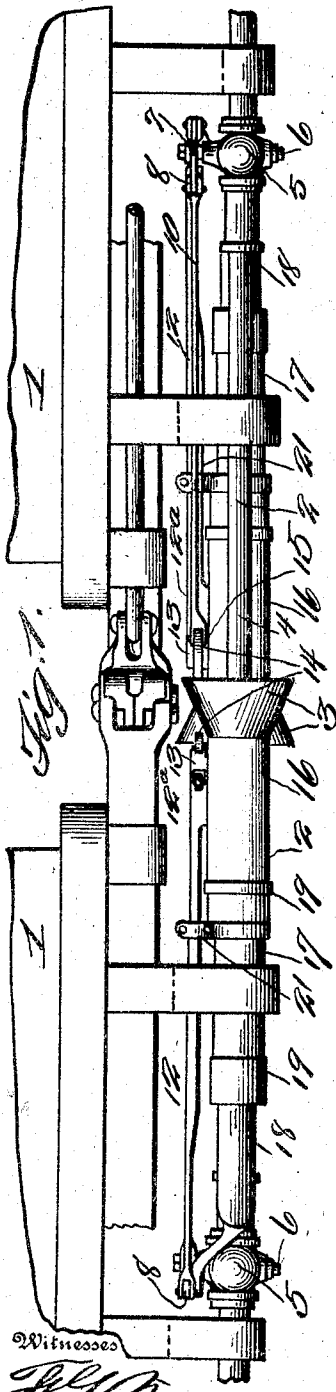


A. KOAGE.
 AUTOMATIC COUPLING.
 APPLICATION FILED JAN. 2, 1909.

937,537.

Patented Oct. 19, 1909.
 2 SHEETS—SHEET 1.



Witnesses
J. H. Oswee
M. De Grange

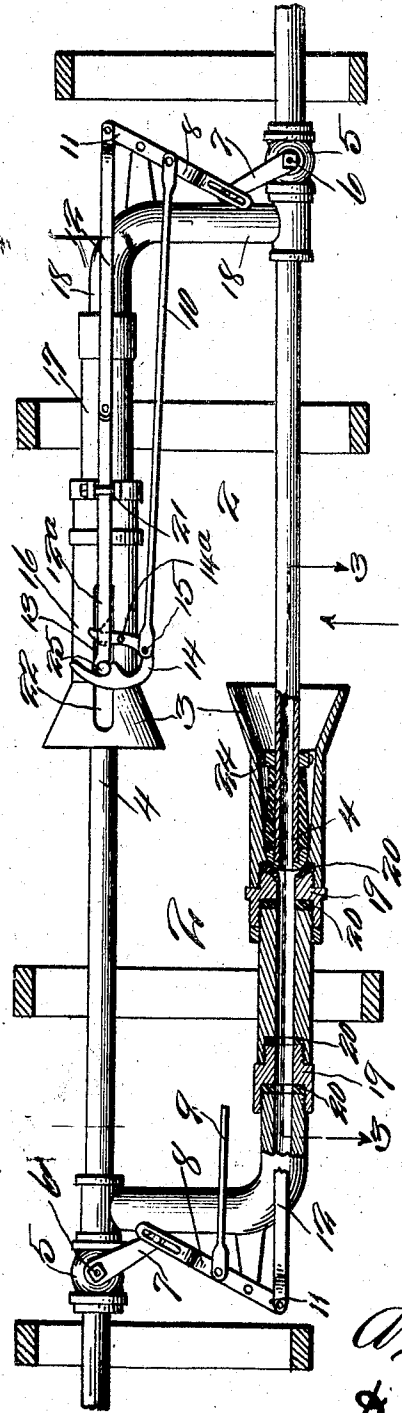


Fig. 2.

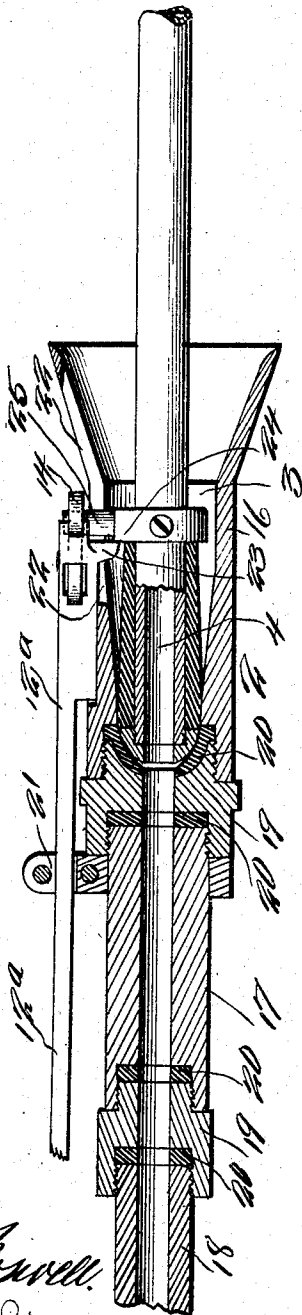
Inventor
A. Koage.
 By *D. Swift & Co.*
 Attorneys

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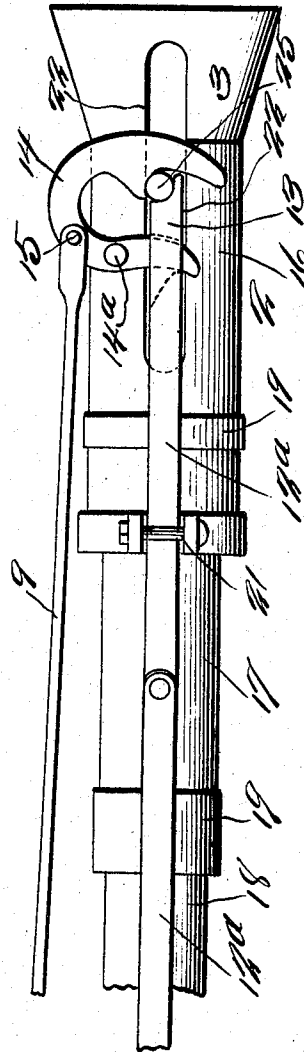
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Fig. 3.



Witnesses
J. B. Brown.
M. De Grange

Fig. 4.



Inventor
W. Koage.
 By *D. Swift & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

AUGUSTUS KOAGE, OF PINE RIVER, WISCONSIN.

AUTOMATIC COUPLING.

937,537.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed January 2, 1909. Serial No. 470,481.

To all whom it may concern:

Be it known that I, AUGUSTUS KOAGE, a citizen of the United States, residing at Pine River, in the county of Waushara and State of Wisconsin, have invented a new and useful Automatic Coupling; and I do hereby 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.

This invention pertains to a new and useful automatic steam or air coupling, designed for use between cars of a train, and the invention in its broadest principles, provides for its main object, means carried by the device for opening and closing the valve, that is to say, if two cars equipped with a coupling, as shown in the drawings, be brought together, the means for operating the valves of each coupling, will be operated, as will be clearly understood.

This coupling comprises a receiving portion and an inserting portion, the inserting portion operating the means for opening and closing a valve of a cooperating coupling, as the inserting portion is received by the receiving portion of the cooperating coupling, as will be understood from the drawings.

This invention comprises further objects and combinations of elements which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claims.

The features, elements and the arrangements thereof, which constitute the above entitled invention, may be changed and varied, that is to say, in the actual reduction to practice with the understanding that the changes and variations accruing from said reduction to practice are limited to the scope of the appended claims.

To obtain a full and correct understanding of the details of construction; combinations of features, elements and advantages, reference is to be had to the hereinafter set forth description and the accompanying drawings in connection therewith, wherein—

Figure 1 is a side elevation of portions of two cars, each being equipped with a coupling device, which are shown as being coupled. Fig. 2 is a sectional view longitudinally through a pair of coupling devices, showing the detail construction of the apparatus. Fig. 3 is a sectional view on line

3—3 of Fig. 2, showing clearly the manner in which the receiving and inserting members are held together when coupled. Fig. 4 is an enlarged detail perspective view of a portion of one of the receiving members, showing clearly the means for operating the valve of each coupling.

In regard to the annexed drawings, 1 designates cars, each being equipped with a coupling 2, as shown clearly in Fig. 1 of the drawings. Each coupling member 2 comprises a receiving member 3 and an inserting member 4, the inserting member of each coupling being telescopically received by the receiving member 3 of the opposite cooperating coupling, as will be clearly evident.

The coupling devices of each car is provided with a valve 5, by the operation of which steam or air is allowed to pass through the coupling devices when brought together. Projecting laterally from the stem 6 of each valve is a lever 7, which is pivoted to another lever 8, as shown clearly in the drawings. Pivoted to the junctions of the levers 7 and 8 are levers 9 or 10, the purpose of which will be apparent, from the hereinafter set forth description in connection with the drawings. To the ends 11 of the levers or links 8, are pivoted rods 12, which are in turn connected to the rods 12^a. The ends 13 of the rods 12^a, are so constructed as to partially fit and contact with the movable dogs 14, which are carried by and pivoted to the said receiving members, as clearly shown in the drawings. The levers or rods 9 and 10 are also pivoted to said dogs as at 15, the pivots of the dogs being disposed slightly to the rear of the pivots 15, that is, when the dogs are in the positions shown in Figs. 2 and 4, but when the dogs are disengaged from the lugs 25 sufficiently to allow them to be withdrawn, the pivot 14^a is between the pivotal connections 15 and the lug engaging portions of the dogs, as will be clearly apparent.

The receiving members of the couplings comprise three elements 16, 17 and 18, between which are disposed bushings 19 and gaskets or washers 20, so as to provide steam or air tight connections between the said elements, as shown clearly in the sectional view of the drawings. The levers or rods 12 are slidable within bearings 21 which are carried by the said receiving members. The said receiving members are provided with slots 22, into which lateral projecting por-

tions 23 of the rods 12 extend, which lateral projecting portions 23 coöperate with shoulders 24 of the inserting members, that is, when brought together. When the couplings are brought into coupled relation the said shoulders 24 of the inserting members contact with the lateral projecting portions 23, so as to oscillate the dogs upon their pivots, thus causing the free ends of the dogs to engage behind lugs 25, which project laterally from the said shoulders; in this way the receiving and inserting members are held connected, and while this operation is being performed, a pulling action is being imparted to the rods 9 and 10, which causes the valves 5 to be opened, through the medium of the levers or rods 7. When the coupling devices are separated, the said dogs are oscillated in the reverse direction, by their being contacted with by the said lugs 25, the levers 9, 10 and 12 will operate in directions to close the valves 5, through the reverse manipulation of the said levers or rods 7, as will be clearly manifest.

From the foregoing description, it will be clearly noted that a device embodying simple and efficient constructions is provided, and when employed in connection with cars, a secure and automatic connection is insured between them, and when two cars are uncoupled, the valves of the couplings are automatically closed.

Having thus fully described the invention, what is claimed as new and useful by the protection of Letters Patent is:—

1. Two opposing coupling members, each having a receiving and an inserting member and provided with valves, said receiving members having pivoted members and being provided with slots, said inserting members having annular shouldered portions provided with upwardly extending lugs adapted to extend through said slots to coöperate with the pivoted members, connections between the valves and the pivoted members having means coöperating with the said lugs so that when the coupling members are separated the pivoted members will operate to close the valves.

2. The combination of two opposing coupling members, each having a receiving and an inserting member and being provided with valves, said receiving members having pivoted U-shaped dogs and provided with slots, said inserting members having annular shouldered portions provided with upwardly extending lugs adapted to extend through said slots to coöperate with the pivoted dogs, connections between the valves and the pivoted dogs having means coöperating with said lugs so that when the coupling members are separated the pivoted dogs will operate to close the valves.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUSTUS KOAGE.

Witnesses:

OLE P. JOHNSON,
W. H. OGILVIE.