(No Model.)

2 Sheets—Sheet 1.

W. MARTIN.
PIPE COUPLING.

No. 521,122. Patented June 5, 1894.

Fig. 1

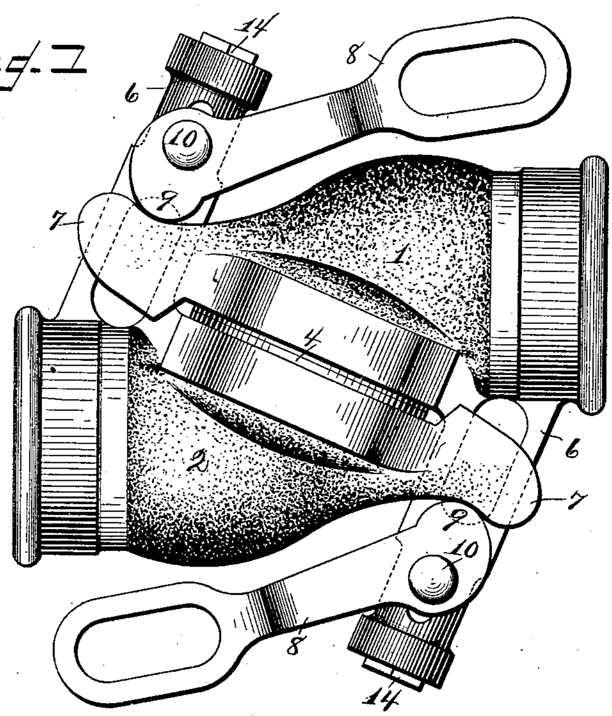
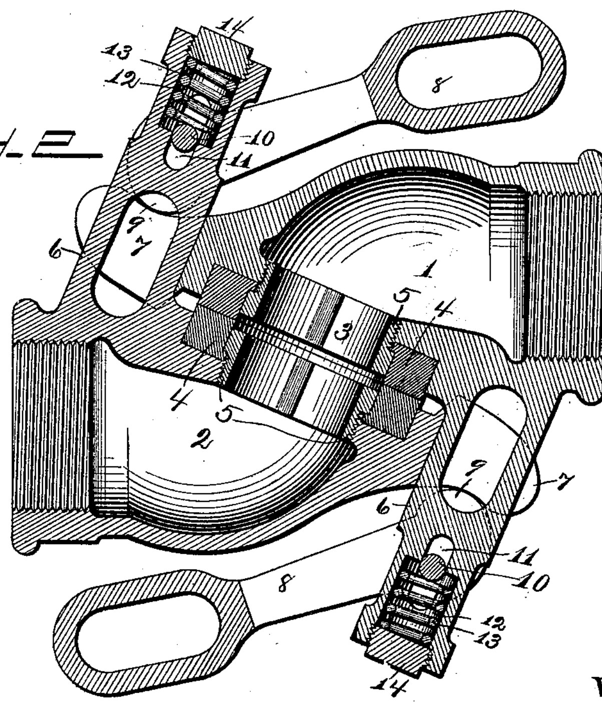


Fig. 2



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(No Model.)

2 Sheets—Sheet 2.

W. MARTIN.

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Fig. 4

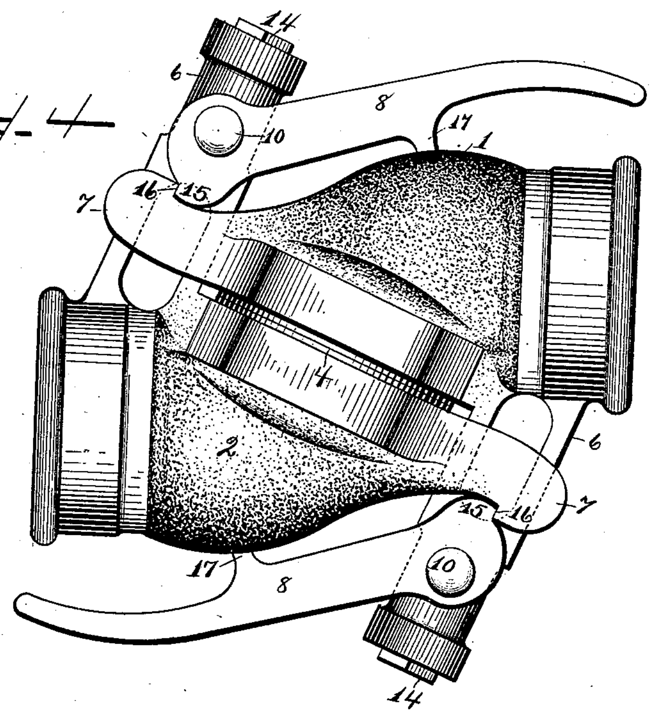
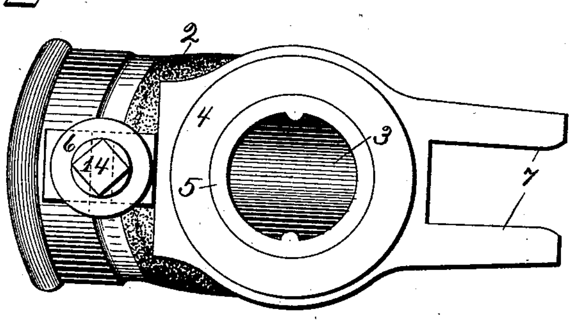


Fig. 3



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UNITED STATES PATENT OFFICE.

WILLIAM MARTIN, OF DUNKIRK, NEW YORK.

PIPE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 521,122, dated June 5, 1894.

Application filed March 16, 1893. Serial No. 466,283. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MARTIN, of Dunkirk, county of Chautauqua, and State of New York, have invented certain new and useful Improvements in Pipe-Couplings, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce in pipe couplings, specially adapted for use in coupling the steam pipes of railway trains, improvements whereby endwise strain upon them tends automatically to separate them under undue strain, as for example when the cars composing the train are uncoupled either accidentally or intentionally; and by which a close joint may be effected between the parts for a longer period of time without repair than in the ordinary coupling.

In the accompanying drawings, Figure 1 is a plan or top view of two parts of my coupling united together. Fig. 2 is a horizontal section of the same. Fig. 3 is a face view of one of the parts with the clamping-lever removed. Fig. 4 shows a top plan view of a modified form of my coupling.

Referring to the figures on the drawings, 1 indicates one part or section of my coupling, and 2 the other. Their ports 3 are respectively surrounded by annular packing rings 4, secured in place as by a threaded metallic ring 5. The face of each part is provided on one end with a post 6, and on the other end with lugs or bearing parts 7. The lugs in one of the parts are adapted to straddle the post in the other when the parts are united. Each of the posts is provided with a lever 8 having a cam surface 9. A shaft 10 movably supports the lever in slotted bearings 11 in the post. A box 12 is provided in the top of the post above the shaft, within which a spiral spring 13 is carried, one end thereof preferably resting directly upon the shaft, and the other against a cap-nut 14 in the top of the post. By this arrangement the pressure of the spring may be adjusted for the purposes of taking up wear. Instead of having a plain cam surface I may use a notched cam 15, shown in Fig. 4 of the drawings. This notch is adapted to strike against a projection 16 upon the lugs 7. A stop-lug 17 may be provided in each of the levers adapted to rest against the top of each part of the coupling when the parts are united. It should be observed in this connection that the faces of the coupling parts are oblique to each other; and that strain upon the ends of the parts tends to draw the faces obliquely across each other. By the use of the modification shown in Fig. 4 of the drawings the projection 16 upon the lugs engaging with the notch of the cam 15 upon the lever tends to turn each of the levers upon its respective shaft, and to disengage and automatically separate the parts under due strain. The lugs in the other figures are shown somewhat curved, and a tendency of the parts is, in that form, to cause the levers to rotate and to separate under undue strain; but it is not thought to be so positive and certain as in the modification shown in Fig. 4. The lugs and levers upon opposite ends of the coupling sections constitute in this connection locking mechanism for uniting the two parts of the coupling.

What I claim is—

1. The combination with a two part coupling, of a post and bearing lugs upon each of the parts, the lugs upon one part adapted to straddle the post upon the other, with levers provided with cam faces pivotally mounted in slotted bearings within the post, and adapted to bear against the lugs, said lugs and levers being provided with co-operating projections and notches, and a spring within the post adapted to yieldingly sustain the connection between said levers and lugs, substantially as specified.

2. In a two part coupling, the combination with posts projecting from each of the parts in opposite directions and carrying cam-levers, mounted in longitudinal slots, of springs in the posts adapted to actuate the levers, bearing lugs projecting from each of the parts adapted to be engaged by the cam-levers of the opposite part, said projection being provided with an inclined shoulder adapted under a separating strain to ride upon the opposite coupling part to force the lever against the action of the spring, substantially as specified.

In testimony of all which I have hereunto subscribed my name.

WILLIAM MARTIN.

Witnesses:
GEO. A. STARR,
G. T. MYERS.