(No Model.)

S. W. DAY.

HOSE COUPLING.

No. 568,841. Patented Oct. 6, 1896.

Fig. 1.

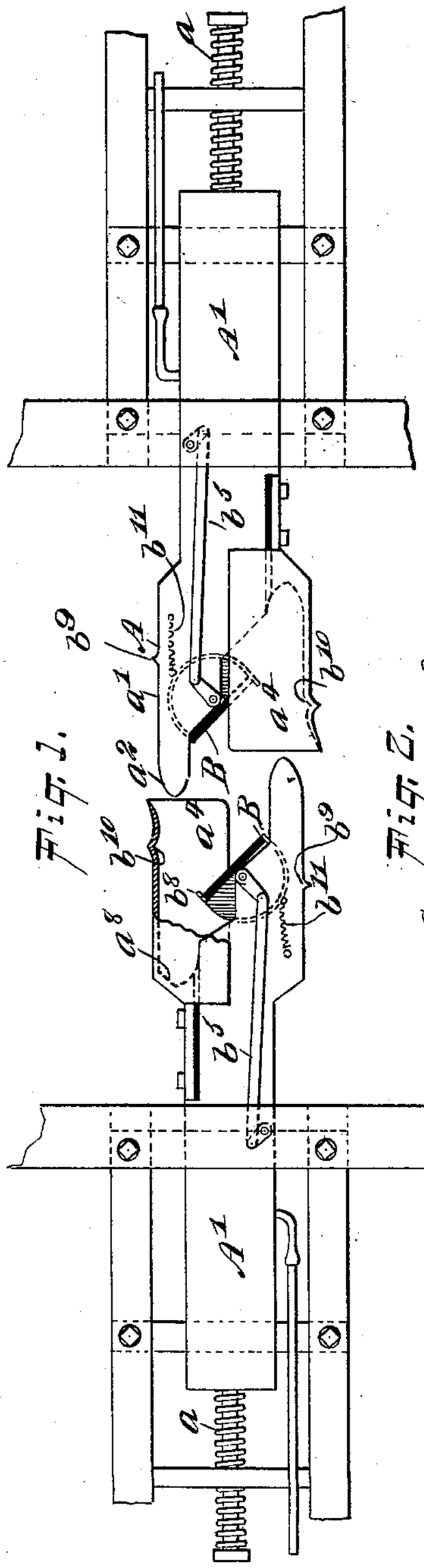


Fig. 2.

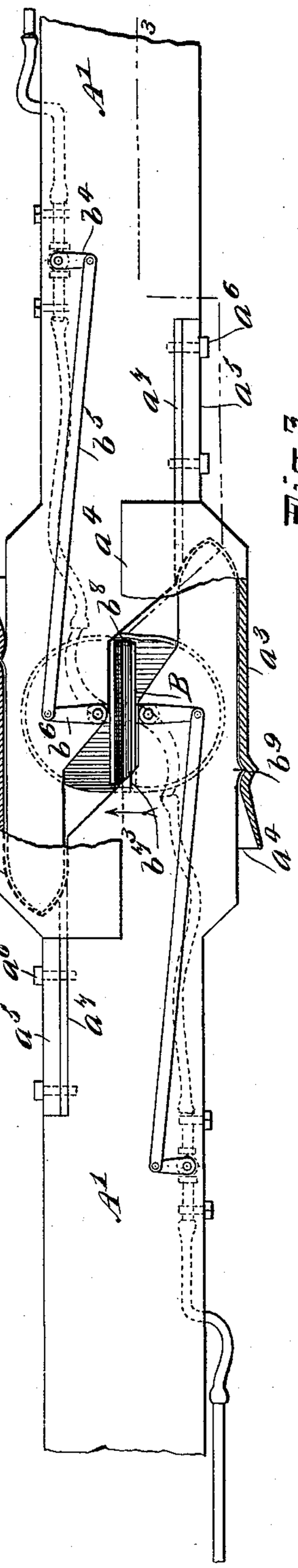
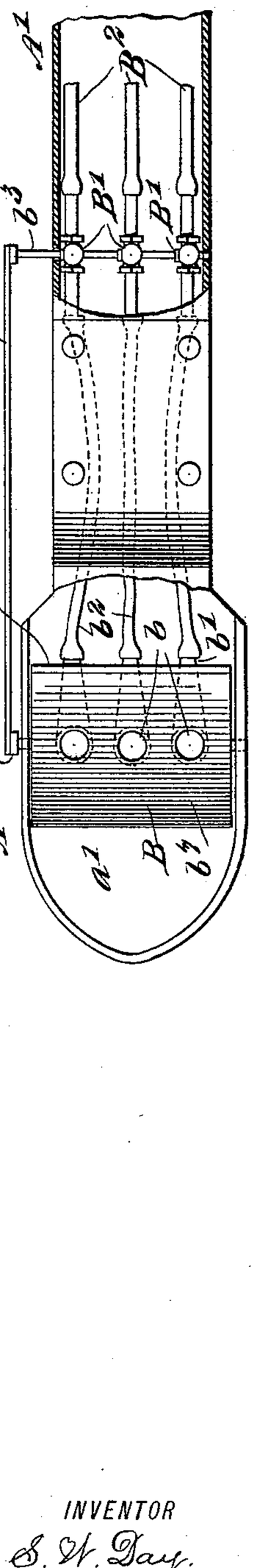


Fig. 3.



WITNESSES:

William F. Goebel.

C. Sigmund

INVENTOR

S. W. Day.

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SHERMAN W. DAY, OF AVONMORE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO IRA C. EWING, OF SAME PLACE.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 568,841, dated October 6, 1896.

Application filed September 28, 1895. Serial No. 563,991. (No model.)

To all whom it may concern:

Be it known that I, SHERMAN W. DAY, of Avonmore, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Hose-Couplings, of which the following is a full, clear, and exact description.

This invention relates to couplings for hose or a series of hose on railway-cars and the like, and the object is to provide a simple device that will be automatic both in coupling and uncoupling, so that the same will require no personal attention when cars are coupled together or separated.

The coupling may be attached by bolts or otherwise to the draw-head of the car-coupling, or it may be attached to the sill or framework of a car at one side of the draw-head. In either event the hose-coupling should be slightly forward of the car-coupling, so as to insure a close connection when cars are brought together.

The invention consists in the construction and novel arrangement of parts, as will be hereinafter specified, and particularly pointed out in the appended claims.

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

Figure 1 is a plan view of two coupling-sections embodying my invention and showing the same separated. Fig. 2 is a plan view of the same on an enlarged scale and showing the sections as connected, and Fig. 3 is a partial elevation and partial section on the line 3 3 of Fig. 2.

Referring to the drawings, A designates the coupling draw-head, of box-like or hollow construction and having the hollow shank portion A′, designed to be slidably attached to a car-coupler draw-head or other support, and a buffer-spring a is designed to give a yielding motion to the coupling-section when two sections are brought together in the act of coupling cars.

One side of the coupling-section is closed by a rigid wall a', which is transversely rounded or curved at the forward end a^2, and the opposite side is closed by a yielding wall a^3, which has walls a^4 respectively connected with its top and bottom edges and projected about half-way across the coupling-head. A plate a^5 is rigid with and extends from the rear end of the wall a^3, and screw-bolts a^6 pass through holes in this plate and engage in tapped holes in the portion A′ of the coupling. A rubber or similar yielding cushion a^7 is placed between the plate a^5 and the outer side of the portion A′; and the outer end of the yielding wall or section is preferably flared outward or bell-mouthed, as shown, to facilitate the entrance of the rigid side wall of an approaching section. The inner end wall of the yielding section is transversely curved, as at a^8, to correspond with the curve of the end a^2, so that when these parts come together there will be a cam-like action to force and hold the coupling-blocks B closely together. By this construction a projecting tongue is formed by the wall a' and its end a^2.

It will be seen that when two coupling-sections are in coupling position the aforesaid tongue of one section will enter the space between the yielding wall and the adjacent side of the other section, and the edges of the top and bottom walls a^4 of the two sections will meet, thus providing a closure to protect the interior parts from rain, snow, or the like.

B designates a rocking valve-block having trunnion-bearings in the coupling-head A, and having a port or a number of ports b extended through it. The inner ends of the ports b have nipple projections b', from which flexible hose connections b^2 extend to valves B′, which communicate with the train-pipes B^2. I have here shown three valves B′ for controlling a like number of train-pipes, but it is to be understood that a greater or less number may be used without departing from the spirit of my invention.

A valve-stem b^3, common to the plugs of all the valves, extends outward through the top wall of the portion A′ of the coupling-head, and a crank-arm b^4 on said valve-stem has a link connection b^5 with a crank-arm b^6 on an extended trunnion of the valve-block B, so that the several valves will be closed or opened by the movements of the valve-block.

The outer or contacting face of the valve-block B is provided with a gasket b^7, of yield-

ing material, so that when two blocks are engaged the contact will be practically air and water tight, and the rear edge of the block is provided with a stop-flange b^8 to prevent the forward slipping of one block relatively to the other.

As a means to hold the two coupling-heads together I provide a rib or projection b^9 on the rigid wall of one head to be engaged by a corresponding depression b^{10} in the yielding wall of the other head, and to automatically rock the valve-block to close the valves as the two coupling-sections are separated I employ a spring b^{11}, attached at one end to the block and at the other end to the head.

In operation upon bringing two cars together the valve-block of one coupling-head will engage with the block of the approaching coupling-head, and the two blocks will be rocked to the position shown in Fig. 2, and the ports of one block will register with the ports of the other block, and at the same time the several valves will be opened, thus allowing the passage of the elements in the pipes from one car to the other. When the cars are separated, the springs b^{11} will rock the blocks to the position shown in Fig. 1, thus closing the valves.

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

1. A hose-coupling comprising a head, a rocking valve-block therein having a port, a valve carried by the head, a connection between said port and the valve, and a connection between the block and valve whereby said valve may be opened and closed by the movements of the block, substantially as specified.

2. A hose-coupling comprising a head, a yielding side portion therein, a rocking valve-block in the head and having a port, a valve, a flexible hose connection between the port in the block and the valve, and means for controlling the valve by the rocking of the valve-block, substantially as specified.

3. In a hose-coupling, the combination with a head, of a rocking valve-block with which the hose communicates, a valve commanding the hose, and an operative connection between the valve-block and the valve, substantially as described.

4. In a hose-coupling, a head having a hose terminal carried by the head, a spring-wall at one side of the hose terminal, the wall being vertically extended and having top and bottom edge flanges, the flanges being extended approximately to the center of the head, and a tongue rigid with the head and carried opposite the yielding wall, the tongue being capable of passing inward of the spring-wall of a companion head and the spring-wall being capable of pressing and holding a tongue inward against the head, substantially as described.

5. In a hose-coupling, a head having means for connection with a companion, a valve-block rockably mounted in the head and having a port therein, a valve-block having a plane side capable of hermetic connection with the corresponding side of the companion block, and a hose communicating with the port, substantially as described.

SHERMAN W. DAY.

Witnesses:
A. G. C. SHOEMAKER,
JOHN GALVIN.