

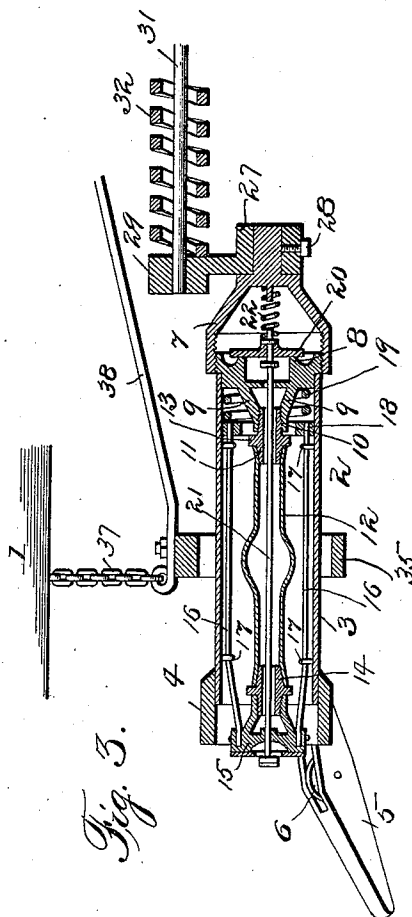
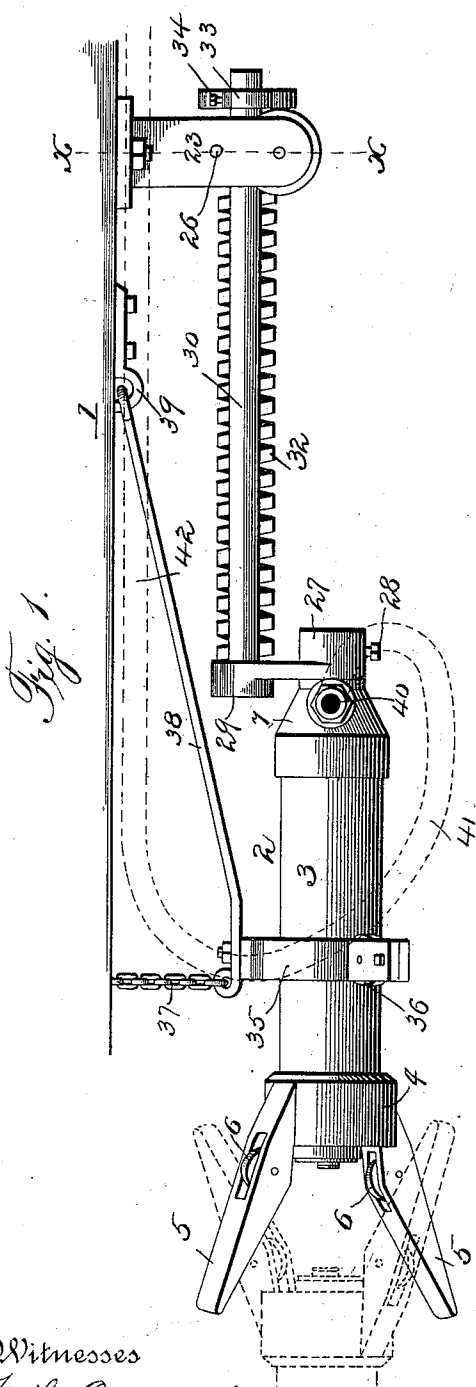
(No Model.)

2 Sheets—Sheet 1.

P. & J. LUKASEVIG.
PIPE COUPLING.

No. 562,189.

Patented June 16, 1896.



Witnesses
F. L. Curand.
A. J. Smit.

Inventors
Paul Lukasevic
and John Lukasevic.
By A. B. Weiss Attorney

(No Model.)

2 Sheets—Sheet 2.

P. & J. LUKASEVIG.
PIPE COUPLING.

No. 562,189.

Patented June 16, 1896.

Fig. 2.

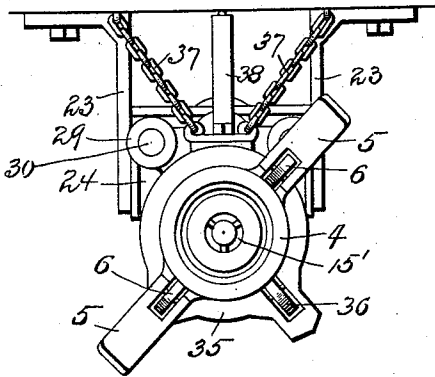


Fig. 4.

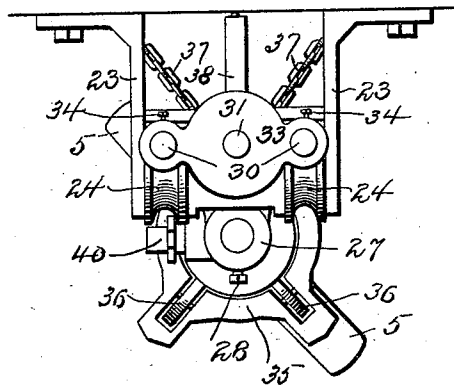
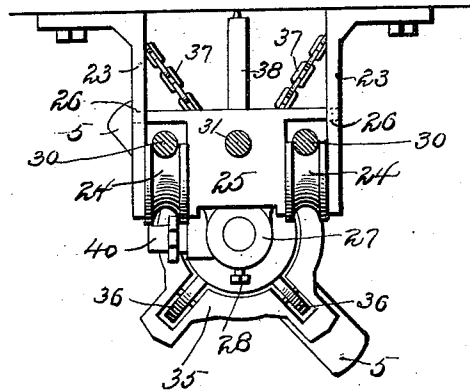


Fig. 5.



Witnesses
F. L. Orvand.
A. B. Smith.

Inventors
Paul Lukasevig
and John Lukasevig
By *A. B. Wilcox* Attorney

UNITED STATES PATENT OFFICE.

PAUL LUKASEVIG AND JOHN LUKASEVIG, OF CUSTER, WISCONSIN.

PIPE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 562,189, dated June 16, 1896.

Application filed October 18, 1895. Serial No. 566,092. (No model.)

To all whom it may concern:

Be it known that we, PAUL LUKASEVIG and JOHN LUKASEVIG, citizens of the United States, residing at Custer, in the county of Portage and State of Wisconsin, have invented certain new and useful Improvements in Pipe-Couplings; and we do 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.

Our invention relates to pipe-couplings, and more particularly to that class of couplings for automatically connecting the air-brake pipes of railway-coaches.

The object of the invention is to provide a device of this character which shall be comparatively simple of construction, which may be easily attached to railway-coaches now in use, and which will effectively couple the air-pipes automatically.

With these objects in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of our improved air-pipe coupling, showing it attached to the draw-bar timbers of a car and showing a portion of the coacting member of the coupling about to be connected. Fig. 2 is a front view. Fig. 3 is a longitudinal vertical sectional view. Fig. 4 is a rear view; and Fig. 5 is a cross-sectional view on line *xx*, Fig. 1, looking from the rear forward.

In the drawings, 1 denotes the draw-bar timbers of a railway-car.

2 denotes one of the sections of the coupler, which comprises a sleeve 3, having at its front end a collar 4, having forwardly-diverging arms 5, arranged at opposite sides of a line drawn vertically through the collar, and in which are journaled rollers 6. To the rear end of this coupler is secured a valve-casing 7, having a valve-seat 8, provided with forwardly-converging arms 9, connected by a ring 10, which is interiorly screw-threaded. A nipple 11, having an exterior screw-thread, is engaged with this ring. A flexible tube 12 is placed over the forward end of the nipple, with its rear end abutting against a collar 13, formed on said nipple, and the forward end

of this tube is engaged with a similar nipple 14, which is screwed into a head 15, having an open work end 15'.

16 denotes rods which have a sliding engagement in eyebolts 17, secured within the sleeve 3, and which have their forward ends swiveled to the said head, so as to allow it to have a slight rocking movement therewith.

18 denotes a collar which is secured to the rear ends of said rods and which engages a coil-spring 19, confined between the valve-casing and the collar.

20 denotes a valve which is seated on the valve-seat in the valve-casing. 21 denotes a valve-stem which is secured to said valve and projects through the flexible tube and the head at the front end of the sleeve and extends slightly beyond the same. The rear end of this valve-stem is provided with a coil-spring 22, which exerts its energy to hold the valve tightly against the seat.

23 denotes brackets which are secured to the draw-bar timbers and are provided with rollers 24. 25 denotes a collar having studs 26, which are journaled in the brackets 23.

27 denotes a casting which is secured to the rear end of the valve-casing by a set-screw 28 and has three upwardly-extending apertured arms 29. Tubes 30 are secured with their forward ends in the apertures of the outer arms and extend rearwardly between the brackets and are supported upon the rollers aforesaid. To the central arm of the bracket between said tubes is secured a rod 31, which projects rearward between the brackets and has coiled around it a spring 32, which is confined between the central arm of the bracket and the collar pivoted between said brackets. The rear ends of these tubes and the arm extend through apertures in the plate 33, to which they are secured by set-screws 34. This plate is for the purpose of preventing the spring thrusting the rod and tubes forward from between the brackets. In other words, the plate serves as a stop to limit the forward movement of the rod and tubes.

35 denotes what may be properly called a "hanger-ring," which embraces the sleeve 3 of the collar and is provided with rollers 36, to allow said sleeve to have a free sliding movement through the ring. This ring is

connected by a chain 37 to the draw-bar timbers, and is also connected by a link 38 to a hook 39, secured to the draw-bar timbers. These connections allow of a sidewise movement of the ring and not a longitudinal movement. It is therefore evident that by this construction the coupling may swing laterally and by the movement of the spring and the tubes and rod the coupling may move longitudinally.

40 denotes a hose-nipple which is attached to or formed with the valve-casing and to which the flexible hose 41 of the air-pipe 42 is connected.

In operation, as the two sections of the coupler are moved toward each other, it being understood that the diverging arms at the outer ends of the sleeves of each section are arranged reverse to each other, the sections will be, by means of the rollers in said diverging arms, directed straight into each other, bringing the outer ends of the valve-stems into engagement. This movement will cause the valve-stems to be moved inward, thus removing the valves from their seats and establishing a communication between the two air-pipes of the two coaches. When the sections of the coupler meet, they will be compressed and the coil-spring supported by the rod will likewise be compressed against the collar pivoted to the brackets and will exert its energy to hold the two sections of the coupler together, and as the tension of these main springs is greater than the tension of the springs on the valve-stem the valves will be held open while the couplers are connected, but immediately upon separating the coaches the springs on the valve-stem will force the valves to their seats, thus preventing the escape of air.

In the present instance, we have shown the short flexible tube arranged within the sleeve of the coupling as being provided with a bulb or bulged portion 43, which will allow of the heads of the outer ends of the coupling being more easily retracted upon concussion with the adjacent coupling without injuring said flexible tube. This is the preferred form, but we do not wish to be restricted thereto.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a coupling of the character described, the combination with a sleeve provided at one end with a valve-casing, which is adapted to be connected with an air-pipe, a head at the forward end of the casing, a tube located in said sleeve and connecting the head with the valve-casing and establishing a communication therebetween, a valve in said valve-casing, and a rod connected to said valve and

extending through said tube and through the head and beyond the same, substantially as set forth.

2. In a coupling of the character described, the combination with a sleeve provided at one end with a valve-casing and at the other end with diverging arms provided with rollers, said valve-casing being adapted to be connected with an air-pipe, a head at the forward end of the casing, a tube connecting the head with the valve-casing and establishing a communication therebetween, a valve in said valve-casing, a rod connected to said valve and extending through said tube and through the head and beyond the same, and a spring for normally holding the valve closed, substantially as set forth.

3. In a coupling of the character described, the combination with a sleeve, provided at one end with a valve-casing, a head located at the other end of said sleeve and connected to the valve-casing, guide-rods to which said head is secured, a tube connecting the head with the valve-casing, a valve located within said casing, a stem secured to said valve and projecting beyond the said head, substantially as set forth.

4. In a hose-coupling, the combination with a spring-pressed sleeve provided at one end with a valve-casing which is adapted to be connected with an air-pipe, a spring-pressed head at the forward end of the casing projected slightly beyond the same, a flexible tube located within the sleeve and connecting the head with the valve-casing and establishing a communication therebetween, a spring-pressed valve in said casing, and a rod located in advance of said head and connected to the valve, substantially as set forth.

5. The combination with the timbers of a railway-coach, brackets secured thereto, and provided at their lower ends with rollers, a coupling-section hung to said timbers and provided with a casting at its inner end, tubes secured to said casting and supported by the rollers of said brackets, a rod secured to said casting and projecting between said brackets, a collar pivoted between said brackets, and a spring coiled around said rod and confined between the aforesaid collar and the casting, and a plate securing the ends of the tubes and the rod together and serving to prevent the outward thrust of said tubes and rod, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

PAUL LUKASEVIG.
JOHN LUKASEVIG.

Witnesses:

MARTIN HEFFRON,
JOHN J. HEFFRON.