G. F. HINKENS.

BRAKE ROD COUPLING JAWS.

APPLICATION FILED DEC. 27, 1904.

936,453.

Patented Oct. 12, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

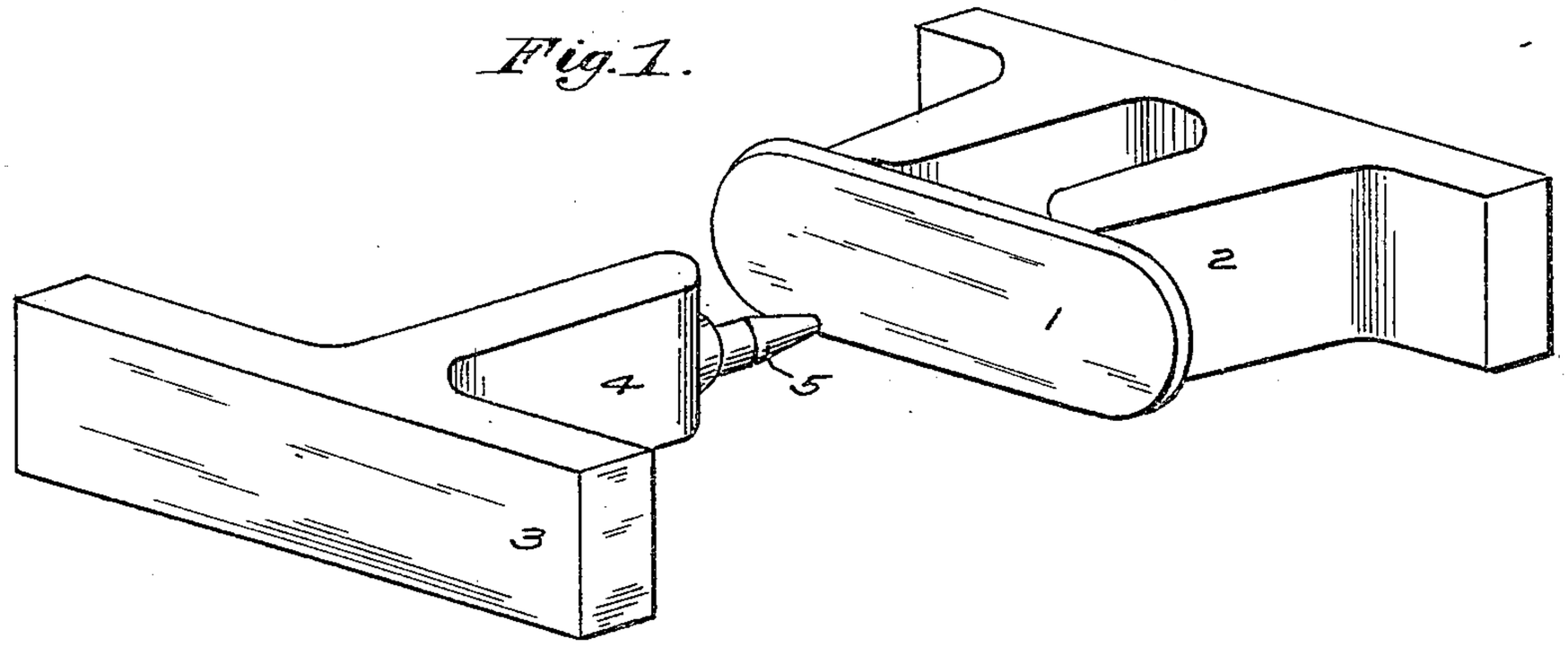


Fig. 2

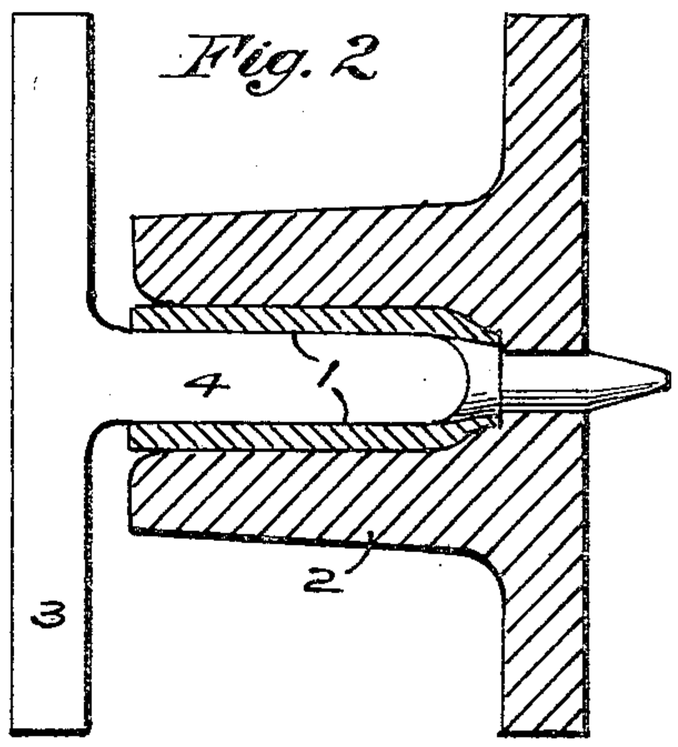


Fig. 3.

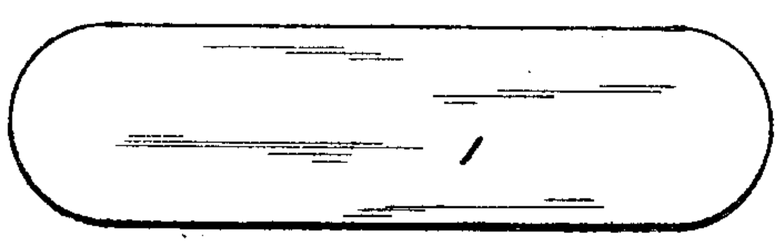
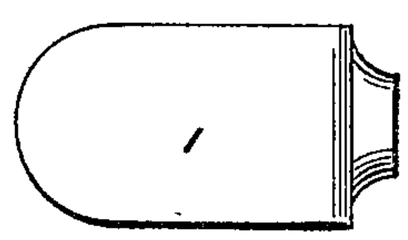


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

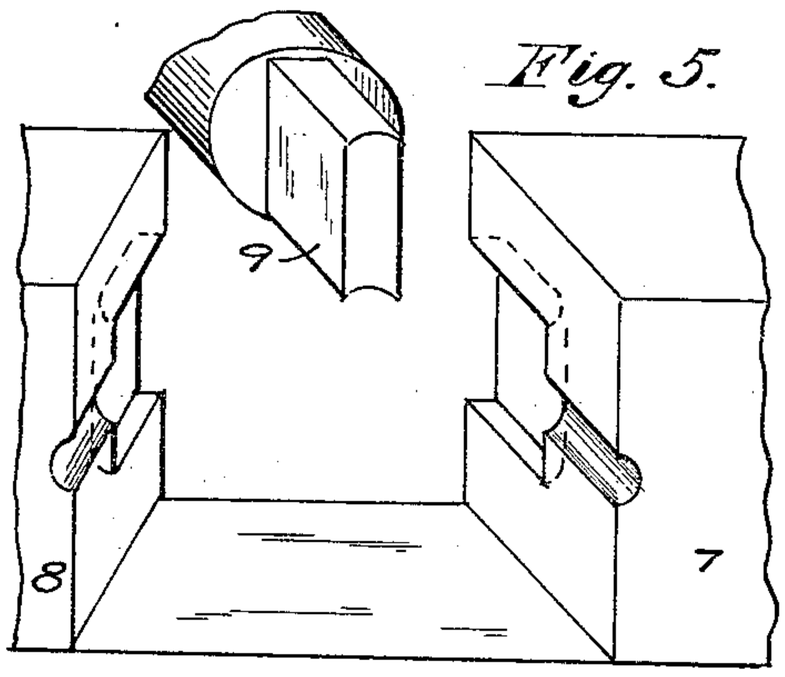


Fig. 10.

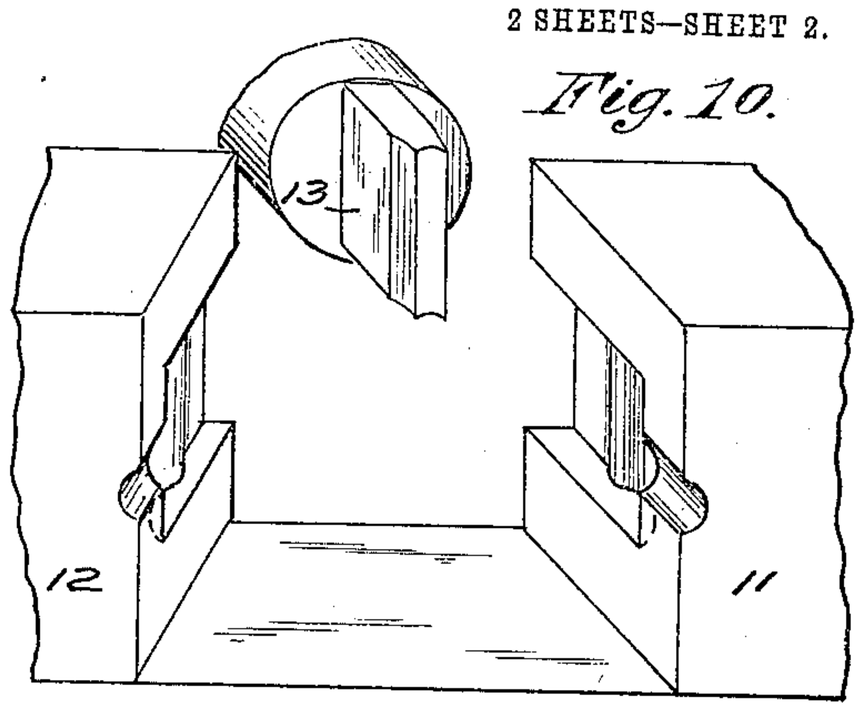


Fig. 6.

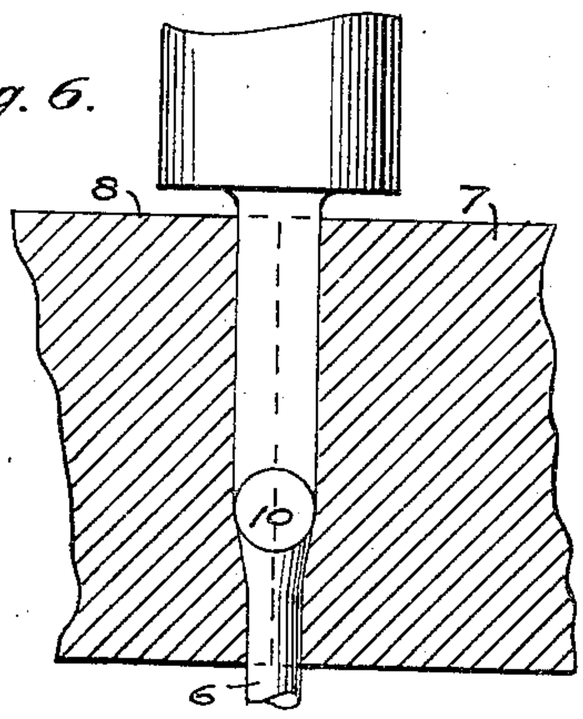


Fig. 11.

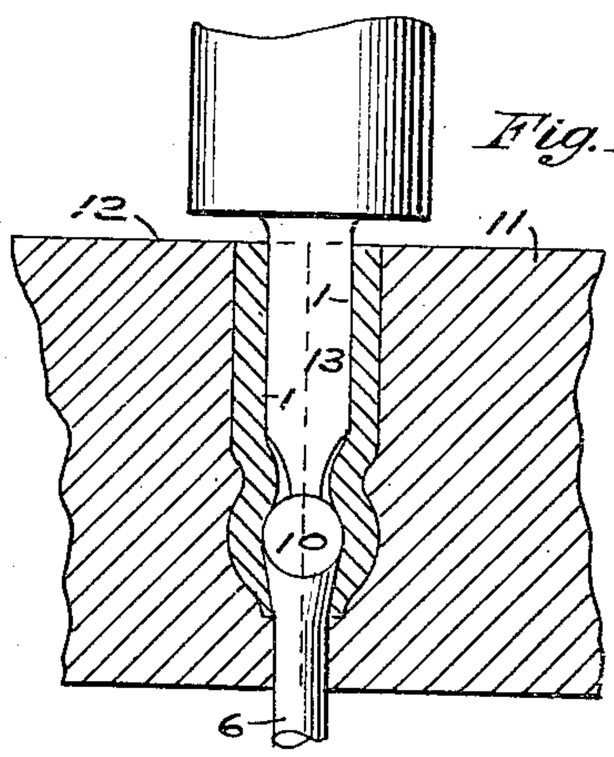


Fig. 7.

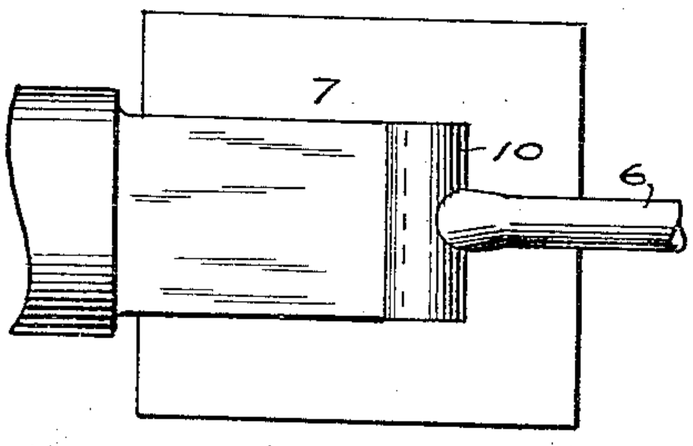


Fig. 8.

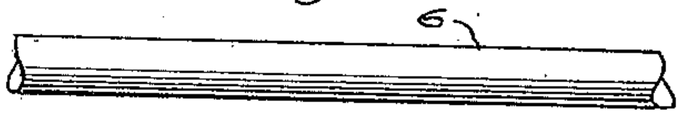


Fig. 9.

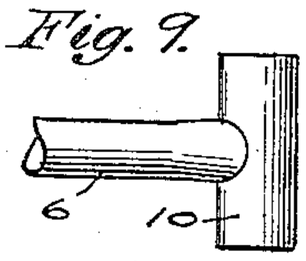
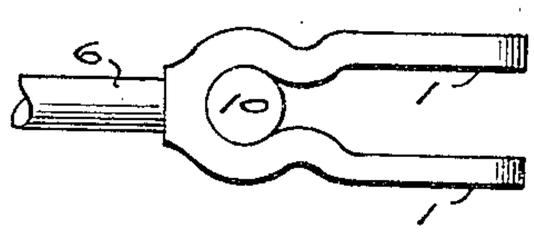


Fig. 12.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE F. HINKENS, OF WILMERDING, PENNSYLVANIA, ASSIGNOR TO THE WESTINGHOUSE AIR BRAKE COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BRAKE-ROD COUPLING-JAWS.

936,453. Specification of Letters Patent. Patented Oct. 12, 1909.

Application filed December 27, 1904. Serial No. 238,334.

To all whom it may concern:

Be it known that I, GEORGE F. HINKENS, a citizen of the United States, residing in Wilmerding, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Brake-Rod Coupling-Jaws, of which the following is a specification.

My invention relates to coupling means for rods, or links. Its object is to provide an improvement in the construction of coupling ends, or jaws, for rods, or links.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view showing the fixed and moving dies of a bending press, or bulldozing machine, with a blank for the coupling jaws in place against the fixed die; Fig. 2 a view showing the fixed die and the jaws in section, and the movable die in plan view, when the two dies have been brought together; Fig. 3 a view of the blank for the jaws before being operated on; Fig. 4 the jaws after being operated on in the bulldozing machine; Fig. 5 shows the fixed and movable dies, and the ram, of a forging machine for upsetting the end of the rod; Figs. 6 and 7 show other views of the same forging machine after the dies have been brought together; Figs. 8 and 9 show views of the rod before and after the end has been upset; Fig. 10 a view of the dies and ram for crimping the jaws on the T-shaped end of the rod; Fig. 11 a view showing the dies and jaws in section and the ram and rod in place after the dies have been brought together to crimp the jaws on the rod; and Fig. 12 an elevation of the jaws and rod when the process is complete.

In the manufacture of my improved brake rod coupling jaw I provide a blank, 1, such as that shown in Fig. 3 of the drawings, of suitable thickness, for the coupling jaws which are to be formed on the rod, or link; and this blank when properly heated is placed in position, as shown in Fig. 1, against the fixed die 2. The movable die 3, is then moved toward the fixed die, 2, into the position shown in Fig. 2, and the blank, 1, is pressed into a U-shape and perforated by the action of the ram, 4, and the perforating device, 5, as shown in Figs. 2 and 4. The rod, 6, after being properly heated, is placed in position to be acted on by the fixed die 7, the movable die 8, and the ram 9, of the forging machine, shown in Figs. 5 and 6; and when the dies and ram are brought together, as shown in Fig. 6, the end of the rod 6 is upset and forms a transverse head, 10, thereon; the length of the head, or upset portion of the rod, in a direction at right angles to the axis of the rod, being equal to the width of the jaws or blank shown in Figs. 3 and 4. The jaws, 1, shown in Figs. 2 and 4, may be slipped over the rod 6, before forming the T-shaped head on the rod, or they may be slipped over the rod after the head is formed if there be no obstruction on the other end of the rod. After forming the T-shaped head on the rod, the jaws are slipped down along the rod over the head, and the jaws and the end of the rod are placed in position between the fixed and movable dies, 11, and 12, of the forging machine, shown in Fig. 6; and when the dies 11, and 12, and the ram 13, are brought together, the jaws are crimped around the T-shaped head of the rod as shown in Figs. 11 and 12. In performing the operation of crimping the jaws around the T-shaped head of the rod, it is not necessary that the parts should be at a welding heat, as no welded joint is required between the jaws and the head of the rod. A strong connection is thus formed between the rod and the jaws without welding.

It will be seen that by constructing the coupling jaw in the form of my improvement dispenses with the splitting, welding, and hammering usually employed in the manufacture of jaws on the ends of rods, and thereby effects a saving of time, labor, and expense due to operations requiring welding heats for the formation of the jaws. And my invention also provides a simple, strong construction in which the coupling is free from the defect of possible imperfections of welded joints.

In crimping the jaws about the T-shaped head on the rod, in case the T-shaped head is made cylindrical in form, the jaws should embrace something more than a semi-circumference of the head, in order that the jaws may be held securely in position, and the jaws may, if preferred, embrace the whole circumference. It is not essential that the head on the end of the rod should be cylindrical in form, that is, circular in cross section, as other forms may be employed; and it may also be stated that my invention

is not limited to a construction in which the connection between the T-shaped head and the jaws is perfectly rigid.

I claim as my invention, and desire to secure by Letters Patent:—

A coupling joint for brake rods, comprising an integral piece of metal bent into shape to form jaws, a perforation through the connecting portion of the jaws, a rod passing through and closely fitting the perforation, and a solid integral head formed on the end of the rod, the jaws being crimped around said head.

In testimony whereof I have hereunto set my hand.

GEORGE F. HINKENS.

Witnesses:
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J. B. MACDONALD.