

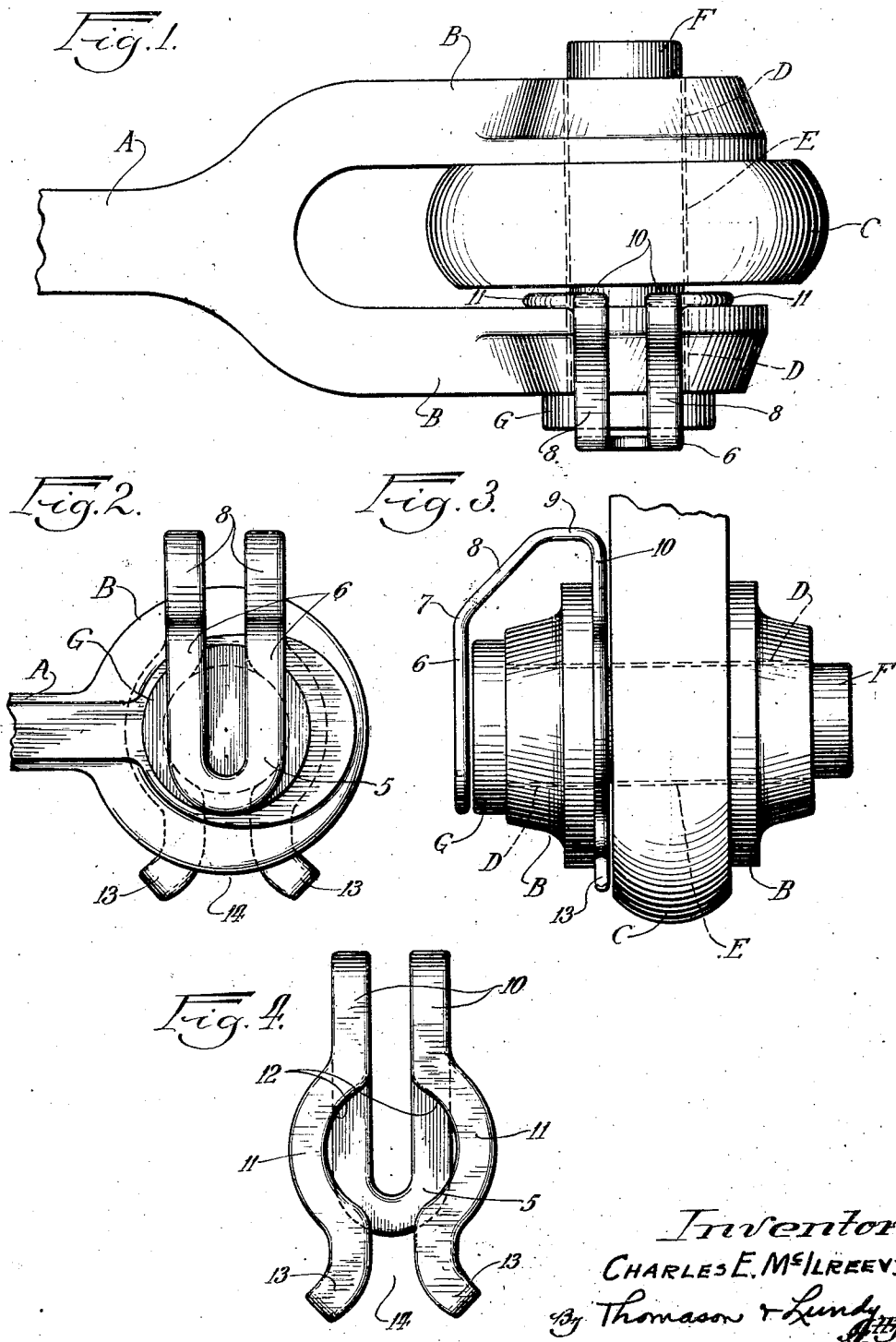
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BRAKE PIN LOCK

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UNITED STATES PATENT OFFICE.

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BRAKE-PIN LOCK.

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My present invention relates to locking devices and has more particular reference to a lock that may be readily applied to a pin in a railway brake mechanism so that the latter may be prevented from accidental dis-

lodgment. The primary object of this invention is to provide a novel lock device so constructed that it may be readily applied to the brake pin subsequent to the latter being inserted into or through the parts it is designed to pivotally secure together. The present structure is made from a single piece of material that is bent the desired shape so that it may be manufactured at an economical figure and sold for a reasonable price. My locking device is so constructed that it is capable of being mounted upon the pin without the use of tools and it may be readily removed therefrom by merely springing the jaws or arms open to permit a separation wide enough for the passage of the shank of the pin.

With the foregoing objects in view, I prefer to carry out my invention in substantially the manner hereinafter fully described and as more particularly pointed out in the claims, reference being now made to the accompanying drawings that form a part of this specification.

In the drawings:—

Fig. 1 is a top plan of two brake operating members pivotally connected by a brake pin and showing the application of my locking device thereto.

Fig. 2 is a vertical elevation looking at the side of the structure illustrated in Fig. 1.

Figure 3 is an end elevation of the said structure.

Fig. 4 is an elevation of the locking device detached from the brake-pin and other parts and looking at the device from the side opposite that illustrated in Fig. 2.

In the drawings I have illustrated a typical or preferred embodiment of my invention, and I have employed similar reference characters to designate like parts wherever the same appear throughout the several views.

Referring first to Figs. 1, 2, and 3, there is shown a rod or bar A having a forked or bifurcated end between the spaced members B, B, of which is the enlarged head or eye C of a second rod or bar. The members B, B, of the fork or bifurcation are provided with transverse perforations D that

align with each other and register with a perforation E made transversely through the head or eye C, so that the two parts may be pivotally connected by the shank F of a transverse brake-pin having a head G, all in detail in the aforesaid figures of the drawing.

The locking device which I have designed for maintaining the brake-pin against accidental displacement is shown in the detached detail, Fig. 4, and consists of a length of flattened wire or metal that is first looped intermediate its ends to provide the substantially U-shaped end portion 5 the parallel arms of which, when the device is in position, extend across the face of the head G of the pin. The upper stretches of the parallel members 6, 6, of the U-shaped portion continue in parallelism but are bent rearwardly at 7 so that there is an obliquely disposed section 8 that clears the head G of the pin and the adjacent member B of the forked end of the rod A as seen in Figs. 1 and 3 of the drawings.

These parallel members 6, 6 are given a downward bend at 9 so as to provide a vertical section 10 that is in a plane parallel to the plane of the front or outside members 6, so that when the structure is viewed edgewise, as in Fig. 3, the same comprises outer and inner parallel sections that are connected at their upper ends by an oblique bridge thus providing an element of inverted U-shape. Preferably intermediate the upper and lower ends of the vertical rear portion of the device the two lengths of metal are bowed away from each other in concavo-convex curves 11 to provide between these bowed portions a substantially circular pocket or seat 12 to receive the shank F of the brake pin when the vertical rear section is inserted between the head or eye C of the second rod and the adjacent member B of the bifurcation.

The lock device is preferably placed in position manually, without the aid of tools, and in order that the same may be readily engaged with the shank of the pin I have bent the lower end of the pieces outwardly away from each other as at 13 so that there is provided an entrance passage-way 14 that is widest at its outer lower end and tapers inwardly and upwardly towards and into the pocket or seat 12 for the brake pin shank F.

When the device is to be inserted on the pin the rear vertical section is placed be-

tween the head or eye C and an adjacent member B of the fork or bifurcation with the outwardly bent or flared ends 13 (which in reality provide a bifurcated end for the lock device) engaged with or straddling the adjacent segment of the pin. The front or outer vertical section of the device will be in front of the plane of the head G of the pin, and upon the device being pushed towards the axis of the pin, the bifurcated end will separate thus widening the mouth of the passageway 14 and permit the pocket or seat 12 to receive the pin between its opposite members. Due to the springy nature of the metal and its peculiar formation, that is, its construction in practically two halves joined by a single piece at the lower end of the U-shaped front section, the parts 13 will readily open to permit the passage of the pin. After the device is in position it will be so disposed that the pin is prevented from being moved longitudinally and therefore may not be accidentally displaced but when it is necessary to remove the pin this may be done by spreading the ends 13 outwardly and drawing the lock off the pin by an outward radial movement with respect to the axis of the pin.

Modifications or refinements of the disclosed structure are possible and I desire it understood that such are fully comprehended within the scope of the appended claims.

What I claim as new is:—

1. A brake-pin locking device comprising a U-shaped spring wire the end portions of the wire opposite the bight portion being oppositely bowed to provide a pocket to receive the shank of the pin, and said structure being provided, intermediate the bight and the bowed portions, with a return bend whereby to position the bight portion opposite said pocket to engage the head of the pin.

2. A locking device comprising a length of metal looped upon itself mediate its ends to provide a flat double element and the looped structure bent transversely into a U-shape the arms of which have spaced side by side members, the end portions of the latter members which are farthest from the first formed loop being bowed in opposite directions to provide a pocket with an outwardly opening passageway leading into the same.

3. The combination with two members having alined apertures and a pin inserted through said apertures to pivotally connect said members, of a locking device consisting of a length of metal provided with two U-shaped bends at substantially right angles to each other, one of the arms of the second U-shaped bend being positioned across an end of said pin, the other arm having its two parts bowed outwardly to provide a pin receiving pocket open to the end of the arm whereby the parts adjacent the pocket are adapted to be sprung away from each other and assembled with the pin subsequent to the latter being inserted in the apertures of said members.

4. A brake pin locking device comprising a U-shaped spring wire formed intermediate its spaced ends and its bight portion with a return bend whereby to position the bight portion alongside the spaced ends, the spaced ends being formed with opposite bows to provide a pocket to receive the shank of the pin and then extending away from each other to provide an open passageway for ready access to the pocket into which the shank of the pin to be locked may be inserted transversely between the spaced ends.

Signed at Chicago in the County of Cook, and State of Illinois, this 23rd day of April, 1925.

CHARLES E. McILREEVY.