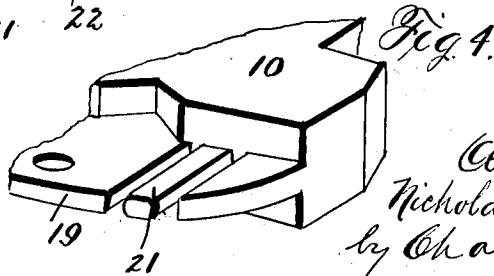
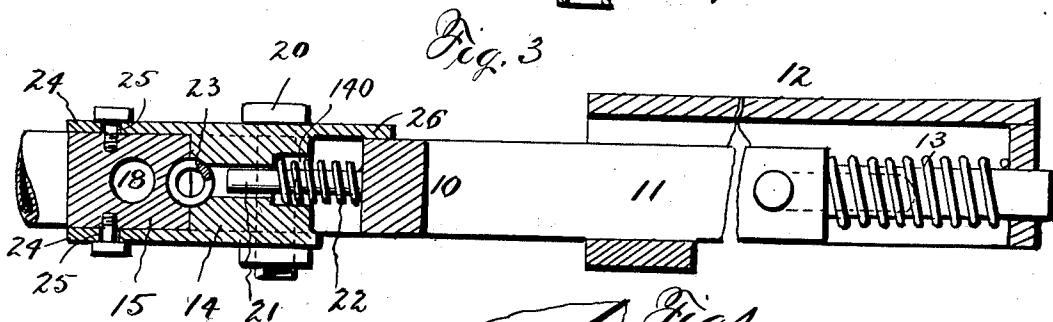
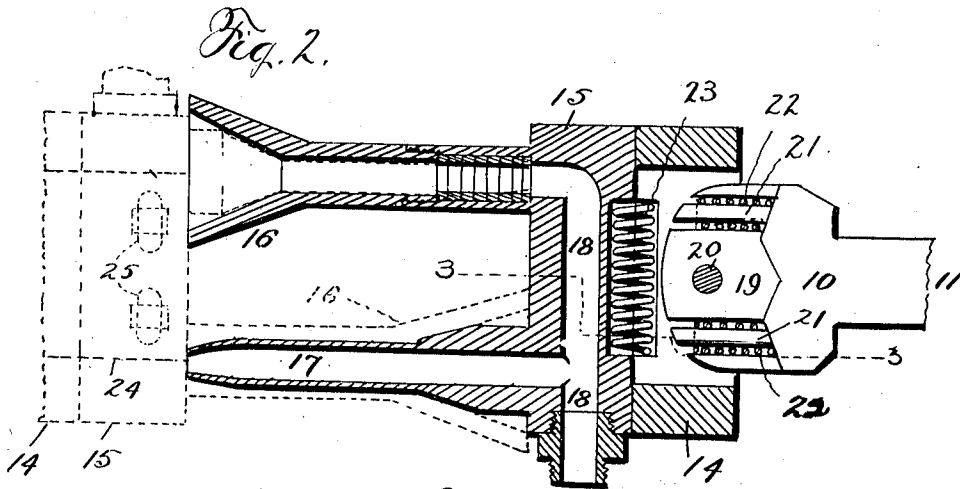
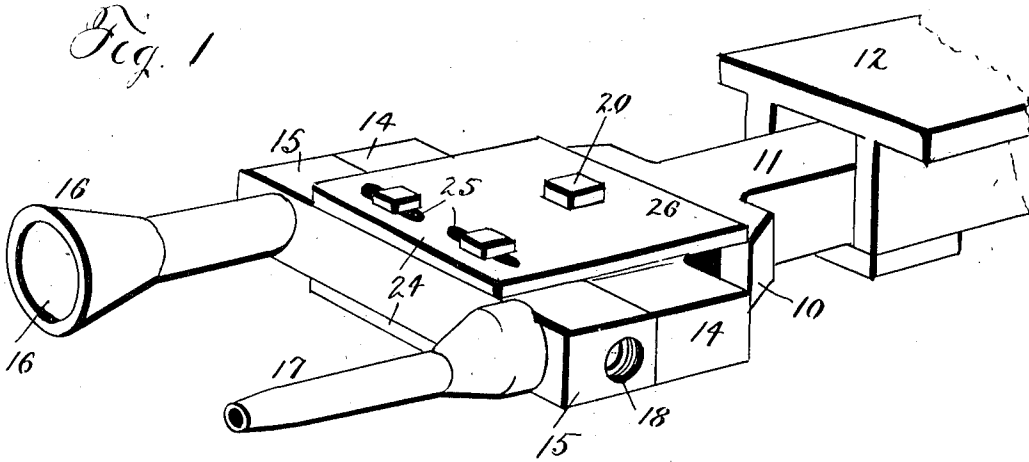


C. C. CROWELL & N. A. SIEBENALLER.
 TRAIN PIPE COUPLING.
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1,051,563.

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CLAYTON C. CROWELL AND NICHOLAS A. SIEBENALLER, OF TIFFIN, OHIO.

TRAIN-PIPE COUPLING.

1,051,563.

Specification of Letters Patent.

Patented Jan. 28, 1913.

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To all whom it may concern:

Be it known that we, CLAYTON C. CROWELL and NICHOLAS A. SIEBENALLER, of Tiffin, in the county of Seneca, and in the State of Ohio, have invented a certain new and useful Improvement in Train-Pipe Couplings, and do hereby declare that the following is a full, clear, and exact description thereof.

The object of our invention is to provide a train pipe coupling which will dispense with the necessity of coupling pipes for air and steam upon railroad cars by hand, an automatic operation being used in place thereof so that two cars on coming together automatically couple and on separating automatically uncouple the train pipes.

Briefly described, our invention comprehends the use of coupling heads having each a pair of members formed for coaction with a pair of corresponding members on an adjoining car, said heads having such flexibility as will enable them to conform to all the conditions as to movement imposed by curves in the track, want of perfect alinement of adjoining cars, etc.

In the accompanying drawings—Figure 1 is a perspective view of the equipment at the end of one car embodying our invention; Fig. 2 is a top plan view showing the equipment of the adjoining ends of two cars to illustrate their position when coupled together; one head being shown in horizontal section; Fig. 3 is a vertical section on the line 3—3 of Fig. 2; and Fig. 4 is a detail perspective view of a portion of one of the heads.

As the coupling head construction is the same for each end of the car and for each car, it will be most convenient in describing the structure to speak of one of the coupling heads.

The head is composed of three main members, one 10 having a rearwardly extending shank or draw bar 11 which is longitudinally movable for a limited distance in a box 12, or housing secured to the underside of the car frame, it being yieldingly held at the forward limit of its movement by a coil spring 13, a second member 14 in the form of an oblong block with flat sides, and a third member 15 also in the form of an oblong block with flat sides, which near its opposite ends has two forwardly projecting coupling members, each being tubular or a

pipe, and one of which 16 has its outer end outwardly flared or funnel shaped, while the other 17 slightly tapers in form reducing in diameter toward its outer end so that it may enter the funnel shaped end of an opposing coupling and enter the reduced portion thereof in rear of the funnel shape, a suitable packing being provided to produce an air or fluid-tight joint between the two thus telescoping pipes. Each of said coupling members 16 and 17 at its rear end communicates with a chamber or passage 18 in the block 15 which opens out to one end thereof, and at such end is coupled with the train pipe or hose by a detachable coupling so that should the train be made up of cars provided some with our invention and some without, the train pipes of adjoining cars could nevertheless be coupled.

Between the coupling head members 10 and 14, there is a pivotal connection that permits limited horizontal swinging motion of the blocks 14 and 15 with their attached parts, when such movement is necessary, said pivotal connection being formed by a centrally disposed plate like extension 19 from the head member 10 whose edge is curvilinear, and a slot in the contiguous portion of the block 14, and a pivot bolt 20 which passes through alining vertical holes in said extension 19, and said block 14. At opposite sides of the pivot bolt 20 the extension 19 is slotted to form two tongues 21 upon each of which is placed a coil spring 22 which at one end bears against the head 10 and at the other end bears against the block 14, which is provided with a socket or chamber 140 for the reception of the spring, the effect of said springs being to yieldingly maintain the members of the head in a mid position.

The two blocks 14 and 15 are placed along side of each other and in their abutting sides there are transversely extending channels forming between them a recess or cavity for a coil spring 23, which at its opposite ends bears against the ends of the recesses or cavities in the two blocks and normally holds said blocks in alinement from front to rear, but should there be any occasion requiring lateral movement of the block 15, as for example by reason of non-alinement of two cars to be coupled when the coupling members 16 and 17 abut, then the spring will yield and allow such transverse move-

ment of the block 15 as may be necessary. The block 14 has at top and bottom forwardly projecting flanges 24 which overlap the top and bottom, respectively, of the block 15, and in said flanges are two transverse slots 25 through which pass headed bolts into the block 15, and thus the block 15 is attached to the block 14 by a connection that permits the just described transverse movement of the block 15. Flanges 26 similar to the flanges 24 project rearwardly from the block 15 and overlap the top and bottom, respectively, of the coupling head member 10.

It will be evident by our invention an automatic coupling having all necessary flexibility is provided that may be successfully substituted for the hand couplings in common use for train pipes, and that our coupling has such construction as not readily to be rendered inoperative.

As has been noted, provision is made for coupling the train pipes of cars provided with our invention and those not having it.

Having thus described our invention what we claim is—

1. A train pipe coupling head comprising three members, two slidably connected together, for horizontal movement transversely of the car, a spring interposed between said two slidably connected members to hold them in normal position, and two pivotally connected on a vertical axis, and one of said members having train pipe coupling members, one of which is hollow and has a flared outer end, and the other of which is hollow, but shaped to enter a mem-

ber shaped similar to the one with the flared outer end.

2. A train pipe coupling head comprising three members, two slidably connected together for horizontal movement transversely of the car, and two pivotally connected on a vertical axis, and one of said members having train pipe coupling members, and springs for holding said members in a normal position located, respectively, in recesses in the contiguous sides of the slidably connected members and to one side of the median line of the two pivotally connected members and bearing oppositely against said two pivotally connected members.

3. A train pipe coupling head comprising a forward member having a transversely extending passage from which extends a pair of train pipe coupling members, a middle coupling head member, a transversely extending spring situated in shouldered recesses in contiguous sides of said forward and middle member, a third coupling head member, a vertical pivotal connection between the third member and the middle member, fingers on said third member at opposite sides of said pivot, and springs on said fingers bearing at one end against the middle member and at the other end against said third member.

In testimony that we claim the foregoing we have hereunto set our hands.

CLAYTON C. CROWELL.

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Witnesses:

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