(No Model.)

# F. A. JACOB.

## HOSE COUPLING.

No. 377,075. Patented Jan. 31, 1888.

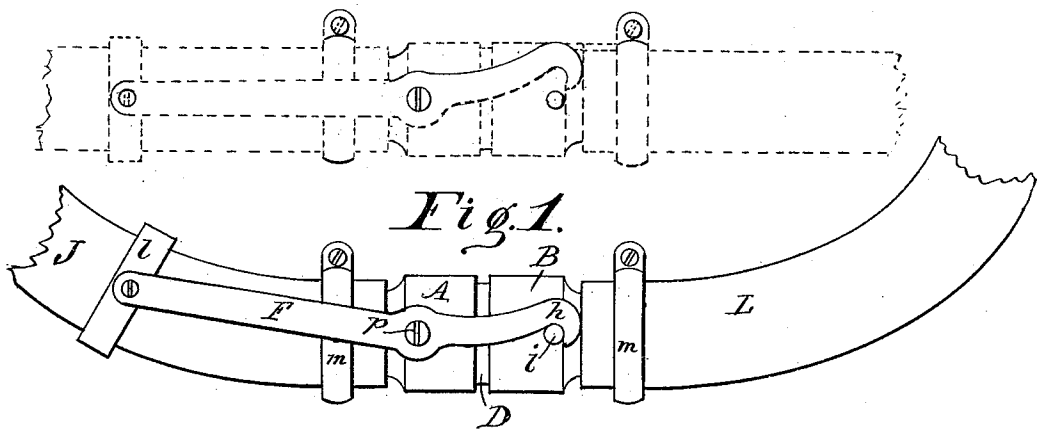


Fig. 1.

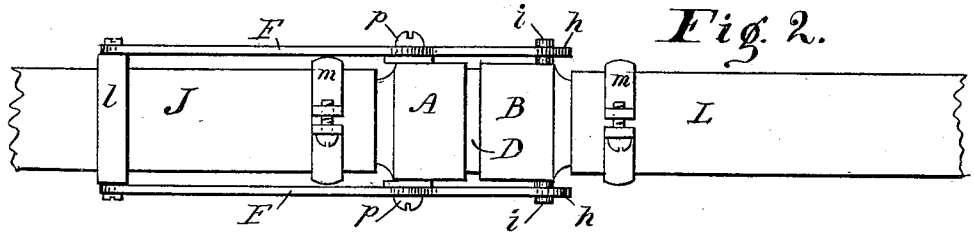


Fig. 2.

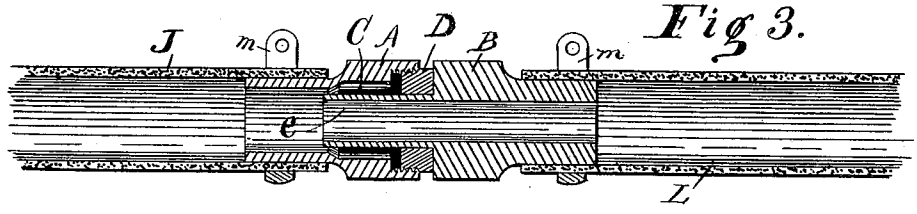


Fig 3.

Witnesses
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# UNITED STATES PATENT OFFICE.

FRANK A. JACOB, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO WILLIAM STRONG, OF SAME PLACE.

## HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 377,075, dated January 31, 1888.

Application filed September 19, 1887. Serial No. 250,061. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK A. JACOB, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Hose-Couplings, of which the following is a specification.

My invention relates to a coupling for flexible pipes or hose, and it is particularly adapted to be used in connection with the flexible pipe-connections used between the air or steam pipes of the cars of a train which is equipped with "air-brake" or "steam-heating" apparatus. The opposed ends of the air or steam pipes on two cars are usually connected when the cars are coupled together by means of short lengths of flexible hose attached to the ends of the pipe and provided with a hose-coupling. These pieces of hose are made longer than the distance between the ends of the pipes, so that when coupled they form a downwardly-bent curve.

The object of my improvement is to provide a coupling which may be coupled by simply thrusting the male and female parts together without any twisting movement of either part, and which will be automatically locked when coupled by the downward curving of the hose, and be automatically unlocked by the straightening of the hose, so that when the cars have been uncoupled the hose-connections may be pulled apart by the separation of the cars, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation. Fig. 2 is a plan. Fig. 3 is a longitudinal section.

A is the female portion of the coupling.

B is the male portion.

C is a flexible thimble, preferably of rubber, which is secured in the open end of part A by a screw-threaded ring, D. The internal diameter of the thimble C fits closely the outside of the tubular projecting portion *e* of the male coupling B, and the external diameter of the thimble is a little less than the inside diameter of the coupling A, the purpose being to allow the air or steam in the pipe to surround the thimble and press it closely against the surface of the coupling B.

F F are levers pivoted at *p* to opposite sides of coupling A, and having each at one end a hook, *h*. The hooks *h* of the levers F engage pins *i i*, projecting from opposite sides of the coupling B, thus locking the parts of the coupling closely together. The other ends of levers F, opposite to the hooks *h*, extend along the hose J, and are pivoted to a ring, *l*, which surrounds and fits loosely over the hose.

The arrangement of the levers F, hooks *h*, pins *i*, pivots *p*, and ring *l* is such that when the two hose-sections J and L are in a straight line the hooks *h* are raised clear of the pins *i*, as shown in dotted lines, Fig. 1; but when the two sections form a curve the hooks engage the pins, as shown in full lines.

Couplings A and B are secured, respectively, to the hose sections J and L by clamps *m m*, or by any other well-known means.

In operation the hose-sections J and L, with their respective couplings, are brought into line horizontally and the couplings are thrust together. On being released the hose sections and couplings fall into the position shown in full lines in Fig. 1, thus causing the hooks *h* to engage and hold the pins *i*, and securely locking the coupling. In uncoupling, the hose-sections are straightened, thus disengaging the hooks *h* and allowing the coupling to be pulled apart.

I claim as my invention—

1. In a hose-coupling, the combination, with two sections of hose and two coupling-sections secured, respectively, to the opposed ends of said hose-sections, of a lever connected at one end with one section of the hose at a distance from the coupling, pivoted between its ends to the coupling-section, which is secured to said hose, and terminating in a hook which is adapted to engage a projection on the other opposed coupling-section, and a pin or like projection on said opposed coupling-section, whereby the two coupling-sections are automatically locked when coupled together by the bending and unlocked by the straightening of the hose, substantially as specified.

2. In a hose-coupling, the coupling A, having the thimble C secured therein, coupling B, having the tubular projection *e*, levers F F, pivoted to coupling A and having hooks *h*, pins *i i*, projecting from coupling B, hose J, and ring *l*, all combined and arranged to cooperate substantially as specified.

FRANK A. JACOB.

Witnesses:
H. P. HOOD,
V. M. HOOD.