

(No Model.)

2 Sheets—Sheet 1.

J. S. ARKINS.  
AIR HOSE COUPLING.

No. 598,758.

Patented Feb. 8, 1898.

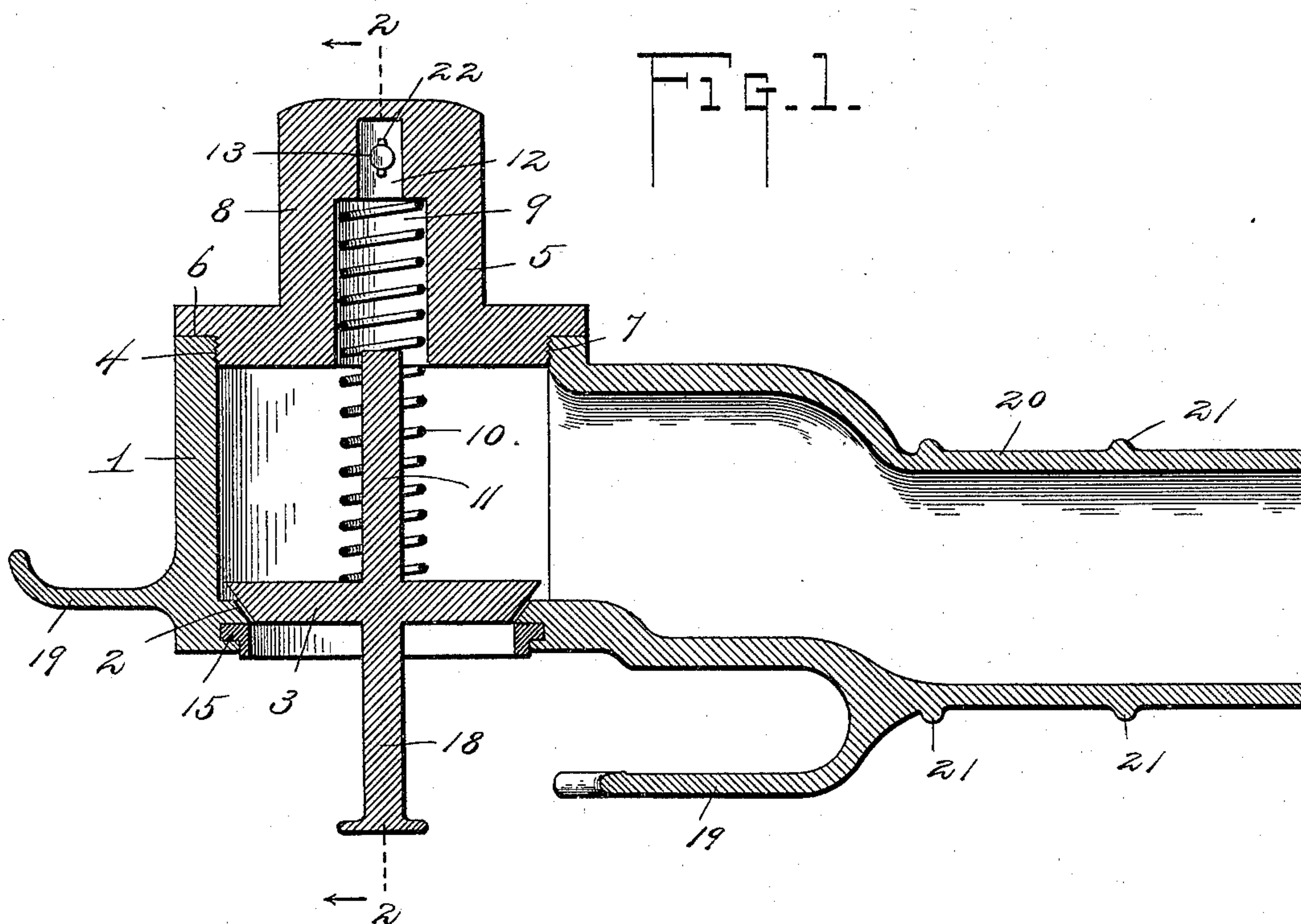
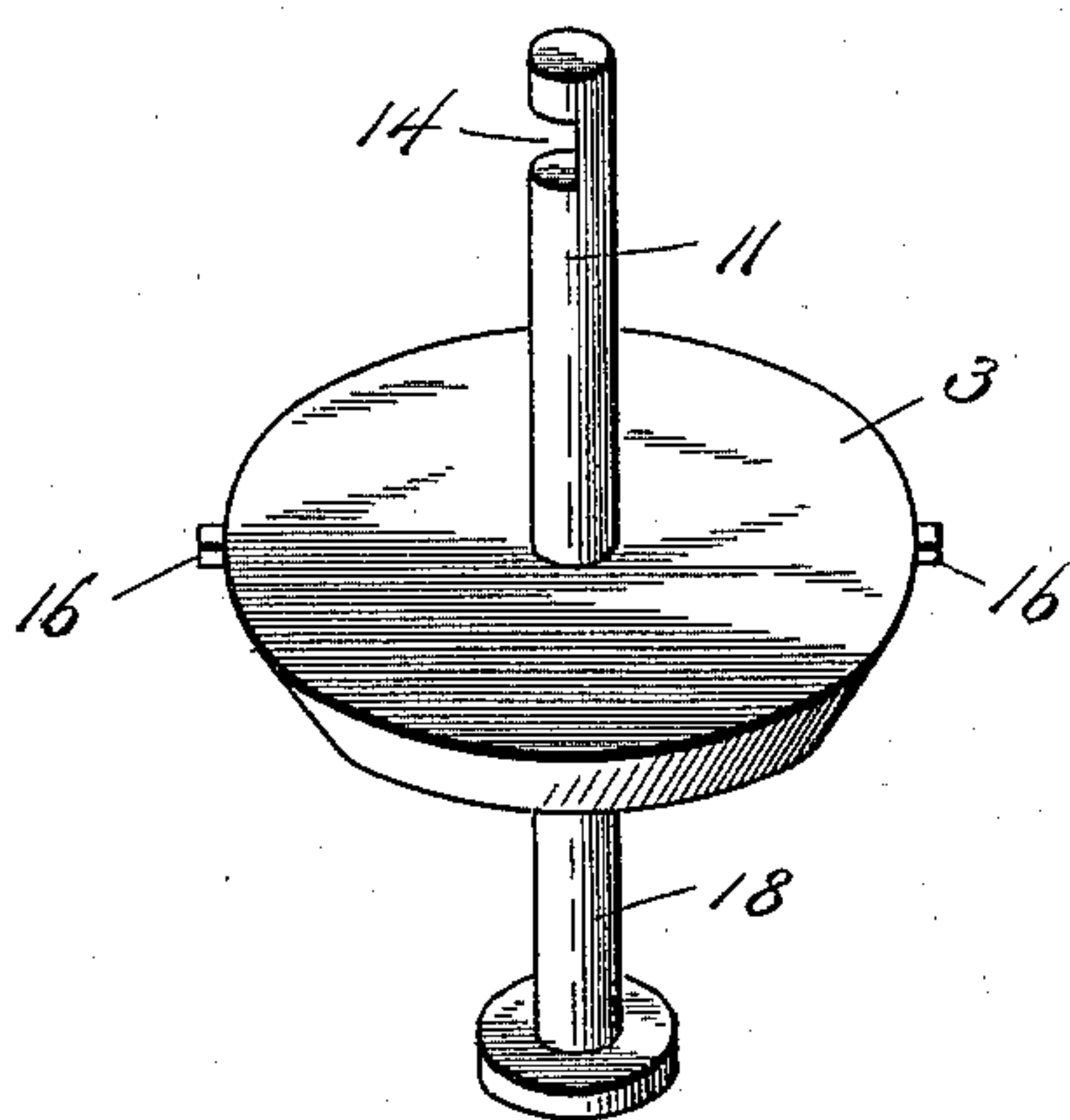


Fig. 3.



*WITNESSES*

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FIG. 2.

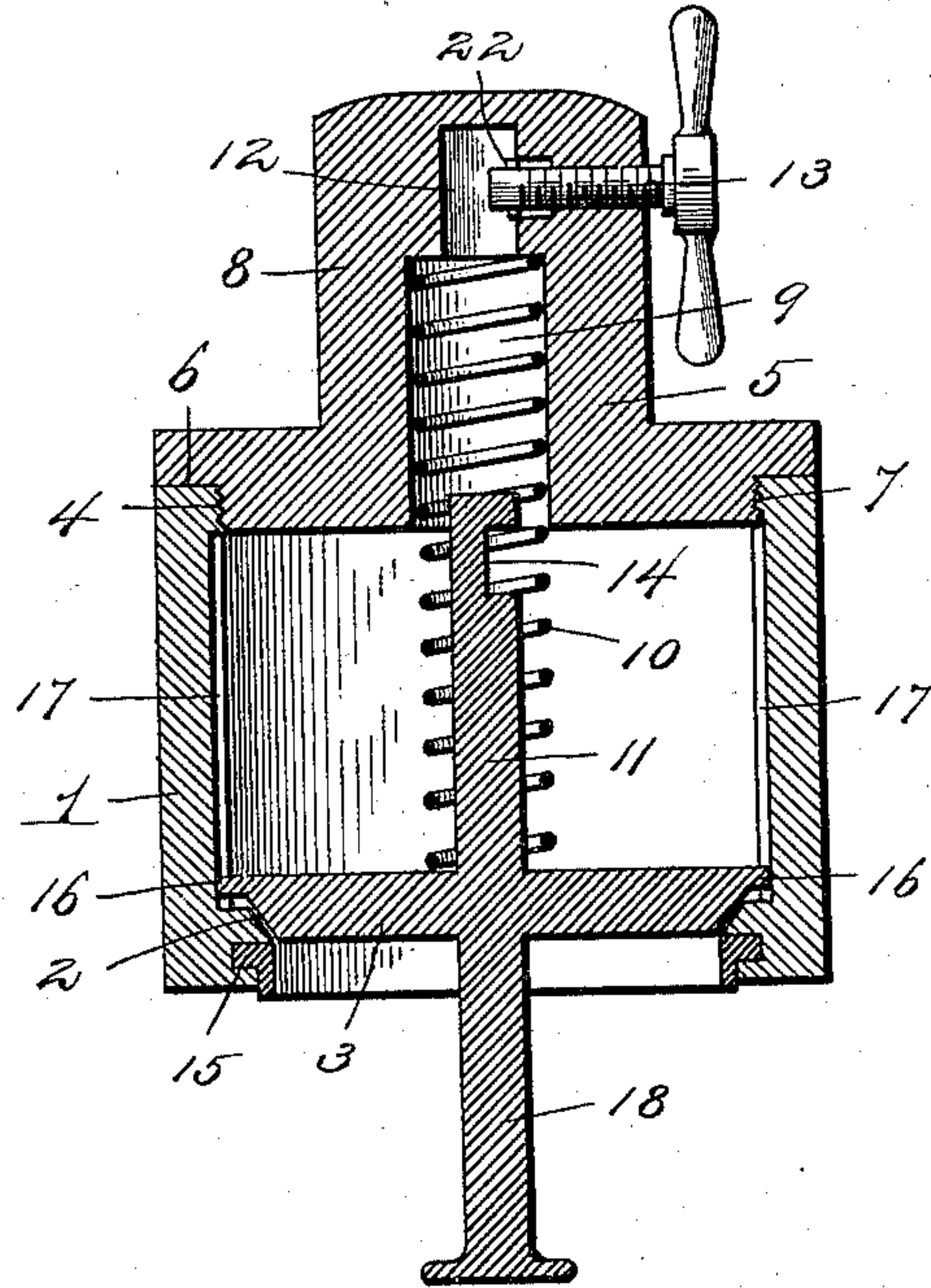
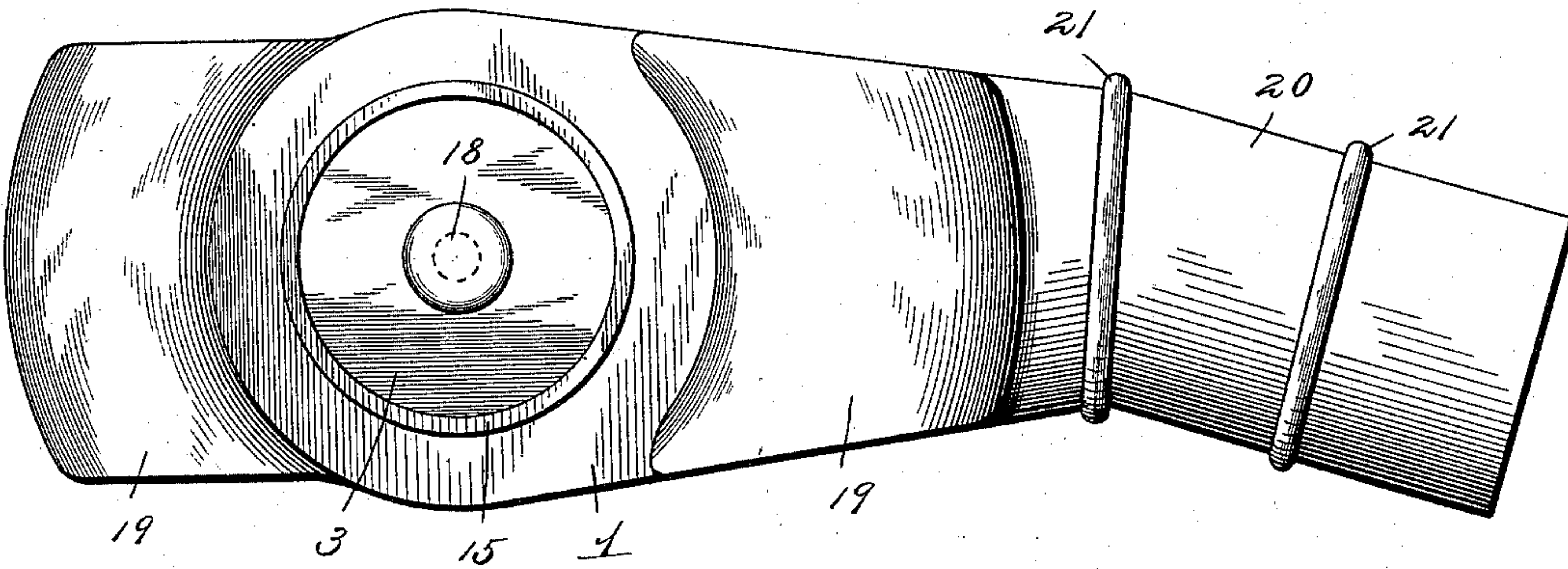


FIG. 4.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES S. ARKINS, OF MENOMINEE, MICHIGAN.

## AIR-HOSE COUPLING.

SPECIFICATION forming part of Letters Patent No. 598,758, dated February 8, 1898.

Application filed March 19, 1897. Serial No. 628,239. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES S. ARKINS, a citizen of the United States, residing at Menominee, in the county of Menominee and State of Michigan, have invented certain new and useful Improvements in Air-Hose Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to air-hose couplings, being designed for use upon all cars employing air-brakes.

The object of the present invention is to provide a simple and efficient coupling by means of which the hose-sections on adjoining cars may be easily and quickly coupled together and placed in communication, provision being also made whereby the spring-pressed valve of one of the coupling-sections may be held inoperative, so that in the event of the cars breaking apart or becoming disconnected from each other the brakes will be automatically set, thus avoiding collisions and other accidents.

With this general object in view the invention consists in an improved hose-coupling for air-brakes embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims.

In the accompanying drawings, Figure 1 is a longitudinal section through one member of a hose-coupling constructed in accordance with the present invention. Fig. 2 is a cross-section taken at right angles to Fig. 1 on the line 2 2 of Fig. 1. Fig. 3 is a detail perspective view of the valve, valve-stem, and valve-foot. Fig. 4 is a bottom plan view of one member of the coupling.

Referring to the drawings, 1 designates the main body of one member of the coupling, such body being substantially cylindrical in form and open at top and bottom, being provided at the lower opening with a conical valve-seat 2, against which presses the conical periphery of a disk-shaped valve 3. The opening at the opposite end of the body 1 is internally threaded, as indicated at 4, to receive a cap 5, which is rabbeted, as at 6, and

screw-threaded, as at 7, adapting it to be inserted in the body 1 and screwed tightly in place. The cap 5 comprises a polygonal portion 8, adapted to have a wrench applied thereto for screwing the cap in place, and is provided with a longitudinal recess 9, in which is arranged a coiled spring 10, which is disposed around the stem 11 of the valve 3. The outer end of the recess 9 is reduced, as indicated at 12, to admit the extremity of the valve-stem 11, such recess being closed at its outer end to prevent the escape of air.

13 designates a thumb-screw which passes through the cap 5, the inner end of said screw being adapted to enter a notch 14 in the outer end of the valve-stem 11 for the purpose of holding the valve 3 away from its seat, so as to allow the escape of air from the valve-coupling section, and thus enabling the brakes to be automatically set in the event of the couplings becoming accidentally detached or in the event of the cars breaking apart or becoming uncoupled.

15 designates a rubber gasket which projects laterally from the opening in the body 1, closed by the valve 3, so as to afford a tight connection between the two members or sections of the coupling in a manner that will be readily understood by those familiar with the art to which this invention appertains. The valve 3 is provided at diametrically opposite points with lateral projections 16, which work up and down in grooves 17 in the body 1 of the coupling. This prevents the valve 3 from rotating and thus maintains the notch 14 in proper position to be engaged by the thumb-screw 13. The valve also comprises a foot 18, extending from the opposite side to the valve-stem 11 and adapted to be engaged by the complementary member of the coupling for opening the valve 3, so as to afford communication between both members or sections of the coupling.

19 designates a pair of longitudinally-disposed lips or hooks which are adapted to engage with corresponding parts on the complementary member of the coupling, as in the ordinary construction of hose-couplings.

20 designates the tubular extension of the coupling, the same being provided exteriorly with circumferential flanges or ribs 21 for engaging the end of the flexible pipe or rubber



hose, one of the lips or hooks 19 being formed integrally with the said extension, while the other lip 19 is formed on the body 1 of the coupling.

- 5 The improved coupling hereinbefore described is very simple and effective. It enables the hose-sections to be quickly coupled together and provides for the automatic unseating of the valve in the operation of coupling the parts together. By providing for the holding of the valve 3 in inoperative position or away from its valve-seat many of the collisions and accidents resulting from improper working of the air-brakes will be avoided, as in the event of the cars becoming disconnected the valve will still be held away from its seat, thus allowing the escape of the compressed air, which will result in the setting of the brakes.
- 20 The inner end of the thumb-screw 13 is provided with a transverse pin 22, which prevents the entire withdrawal of said thumb-screw. The coupling above described may be employed in connection with the old style of coupling by locking the valve in its inoperative position. The valve will of course not work automatically under this arrangement, but will enable a car equipped with a new coupling to be connected to a car equipped with one of the old style of couplings, the importance of which feature will be appreciated.

Having thus described the invention, what is claimed as new is—

- 35 1. In an air-brake hose-coupling, the combination with one of the coupling members, of a valve for closing the opening therein, a notched valve-stem, and a screw for engaging the notch in said stem, whereby said valve

may be held away from its seat, substantially as described. 40

2. In an air-brake hose-coupling, the combination with one of the coupling members, of a valve normally closing the opening therein and provided with a notched stem, and a device movable laterally of the casing and adapted to be thrown into and out of engagement with the notched stem, substantially as and for the purpose specified. 45

3. In an air-brake hose-coupling, the combination with one of the coupling members, of a valve for closing the opening therein, an inwardly-projecting stem on said valve provided with a notch as described, a coiled spring surrounding said stem within the body of the coupling member for normally pressing said valve to its seat, and a thumb-screw for engaging the notch in the stem, substantially as and for the purpose specified. 50 55

4. In an air-brake hose-coupling, the combination with one of the coupling members having oppositely-arranged grooves, of a spring-pressed valve working therein, lateral projections on said valve working in said grooves, an inwardly-projecting stem on the valve having a notch, and an adjustable holding device movable laterally into and out of engagement with said notch, substantially as and for the purpose described. 60 65

In testimony whereof I have signed this specification in the presence of two subscribing witnesses. 70

JAMES S. ARKINS.

Witnesses:

DANIELS MCLEOD,  
THOMAS FINNEGAN.