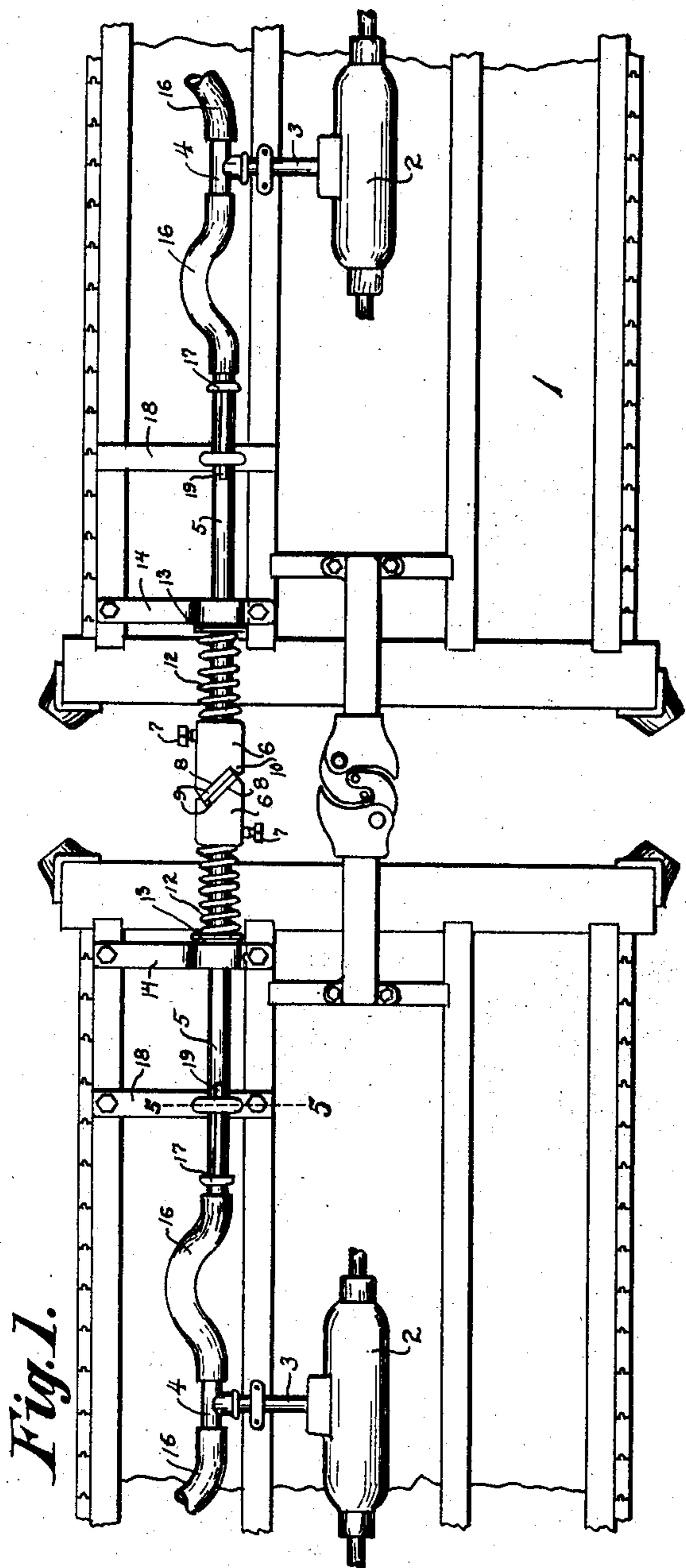


No. 768,232.

PATENTED AUG. 23, 1904.

T. F. LORD.
AIR BRAKE PIPE COUPLING.
APPLICATION FILED MAY 12, 1904.

NO MODEL.



WITNESSES
Joseph J. Hosler.
J. R. Bond.

Fig. 3.

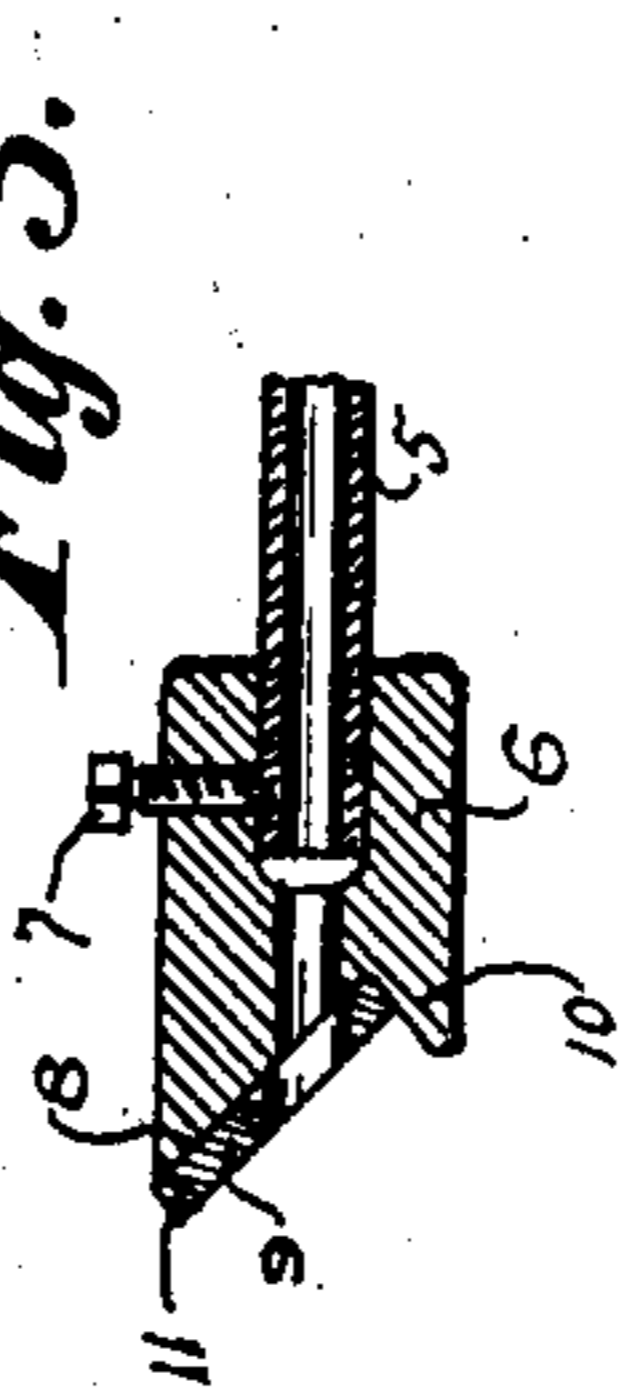
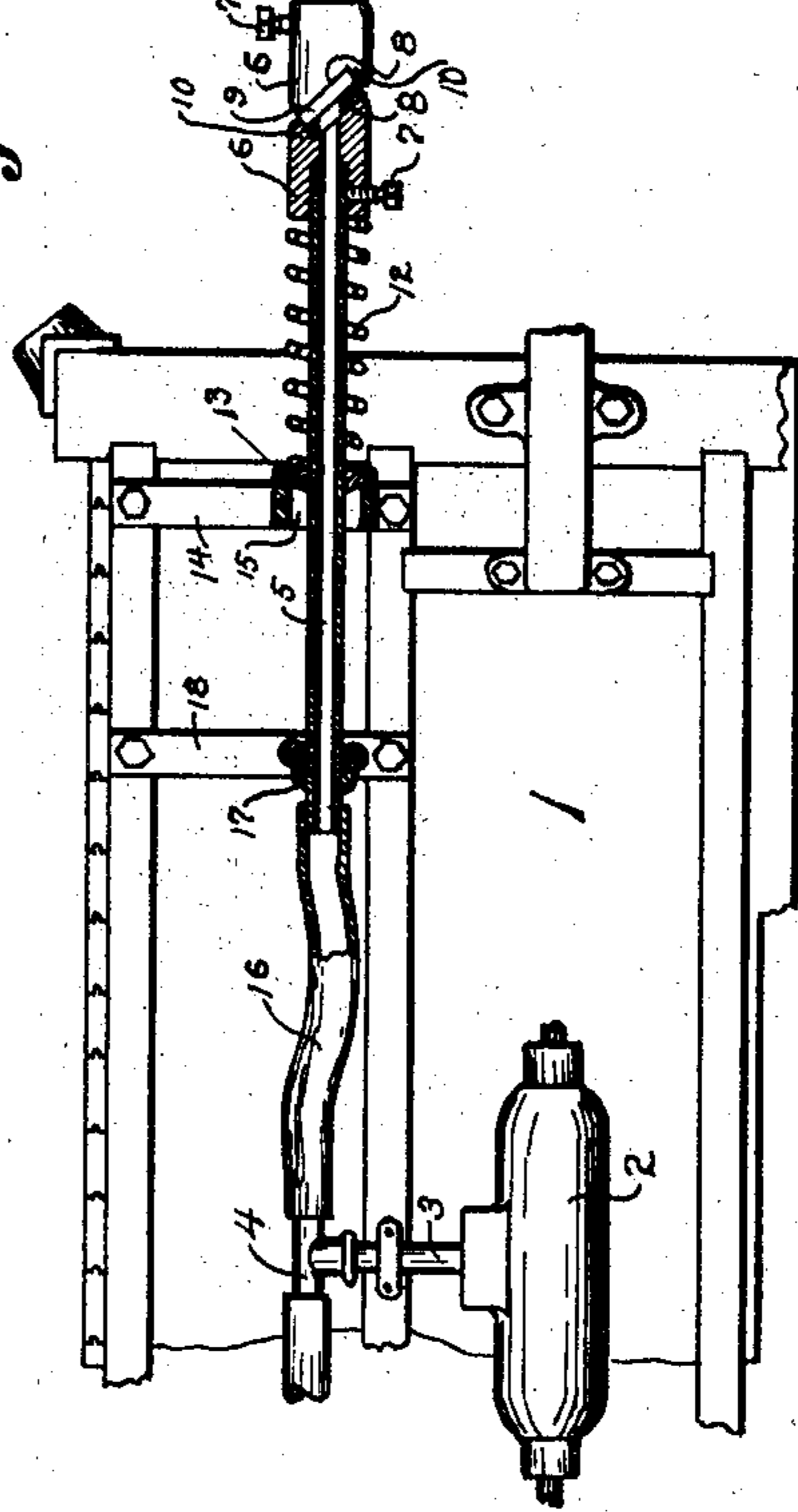
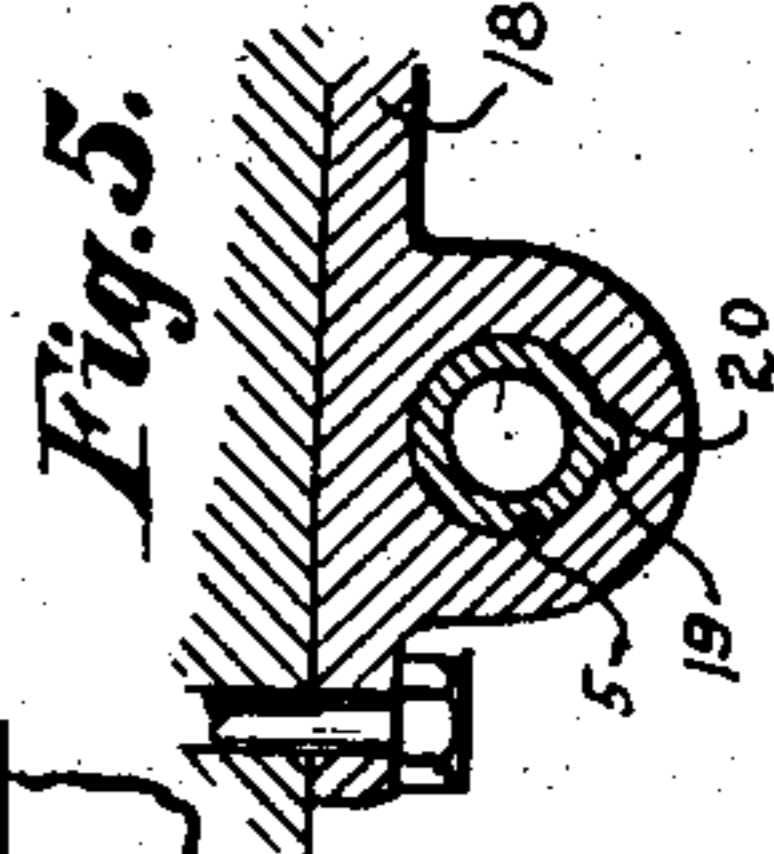
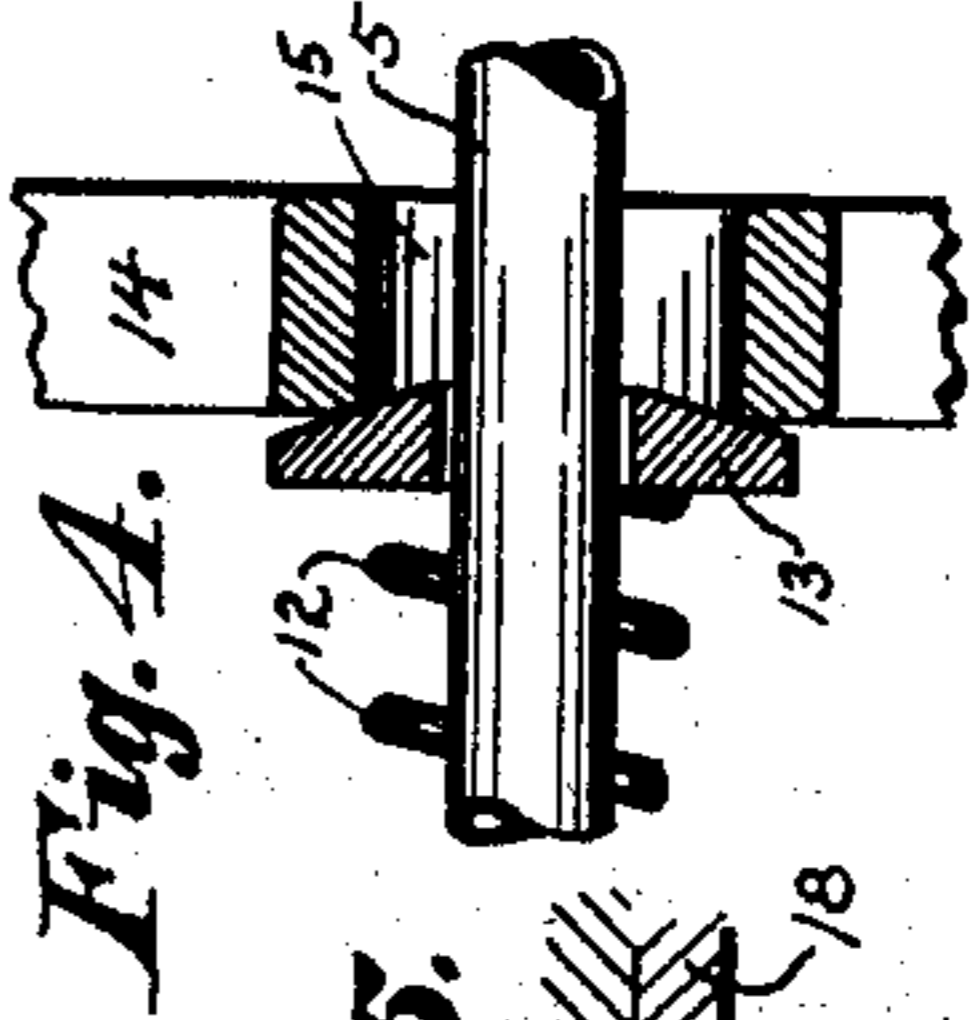


Fig. 2.



INVENTOR
Thomas F. Lord.

BY *J. W. Bond*
ATTORNEY



UNITED STATES PATENT OFFICE.

THOMAS F. LORD, OF MINERAL CITY, OHIO.

AIR-BRAKE PIPE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 768,232, dated August 23, 1904.

Application filed May 12, 1904. Serial No. 207,625. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. LORD, a citizen of the United States, residing at Mineral City, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Air-Brake Pipe-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the numerals of reference marked thereon, in which—

Figure 1 is a bottom plan view showing the adjoining ends of two cars and illustrating my invention. Fig. 2 is a similar view showing the pipe-heads brought in position to be fully coupled together. Fig. 3 is a section of one of the coupling-heads, showing the same connected to the pipe. Fig. 4 is a view showing a portion of the car-frame and illustrating the spring retaining-disk and the pipe-holding eye in section. Fig. 5 is a section on line 5 5, Fig. 1.

The present invention has relation to air-brake pipe-couplings; and it consists in, the novel arrangement hereinafter described, and particularly pointed out in the claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents portions of two cars, which of course may be of any desired construction and are to be supplied with usual couplers of any kind.

To the cars 1 are attached the air-reservoirs 2, from which reservoirs the pipes 3 lead and are connected to the pipes 4, which pipes are held in fixed relative position to the car in any convenient and well-known manner.

To the pipes 5 are attached the pipe-coupling heads 6, which pipe-coupling heads are held in fixed relative position upon the pipes 5 by means of the set-screws 7 or their equivalents. The coupling-heads 6 are each provided with the inclined faces or ends 8, which are so inclined that when the coupling-heads 6 are brought together will be parallel one with the other.

For the purpose of preventing the escape of air at the junction of the coupling-heads 6

their inclined faces are provided with the yielding strips 9, so that when said yielding strips are brought together they will cushion against each other.

For the purpose of guiding the coupling-heads as they approach each other the flanges 10 are provided, which flanges are inclined in the opposite direction from that of the faces of the coupling-heads proper, by which arrangement the forward points 11 will be guided into the V-shaped grooves formed by the oppositely-inclined faces of the flanges 10 and the coupling-heads 6.

As the coupling-heads are forced together the extreme forward ends of the coupling-heads will be forced into the V-shaped groove, thereby crowding or forcing the inclined faces of the coupling-heads 6 snugly against each other.

It is well understood more or less longitudinal movement of the coupling-heads is necessary, and in order to provide for this movement the springs 12 are provided, one end each of said springs pressing against the rear or back ends of the coupling-heads 6 and the opposite ends of said springs abutting against the collar 13 or its equivalent, by which arrangement the cars 1 can be moved to or from each other a limited distance without interfering with the connection of the coupling-heads 6, owing to the fact that the springs 12 are so adjusted that when the cars are properly coupled the springs will be compressed, so that as the distance between the adjacent ends of the cars can sway without disarranging the connection of the coupling-heads 6, owing to the fact that the springs 12 have a tendency to force the coupling-heads against each other at all times when the cars are properly coupled.

It is well understood that cars when coupled together swing or sway independent of each other, and in order to keep the coupling-heads 6 in proper relative position with each other and in proper contact with each other the pipes 5 must vibrate or move to compensate for the swing or sway of the car, and in order to allow this movement the pipe-supports or eyes 14 are provided with apertures 15 larger than the diameter of the pipe, and upon the

front faces of the supports or eyes are located the collars 13, which collars are provided with apertures the size corresponding with the diameter of the pipe, by which arrangement the
 5 pipe 5 can swing or move without disarranging the confinement of the spring 12.

It will be understood that in order to provide for the swinging movement of the pipe 5 there must be a flexible connection between
 10 the pipes 4 and the pipes 5, and in order to provide for this flexible connection the flexible tubes 16 are provided, which tubes are coupled to the pipes 4 and 5.

For the purpose of stopping the forward
 15 throw of the coupling-heads 6, together with their pipes, the pipes 5 are provided with stop-flanges 17, which stop-flanges abut against the eyes or supports 18; but when the springs are compressed the flanges 17 will move away
 20 from the eyes or supports 18, as illustrated in Fig. 1.

For the purpose of preventing any rotary movement of the pipes 5 said pipes are provided with the feathers 19, which feathers fit
 25 in the ways 20, said ways being formed in the eyes or supports 18, as illustrated in Fig. 5.

By my peculiar formation of the coupling-heads I am enabled to provide a straight port through the coupling-heads, thereby allowing
 30 the air to pass through the coupling-heads with little resistance.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a coupler of the class described coupling-pipes provided with coupling-heads, the free ends of said pipes supported by eyes having apertures larger than the diameter of the pipes, collars located upon the coupling-pipes and against the eyes, the coupling-heads provided with inclined faces or ends, and flanges having inclined faces, the inclined faces of the heads having secured thereto yielding strips, and springs interposed between the coupling-heads and collars, substantially as and for the
 45 purpose specified.

2. The combination of coupling-heads provided with inclined faces and flanges, said faces and flanges inclined in opposite directions, said coupling-heads provided with yielding strips upon their inclined faces, pipes carrying the coupling-heads, said pipes adapted to swing, collars located upon the pipes carrying the heads, and springs interposed between the collars and coupling-heads, substantially as and for the purpose specified.
 55

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS F. LORD.

Witnesses:

EVERETT SKEELS,
 R. R. JONES.