

(No Model.)

W. D. SARGENT.
KEY FOR BRAKE SHOES.

No. 593,242.

Patented Nov. 9, 1897.

Fig. 1.

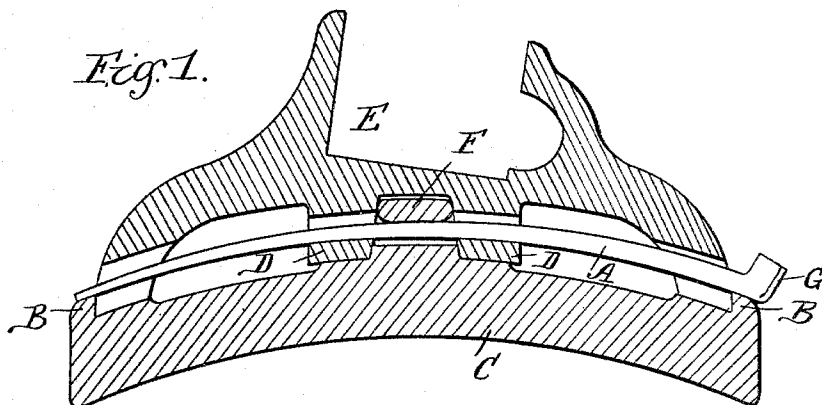


Fig. 2.

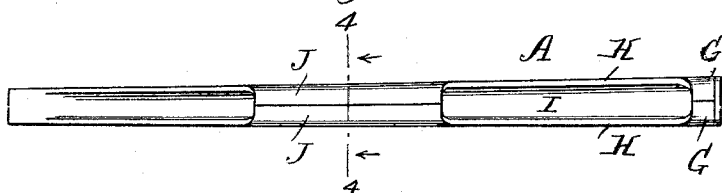


Fig. 3.

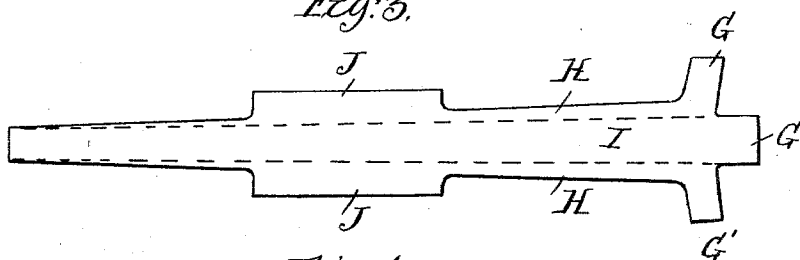
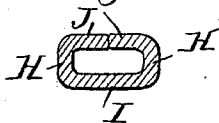


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM DURHAM SARGENT, OF CHICAGO, ILLINOIS.

KEY FOR BRAKE-SHOES.

SPECIFICATION forming part of Letters Patent No. 593,242, dated November 9, 1897.

Application filed March 11, 1897. Serial No. 626,946. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DURHAM SARGENT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Keys for Brake-Shoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My present invention relates to certain new and useful improvements in keys for securing brake-shoes to the heads of car-brakes, and is intended more particularly, perhaps, as an improvement upon the key for which Letters Patent No. 492,839 were granted to me on March 7, 1893.

Previous to my patent above mentioned it was customary to make and use forged solid keys of suitable dimensions bent and formed into a curved wedge having a head forged on the larger end thereof to prevent the key from dropping out of place; but these keys were heavy and expensive to manufacture.

In my patent I have disclosed and claimed a key composed of sheet metal bent to form a body portion with wedge-shaped sides extending laterally from each side of the body portion and provided with extensions forming the head of the key.

My improved key, stamped from sheet metal like the old forged solid keys, bears with its face against the brake-shoe at its ends and against lugs on the brake-head between its ends, and at or about its middle the back of this key bears against and engages a lug on the brake-shoe. It has been found in practice that the continual jarring and jolting of the car and the application of the brakes will cause the laterally-extending sides of the key to cut and wear the lug at the middle of the brake-shoe, thus permitting the key to have an undesirable play while in its securing position and the brake-shoe itself to become loose.

The prime object of this invention therefore is to provide a key formed of sheet metal having bearing-surfaces of such character that they will not injure the parts with which they contact when the key is applied in use.

With this and other objects in view I have

illustrated my invention and its application in the accompanying drawings, in which—

Figure 1 is a sectional view showing a key holding a brake-shoe to the head of a car-brake. Fig. 2 is a plan view of the back of my improved key. Fig. 3 represents a plan view of the blank from which my key is formed. Fig. 4 is a cross-sectional view on the line 4 4 of Fig. 2.

Referring to the drawings, in which like letters of reference denote corresponding parts in all of the figures, it will be observed that when the key A is in place its face will bear against the projections B at the ends of the brake-shoe C and the lugs D on the brake-head E, and the back of the brake-key engages the lug F on the brake-shoe. As the face of the brake-key is smooth and the edges thereof more or less rounded, the key will not wear the projections B and the lugs D to any unusual extent; but as this key is provided with sides extending laterally from the body portion the edges of these sides engage the lug F, and, being more or less sharp, they wear and cut the lug F.

In Fig. 3 I have shown the preferred form of blank from which my key is formed, consisting of sheet metal tapered from end to end and provided at its wider end with projecting ears G, which form the head of the key when the latter is bent to a finished form. This blank is first bent laterally, so that the sides H will project substantially at a right angle to the body portion of the key, the juncture between the sides and the body portion being angular or rounded, as desired, but preferably rounded. The blank is then bent longitudinally on the arc of a circle, as illustrated in Fig. 1—that is to say, transversely of the width thereof—so as to form a curved wedge-shaped key in side elevation, with a head at the broader end thereof.

The form of the blank is preferably such as will provide a key slightly tapering from the point to the head, in plan view and also in side elevation, as the sides H taper from at or about the point to the head. At or about the middle of the blank I provide the extensions J on the sides, which, after the sides have been bent up, as hereinbefore described and illustrated in Fig. 2, are turned down to

a position substantially parallel to the body portion of the key, as illustrated in Figs. 2 and 4, these extensions being preferably made of such a size and shape that their edges will meet when they have been bent as indicated. The side extensions will thus provide a broad flat bearing-face on the back of the key where the key engages the lug F on the brake-shoe, and there being no sharp edges on this bearing surface it is obvious that the lug F will not be worn by contact with the key more than the lugs D on the brake-head, and the projections B on the shoe will be worn by the face of the key.

By this construction I am enabled to provide a key for holding together the brake shoe and head of a car-brake, all of whose bearing-surfaces are broad and smooth, and which will not wear the surfaces of the brake shoe and head. The length of these side extensions may be varied to fit the different kinds of brake shoes and heads, the only essential being that the engaging surfaces formed thereby shall be located at that point where the key engages the lug on the brake-head.

It is much less expensive to manufacture a key in accordance with my present invention than it is to properly make the ordinary forged key in accordance with the standard adopted by the Master Car-Builders, which requires a key tapering from the head to the point. It is a very difficult matter to properly make a forged key in accordance with the standard, as will be readily understood by those skilled in the art, for it would be necessary to draw the key very carefully into its tapered form, involving a considerable expense and much time and care; but my stamped key can be made in the standard form without any difficulty and at very little expense, the finished key conforming in every particular and without variation to the standard desired.

I am aware that changes in the general form and construction of the key and the location and arrangement of the side extensions may be varied and changed without

departing from the spirit or sacrificing the advantages of my invention, and I therefore reserve the right to make all such changes as fairly fall within the scope of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A blank for forming a key for brake-shoes, consisting of sheet metal tapering from end to end and provided at or about its middle with side extensions adapted to form a flat bearing-surface on the back of the key when the key is bent up into finished form, substantially as described.

2. A blank for forming a key for brake-shoes, consisting of sheet metal tapering from end to end and provided at the wider end thereof with ears to form the head of the key, and at or about its middle with side extensions adapted to form a broad, flat bearing-surface on the back of the finished key, substantially as described.

3. A key for brake-shoes, composed of sheet metal bent to form a body portion with laterally-extending sides, said sides being provided with extensions at or about their middle projecting inwardly to form a flat bearing-surface on the back of the key, substantially as described.

4. A key for brake-shoes, composed of sheet metal bent to form a body portion with wedge-shaped sides extending laterally from the body portion and having a broad, flat bearing-surface on its back and at or about its middle, substantially as described.

5. A key for brake-shoes, consisting of sheet metal bent laterally and longitudinally, the sides of the key tapering from the point to the head of the same and provided at one end with ears forming the head, and at or about its middle with side extensions forming a broad, flat bearing-surface on the back of the finished key, substantially as described.

WILLIAM DURHAM SARGENT.

Witnesses:

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