

No. 898,096.

PATENTED SEPT. 8, 1908.

J. H. & J. R. COLE.  
AIR BRAKE COUPLING.  
APPLICATION FILED DEC. 18, 1907.

2 SHEETS—SHEET 1.

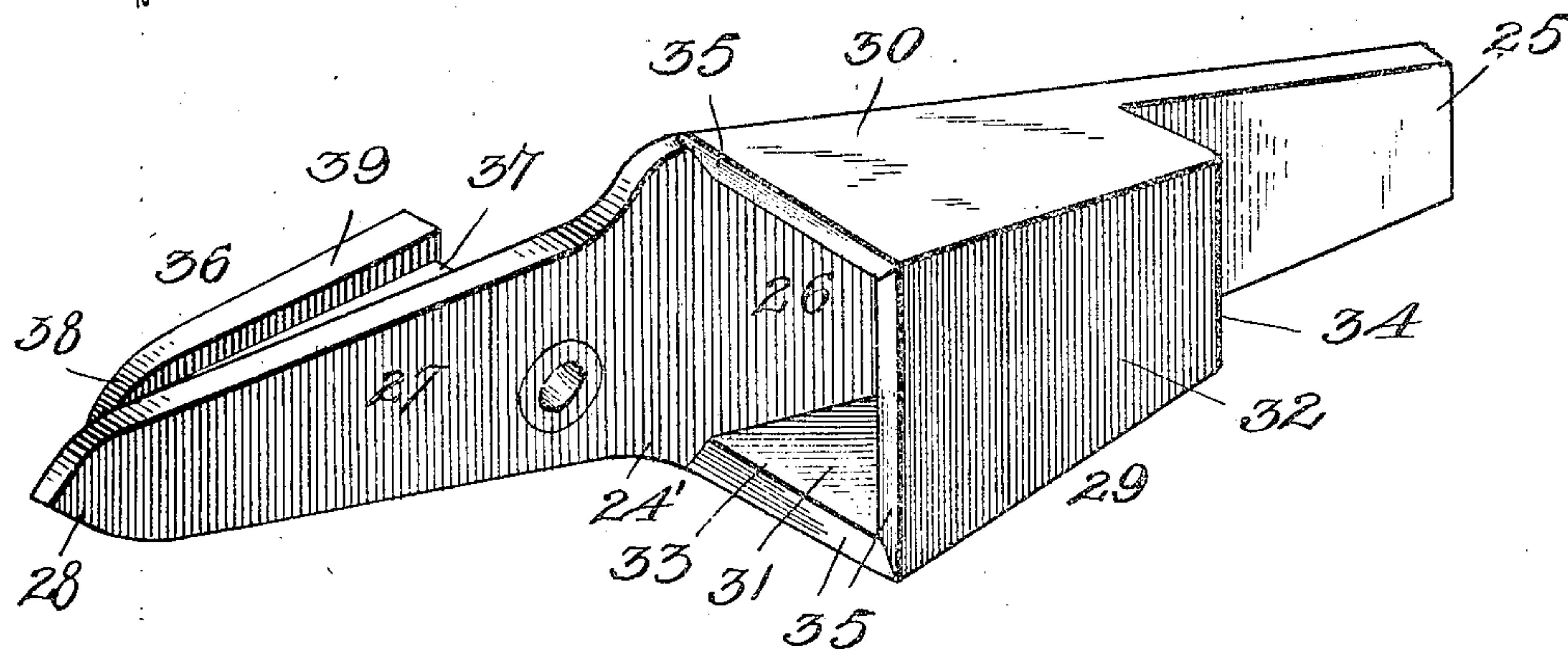
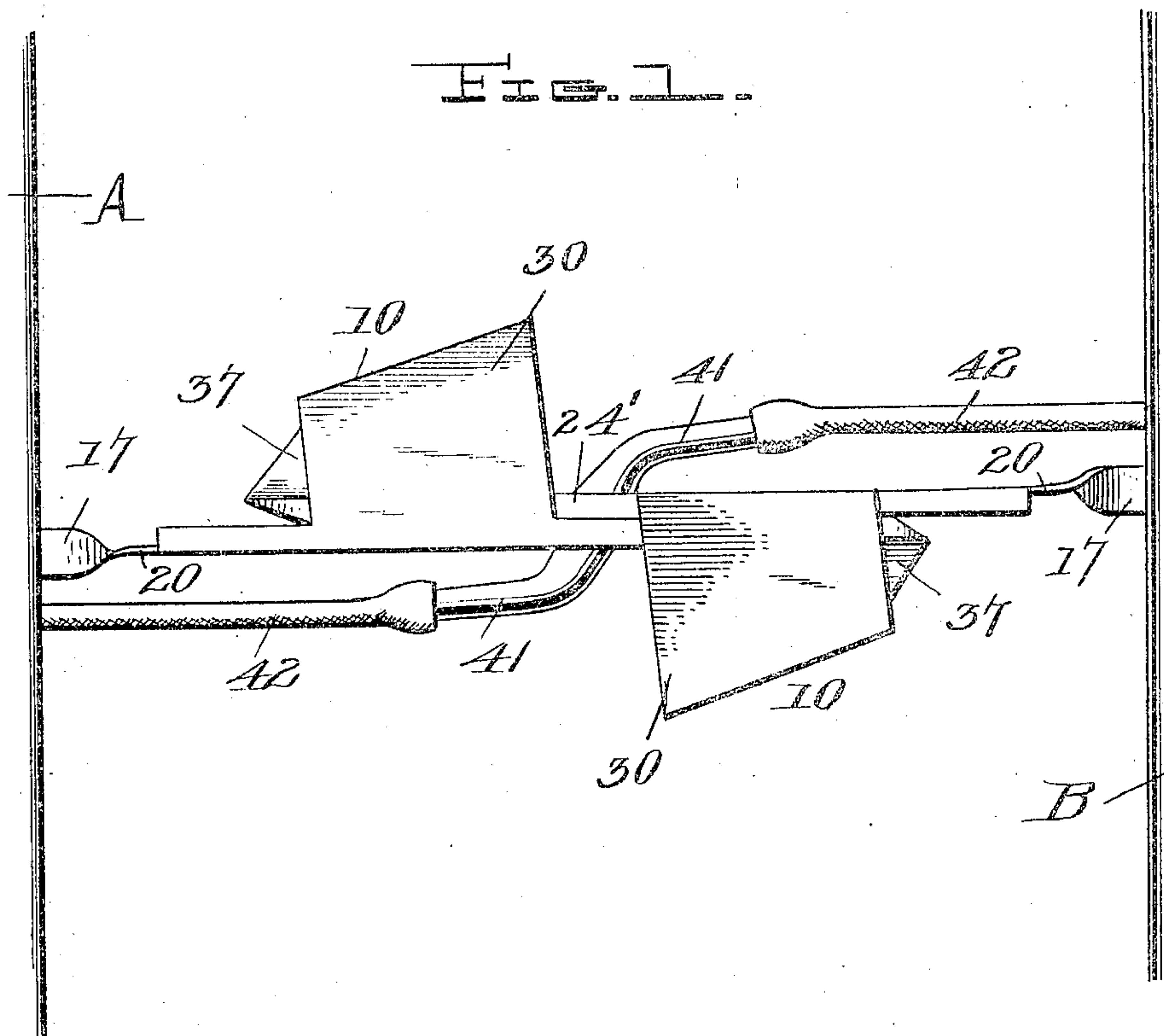


Fig. 4.

Witnesses

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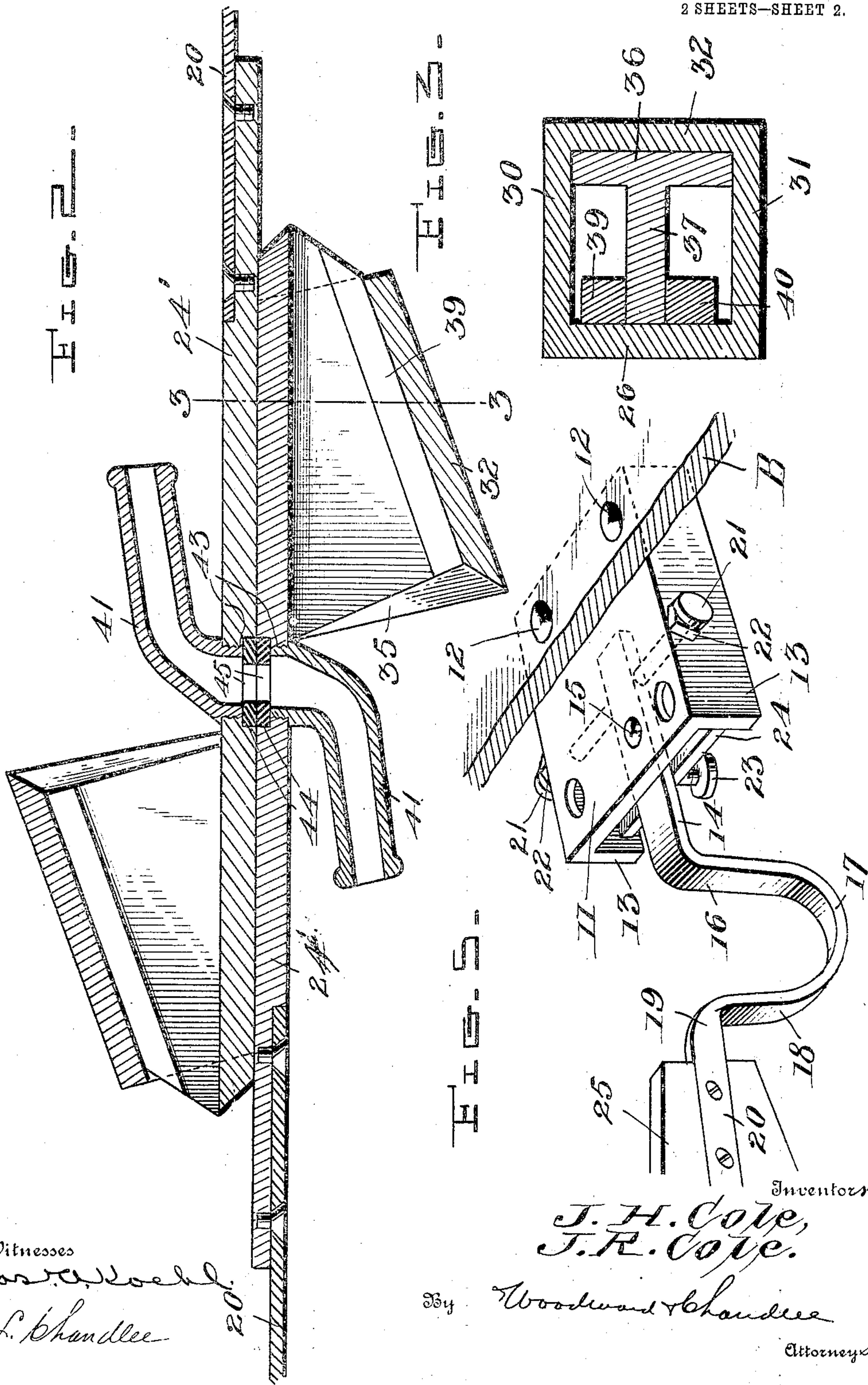
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# UNITED STATES PATENT OFFICE.

JOEL H. COLE, OF ARKANSAS CITY, AND JOEL R. COLE, OF WINFIELD, KANSAS.

## AIR-BRAKE COUPLING.

No. 898,096.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed December 18, 1907. Serial No. 407,051.

*To all whom it may concern:*

Be it known that JOEL H. COLE and JOEL R. COLE, citizens of the United States, residing at Arkansas City, in the county of Cowley and State of Kansas, and Winfield, in the county of Cowley and State of Kansas, have invented certain new and useful Improvements in Air-Brake Couplers, of which the following is a specification.

This invention relates to railway apparatus, and more particularly to couplers for air-brake pipes, and has for an object to provide a coupler capable of automatic locking engagement with its co-engaging coupler and thus obviate manual assistance.

A further object of this invention is to provide means whereby such couplers may be adjusted whereby each coupler may be held in alinement for co-engaging its mating coupler.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the meeting ends of two railway cars showing the application of my invention thereto, Fig. 2 is a horizontal sectional view through the couplers, Fig. 3 is a cross sectional view on the line 3—3 of Fig. 2, Fig. 4 is a perspective view of one of the couplers, Fig. 5 is a perspective view of the attaching member for each coupler.

Referring now more particularly to the drawings, there is shown a portion of two cars A and B respectively. Each car is provided with my improved coupler 10, and as the construction of the members for each car is identical, it is thought that a description of one will suffice for both. Each car is provided with a metallic plate 11 disposed beneath each end of the car adjacent the usual draw-bar, and this plate has its horizontally disposed portion bolted to the under side of each car, as shown at 12. The plate 11 is provided with longitudinally disposed spaced flanges 13, for a purpose to be hereinafter described. A leaf-spring 14 is provided for each plate 11 and this spring has a portion ex-

tending beneath the plate, as shown, and this portion of the spring is pivoted for horizontal movement as shown at 15. Each spring outwardly of the pivotal point is extended downwardly as shown at 16 then curved as at 17, and then extended upwardly in spaced relation to the portion 16, as shown at 18. The spring at the upper end of the portion 18 is twisted as at 19 to provide an outwardly extending and horizontally disposed portion 20. The flanges 13 are each provided with horizontally disposed adjusting screws 21 which are provided with jam-nuts 22, and these screws are thus arranged to engage the portion of the spring 14 inwardly of its pivotal point. A vertically disposed screw 23 is carried by a horizontally extending cross bar 24 which connects the flanges 13 of the plate 11, and this screw is thus arranged to engage the underside of the spring, as shown.

Each coupler 10 consists of a vertically extending plate 24' comprising a portion 25 arranged for engagement with the portion 20 of the spring, and this plate has its upper and lower edges flared toward the portion 25 to provide an enlarged portion 26, and from this portion the plate is provided with a portion 27 which terminates at its outer end to a point 28. The plate 24' is provided upon one side with a socket member 29 comprising upper and lower walls 30 and 31 respectively and a connecting side wall 32. The socket member is provided with an enlarged outer end 33, and at the inner end the member is reduced as shown at 34. The outer edge of each wall of the socket member is beveled as shown at 35. The socket member is preferably located with its inner end adjacent the portion 25 of the plate 24', and with its other portion adjacent the outer end of the enlargement 26. Upon the plate 24' opposite the socket member there is provided a socket engaging member 36 consisting of a horizontally disposed plate 37 which has its outer edge tapered to a point 38. The plate 37 is provided with longitudinally disposed wear strips 39 and 40 located upon the upper and lower side of the plate 37 at the outer edge thereof. The plate 37 is tapered at its outer edge as shown for engagement with the side wall 32 of its co-engaging socket. Each plate 24' is provided with an inwardly directed nipple 41 for attachment of the train line hose 42. The nipple 41 has



its inner end disposed in a horizontal passage 43 in the plate 24', and at the opposite side of the plate from the nipple, the passage is enlarged as shown at 44, and is thus arranged  
5 to receive a rubber washer 45.

It will of course be understood that each coupler for the ends of adjoining cars is arranged with its parts oppositely disposed, that is to say the coupling member of one car  
10 will be arranged to engage the socket of its co-engaging coupler.

By use of a coupler of this character it will be seen that if an attempt should be made to uncouple the cars while the train is in motion  
15 the springs would immediately return each member of the coupler to its original position, and thus obviate trainmen re-coupling the members which would of course result in delay of the train. The use of the springs  
20 serves to provide a coupler which will be operable at all times, and by the provision of the adjusting screws for each spring it will be seen that each coupler may accurately set for co-engagement with each other.

25 What is claimed is:

1. A coupler of the class described comprising coengaging members, each member having oppositely disposed sockets, means carried by each member for engagement in  
30 the sockets, air line connections carried by each member and communicating with each other, pivoted springs for yieldingly support-

ing said members, and adjusting screws engaged with said springs.

2. A coupler of the class described comprising co-engaging coupling member-springs carried by said members, attaching plates, and adjusting screws carried by said plates and engaged with said springs.

3. The combination with a car, of a plate 40 carried thereby, a spring pivotally mounted upon the under side of said plate, and air brake coupling section carried by said spring, and screws carried by said plate and engaged with the spring for movement of the coupling section in a horizontal plane.

4. The combination with a car, of a plate carried thereby, a spring pivotally connected with the under side of the plate, a coupling member carried by said spring, a socket 50 member carried by said coupling member, air line connections carried by said member, a socket-engaging member carried by said coupling member and located outwardly of the socket member, and means carried by 55 said plate for adjusting said spring in a horizontal plane.

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

JOEL H. COLE.  
JOEL R. COLE.

Witnesses:

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H. E. LEASURE.