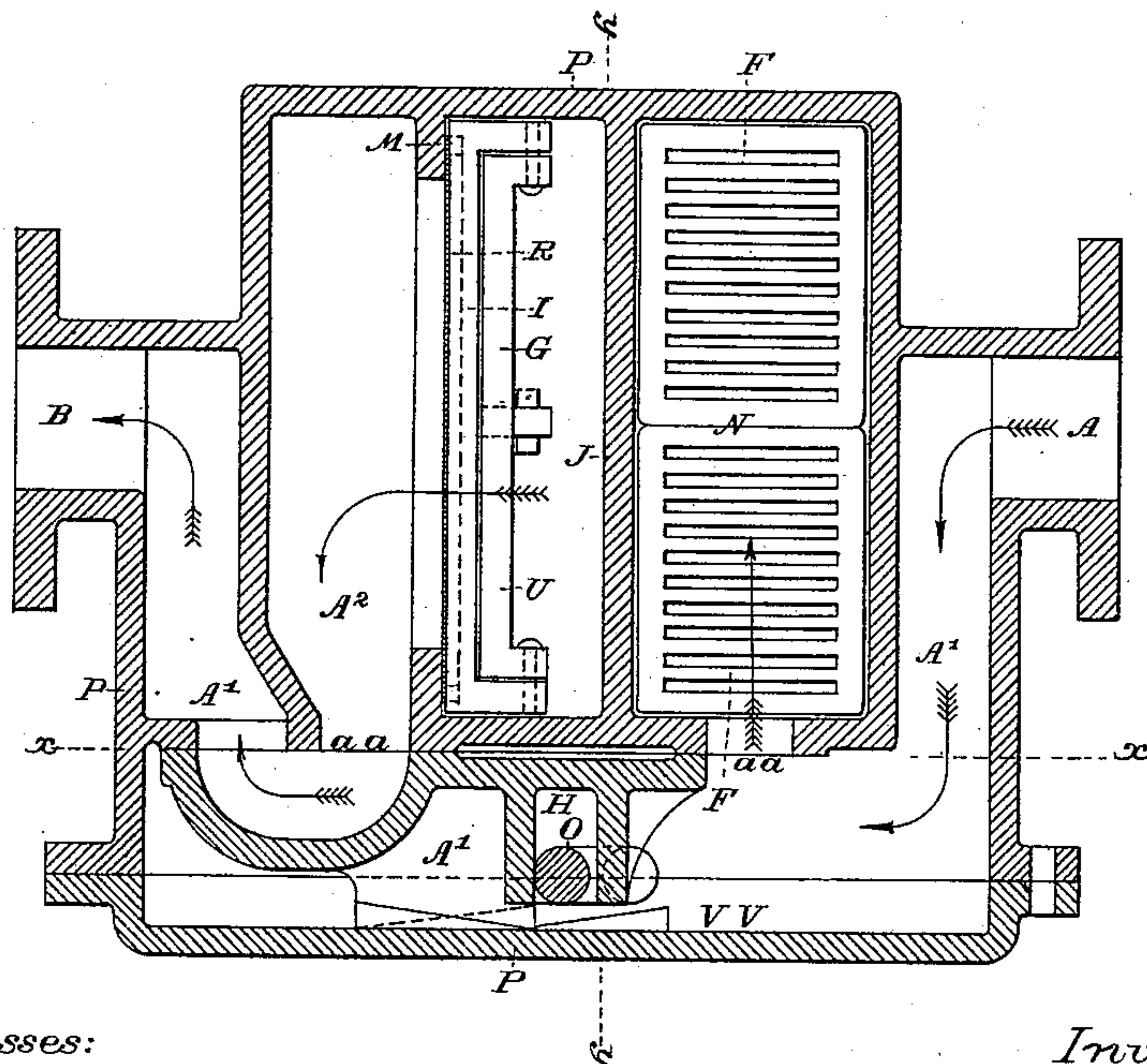


Fig. 2.



Witnesses:

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By his Att'y.

Alphonso Smith

(No Model.)

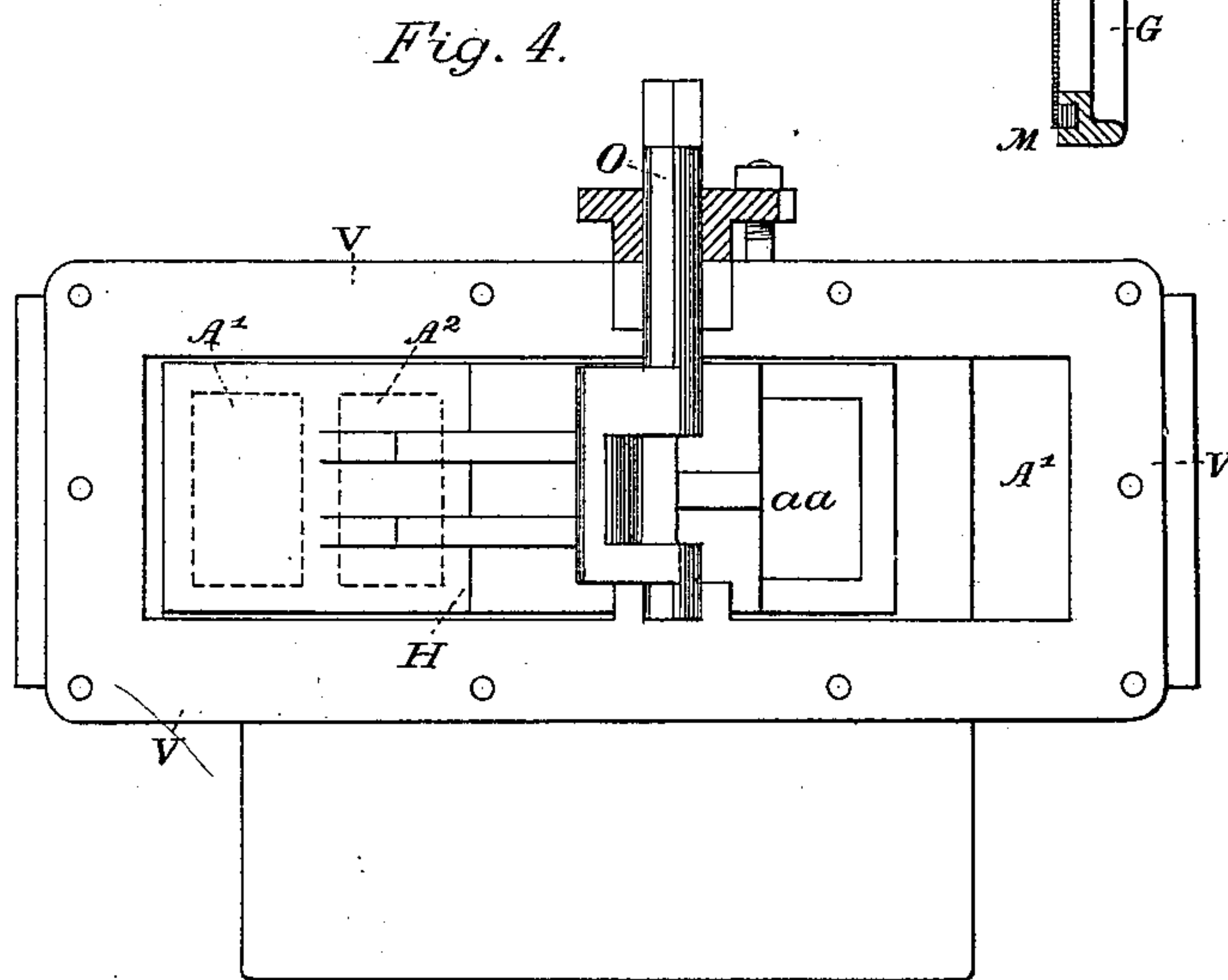
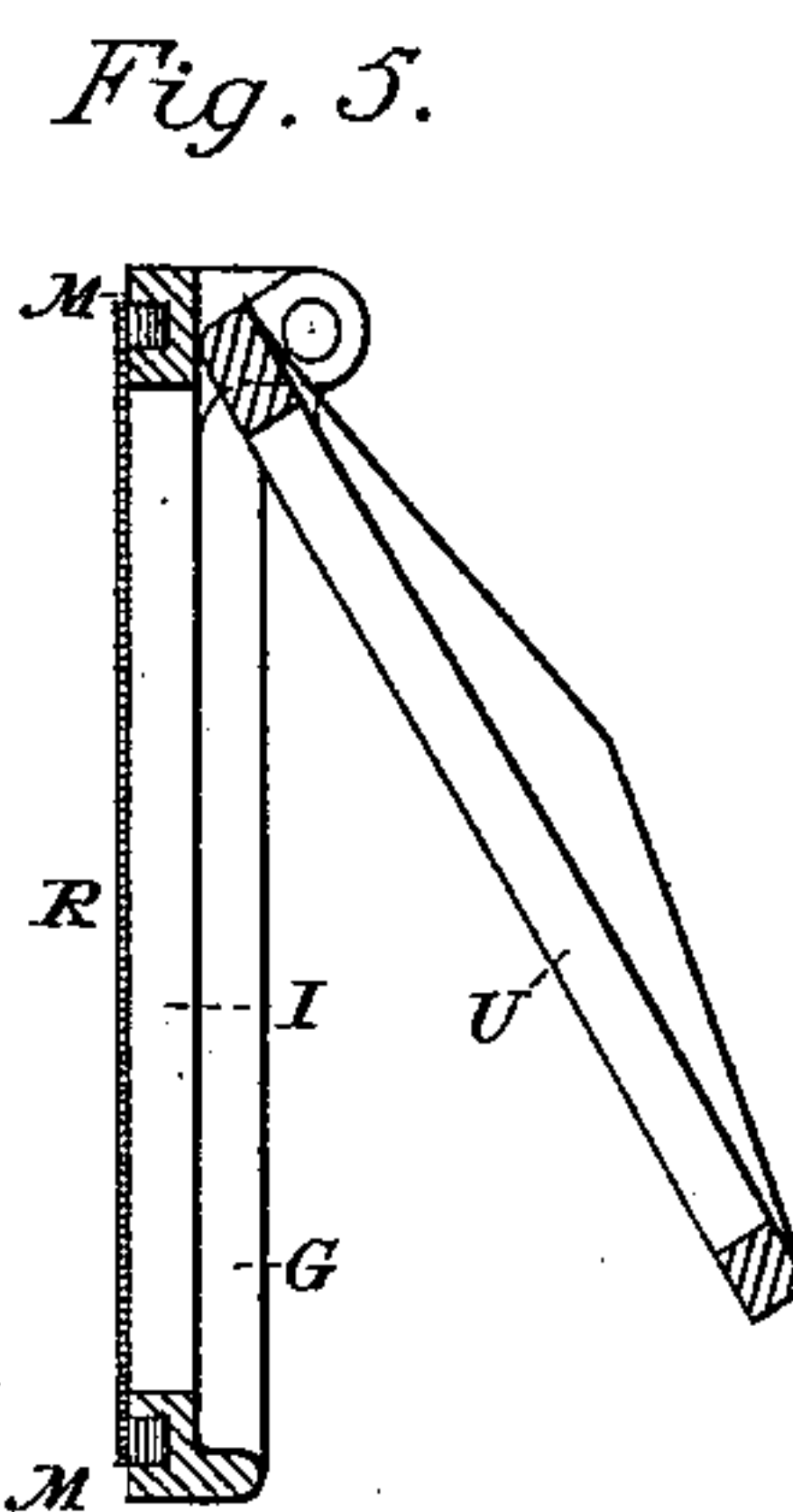
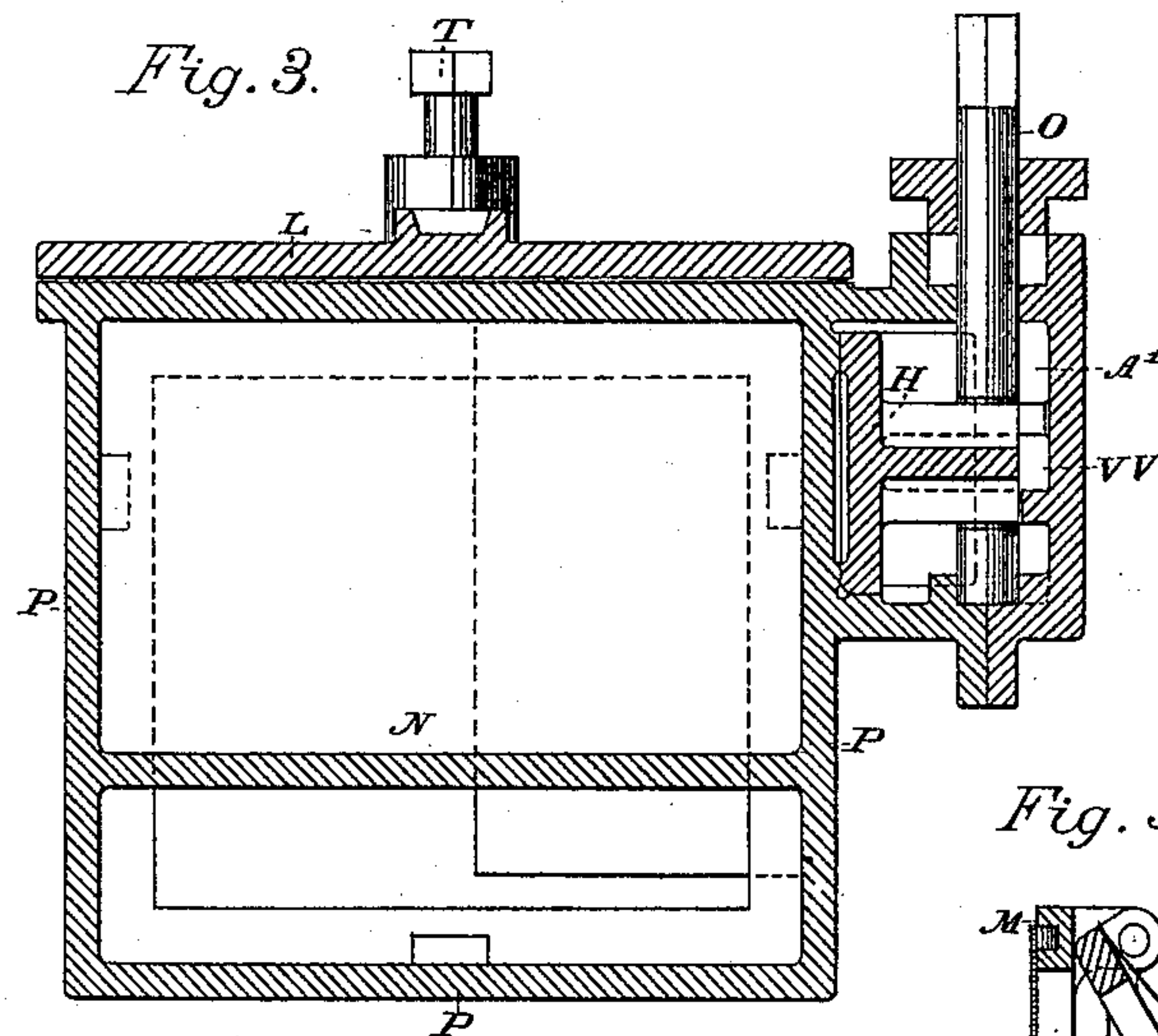
2 Sheets—Sheet 2.

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Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM DANIEL NELSON, OF SAN FRANCISCO, CALIFORNIA.

FEED-WATER GREASE-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 366,864, dated July 19, 1887.

Application filed January 10, 1887. Serial No. 223,961. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DANIEL NELSON, a citizen of the United States of America, and a resident of the city and county of San Francisco, State of California, have invented new and useful Improvements in Oil-Traps or Feed-Water Grease-Extractors, of which the following is a full, clear, and exact description, referring to the accompanying drawings.

My invention relates to oil-traps or feed-water grease-extractors for marine or stationary boilers, in which I have constructed suitable devices and mechanism for extracting oil or grease that is used in cylinders of condensing-engines and preventing its entering the boiler with the feed-water.

Figure 1 is a vertical section of my oil-trap or feed-water grease-extractor. Fig. 2 is a horizontal section. Fig. 3 is a vertical section on the line of Y Y, Fig. 2. Fig. 4 is an elevation of the slide-valve on the line of X X. Fig. 5 is a vertical section of the screen-holder.

P P refer to the outside of the box of my oil-trap; L, the cover; T, holding-down bolts on strong back; S, hand-screw on strong back; M, rubber lining on filtering-screen; K, strong back; F, grating in filtering-box; N, filtering-box containing curled hair or cotton; J, dash-plate; G, flannel screen; I, wire-screen door; R, perforated screen; H, shifting-valve; O, crank-lever on shifting-valve; U, hinged door for fastening screens; V V, valve-chest box.

The water to be cleaned of oil or grease enters my oil-trap or grease-extractor through the inlet A, and then passes along the way, as the arrows show, through the channel or passage-way A' into box N, and through the curled hair or cotton or other suitable material contained therein, and then down through grating F and under dash-plate J, through flannel screen G, and gauze screen I, and perforated screen R, out through passage A², and through the channel-way A', discharging finally through outlet B, in this manner cleaning the feed-water of all oil or grease, which adheres to the hair or cotton and the flannel screen.

When using my trap for extracting grease

or oil from the feed-water, the shifting-valve H should be in the exact position as shown in Fig. 2; but when I have pure water to use for feed-water, the valve H may be shifted to the right by means of and by turning the crank-lever O in such position as to close ports a a, with the valve and the passage-way leading to and from the filtering devices and box N, and opening the passage-way to the left, thus closing out effectually the filtering devices from the passage of the clean feed-water through them, thus compelling the feed-water to pass along and through the passage-way A' and the outlet B.

Whenever it is desirable to change the filtering material contained in the box N, or the flannel screen, or any of the other screens in my oil-trap, then I shift the crank-lever O in such a manner that the valve H is brought to the right, thus closing up or covering the ports a a, thus allowing the feed-water a free passage around the valve H, through valve-chest V V and through channel-way A', leaving the filtering devices dry. I then loosen the hand-screw S, thus enabling me to remove the cover L and from the box N the greasy filtering material and replace the same with fresh material, and also remove the greasy flannel screen and replace the same with clean flannel. The cover is then replaced, the hand-screw S screwed down, the valve H shifted back to leave the ports a a open, and my filtering devices are again in good working order.

In Fig. 5 letter R refers to the perforated screen, I to wire screen, G flannel screen, and U to the hinged door for fastening the screens together.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a feed-water oil and grease extractor of the character described, the combination of the water-inlet, a box filled with filtering material, and screens to arrest the fibers or particles of the filtering material or other matters that pass beyond the filter, as set forth.

2. In a feed-water oil and grease extractor, the box N, containing suitable filtering material and provided with grating F, the screens

G I R, and the hinged door U, arranged and operating as set forth.

3. In a feed-water oil and grease extractor, the combination, with the box P, of the box
5 N, containing suitable filtering material and provided with grating F, screens I G R, door U, hinged thereto, shifting-valve H, crank-lever O, whereby the ports *a a* can be opened

and closed, and the hand-screw S, all arranged and operating in the manner and for the pur- 10
poses set forth.

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Witnesses:

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