

(No Model.)

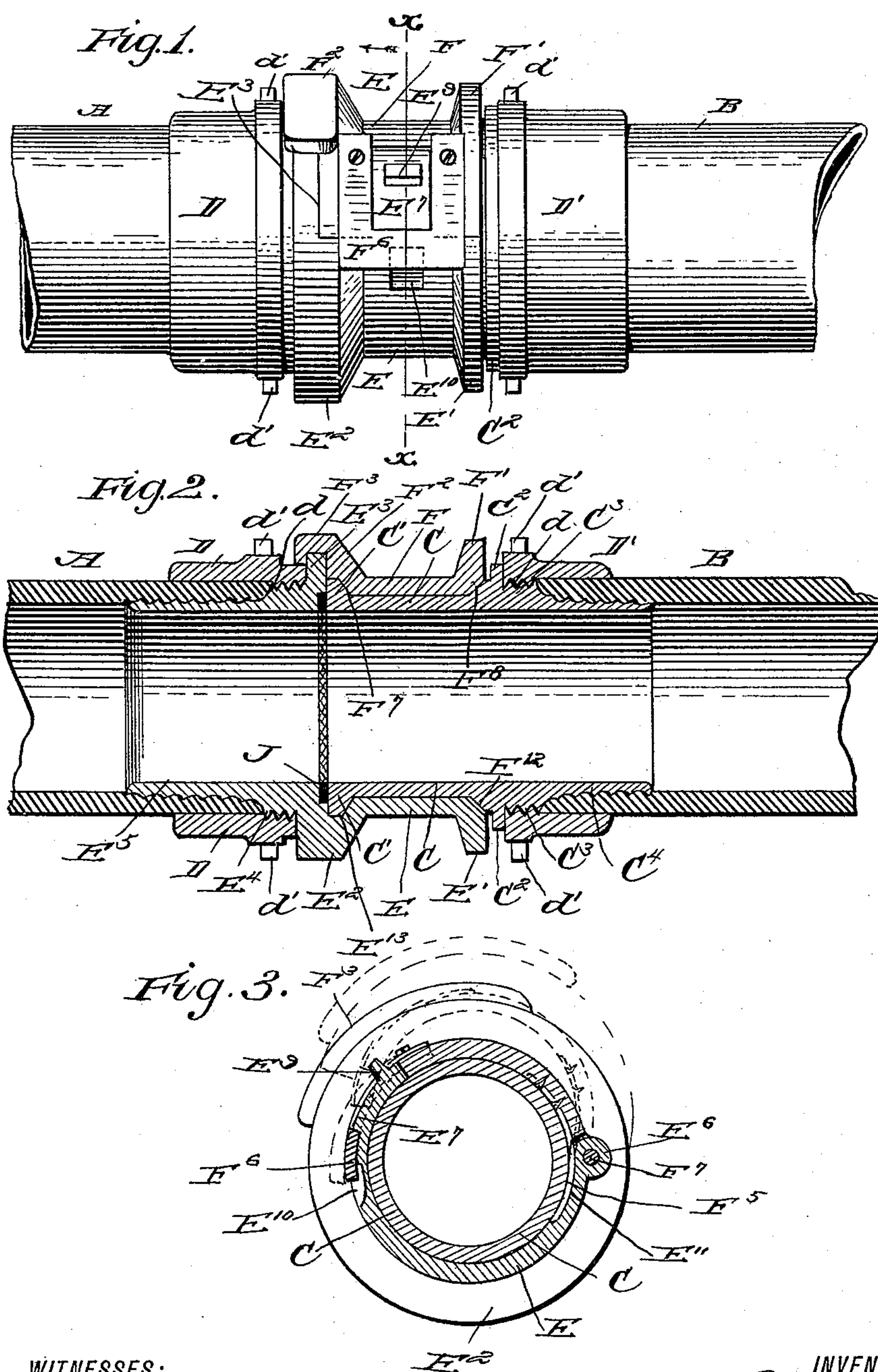
2 Sheets—Sheet 1.

J. D. SLOAN.

HOSE COUPLING.

No. 396,435.

Patented Jan. 22, 1889.



WITNESSES:

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JAMES D. SLOAN, OF RUSHVILLE, INDIANA.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 396,435, dated January 22, 1889.

Application filed June 1, 1888. Serial No. 275,702. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. SLOAN, of Rushville, in the county of Rush and State of Indiana, have invented a new and Improved
5 Hose-Coupling, of which the following is a full, clear, and exact description.

The object of my invention is to produce a hose-coupling simple in construction and effective in operation; and it consists in the
10 parts which will be hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
15 corresponding parts in all the figures.

Figure 1 represents a side view of my coupling engaging two pieces of hose. Fig. 2 is a central longitudinal sectional view of the parts shown in Fig. 1. Fig. 3 is a cross-section on the line *x x* of Fig. 1. Fig. 4 is a side view of the main body of the coupling with the hinge removed. Fig. 5 is an inside view of the hinge and its two springs. Fig. 6 is a side view of a coupling, partly broken away. Fig.
25 7 is a longitudinal sectional view of a nozzle connected to a hose by means of my coupling, and Fig. 8 is a cross-section on the line *y y* of Fig. 7.

A B represent two pieces of hose connected
30 by means of the improved coupling.

C is a short pipe provided on one end with a collar, C', and also provided with a middle collar, C².

C³ indicates screw-threads on the outer side
35 of the pipe adjoining the collar C², and C⁴ are external corrugations extending from the screw-threads aforesaid to the end of the pipe.

D D' indicate two collars, each provided with internal screw-threads, *d d'*, and external
40 pins, *d' d'*.

The body of the coupling is indicated by E. Said body is provided on its outer side with an end collar, E', a middle collar, E² E³, screw-threads E⁴, adjoining said collar, and external
45 corrugations, E⁵. A part of the side at one end of this body is cut away or provided with a large opening, as shown in Fig. 4, and indicated by L O. The part E³ of the middle collar is narrower than the part E².

50 E⁶ E⁷ indicate two lugs on the outer side of the body E, one on each side or edge of the opening L O aforesaid. The lug E⁶ is pro-

vided with a transverse opening, E⁸, (see dotted lines, Fig. 4,) for the reception of a hinge-rod. The lug E⁷ is provided with a smaller
55 lug or stop, E⁹.

The body of the coupling E is provided with a recess or depression, E¹⁰. (See Figs. 1 and 3.) Said body is also provided on the inner side, under the lug E⁶, with a recess, E¹¹,
60 for the reception of a flat spring, to be hereinafter specified. The outer edge of the opening L O is beveled at E¹², and the inner side of the body E is provided with a groove, E¹³.
65

F represents a hinge for closing the opening L O. The respective outer sides of the hinge are provided with flanges F' F². Adjoining the flange F² is an outer extension, F³. The under side of the extension F³ is recessed
70 or grooved lengthwise.

F⁴ F⁴ indicate two lugs on the hinge. Each lug F⁴ is provided with a transverse opening, *f*. (Shown in dotted lines, Fig. 5.)

F⁵ is a flat spring having one end engaged
75 to the inner side of the hinge between the lugs F⁴. The outer end of this spring extends outward between the two lugs F⁴ aforesaid.

F⁶ is a yoke spring or catch engaged to one end of the hinge between the outer flanges, 80 F' F², aforesaid.

F⁷ is a short rod or pin, Fig. 3, for engaging the hinge to the body of the coupling. Said pin engages the transverse openings in the lugs F⁴ and E⁶. The respective sides of
85 the hinge are provided with bevel-edges F⁷ F⁸.

G indicates a nozzle. The inner end of this nozzle is provided with two flanges, G' G², and an intervening body, G³, said flanges and body practically corresponding in construction
90 to the parts of the companion coupling-piece C C' C², as shown in Fig. 2.

G⁴ represents the main body of the nozzle. The outer end of this nozzle is provided with internal screw-threads, *g*.
95

H is a short pipe provided with external screw-threads, *h*, and a shoulder, H'. The diameter of the opening in the pipe H is uniform throughout its length. The opening in the main body of the nozzle is slightly tapering
100 from the flange G' to the outer end. The pipe H is engaged to the nozzle by means of the respective threads of said parts. There are a series of wings or lugs, G⁵, on the inner

side of the nozzle and midway thereof for breaking a stream of water.

I represents a short pipe, provided on one end with a shoulder, I', and also provided on its other end with a larger shoulder, I². The shoulder I² is provided with internal screw-threads, I³, for engaging the pipe to a plug and discharge-pipe at the engine. This pipe, like the inner end of the nozzle and the parts C C' C², is constructed so as to engage with the body and hinged part of the coupling.

J indicates a packing-ring for forming a water-tight joint between the connected ends of the coupling.

The operation is as follows: The collars D D' are engaged on the respective ends of the hose. Each hose is then engaged to the corrugated ends C⁴ E⁵, respectively, of the coupling. The collars are then turned so as to engage their threads with the threads C³ E⁴, each collar being screwed on so as to lie in contact with the collars E², E³, and C², respectively. It will be observed that each collar D D' is shorter than the corrugated ends of the coupling. This permits the outer end of each corrugated part to expand on the inside of the hose and cause said hose to expand over the outer edge of each collar D D'. This feature, with the corrugations, forms a strong connection between the hose and coupling.

The normal condition of the parts when the hinge is closed and the device coupled is shown in full lines, Fig. 3. The dotted lines in said figure represent the position of the parts when the hinge is open. When the hinge is closed, the yoke-spring F⁶ engages the lug E⁷ and locks the parts. By prying into the recess E¹⁰ under the yoke-spring aforesaid said spring may be disengaged from the lug E⁷. When so disengaged, the flat spring F⁵ will be exerted to open the hinge. The extent to which the hinge may be opened is limited by the small lug E⁹ on the lug E⁷. The yoke-spring has an inward tendency. Said spring is therefore caused to engage the small lug E⁹ when the hinge is open, as shown in dotted lines in Fig. 3.

When the hinge is open, a part corresponding with the construction shown by C C' C² (such as is also shown on the nozzle and plug-pipe I) may be engaged within the body or hinged part of the coupling. Then by closing the hinge and causing the yoke-spring F⁶ to engage with the lug E⁷ the several parts of the coupling are firmly united.

The locking between the two main parts of the coupling is effected by causing the collar C' of the part C to engage and lock with the bevel-edge of the hinge, and also lock with the groove in the inner side of the body E.

The lugs d' are for turning the collars D D', so as to engage the internal threads of said collars with the external threads adjoining the corrugated parts of the coupling.

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

1. In a hose-coupling, the combination, with the coupling-body E, provided with a lug, E⁷, and a projection, E⁹, a hinged portion, F, provided with a forwardly-extending spring-catch adapted to engage the lug E⁷ when closed and the projection E⁹ when opened, said hinged portion and the body portion provided with internal grooves, of a pipe provided with an external collar adapted to enter the internal grooves in the coupling, substantially as and for the purpose specified.

2. A hose-coupling consisting of a body provided with a lug, E⁷, said lug being provided with a smaller lug, E⁹, a hinge engaged to said body, said hinge portion being provided with a spring-catch, F⁶, the inner sides of the body aforesaid being grooved, in combination with a pipe provided with a collar adapted to engage with the groove in the body aforesaid, substantially as and for the purpose specified.

3. A hose-coupling consisting of a body provided with a recess, E¹⁰, on its outer side, a lug, E⁷, provided with a smaller lug, E⁹, a spring-actuated hinge portion engaged to said body, said hinge portion being provided with a spring-catch, F⁶, the inner sides of the body aforesaid being grooved, the hinge portion being beveled, as specified, in combination with a pipe provided with a collar adapted to engage with the groove and bevel parts aforesaid, substantially as and for the purpose specified.

4. A hose-coupling consisting of a body portion, E, provided with an opening for the reception of a hinge portion, and a hinge for closing said opening, said body being provided with external corrugations, and also provided with collars E' E² E³, the respective inner sides of the body and hinge portion being grooved and beveled, as specified, one side of the hinge portion being provided with a grooved extension, F³, in combination with the pipe C, provided with collars C' C² and external corrugations, substantially as and for the purpose specified.

5. A hose-coupling consisting of a body portion, E, provided with an opening for the reception of a hinge portion, and a hinge portion for closing said opening, said body being provided with external corrugations and threads, also provided with shoulder and flange, the inner side of the body being grooved, one side of the hinge portion being provided with a grooved extension, F³, in combination with the pipe C, having collars C' C², and also provided with external corrugations and threads, and the internally-threaded collars D D', substantially as and for the purpose specified.

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Witnesses:

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