(No Model.)

W. D. SARGENT.

KEY FOR BRAKE SHOES.

No. 492,839. Patented Mar. 7, 1893.

Fig. 1.

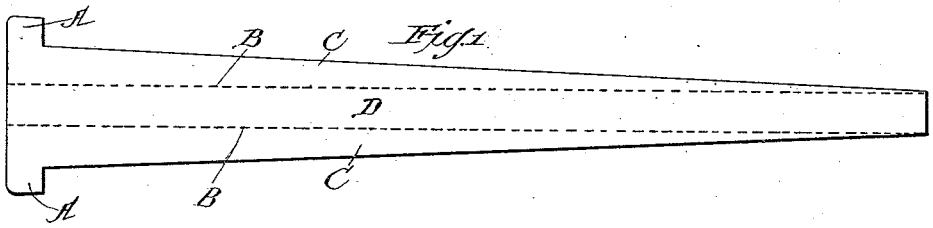


Fig. 2.

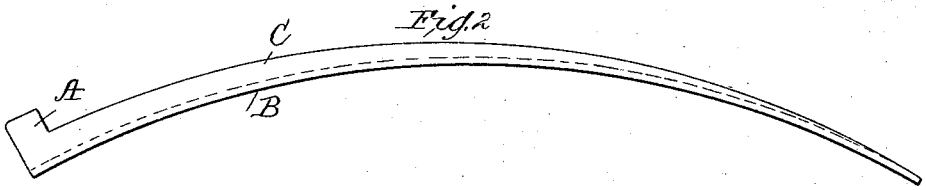


Fig. 3.

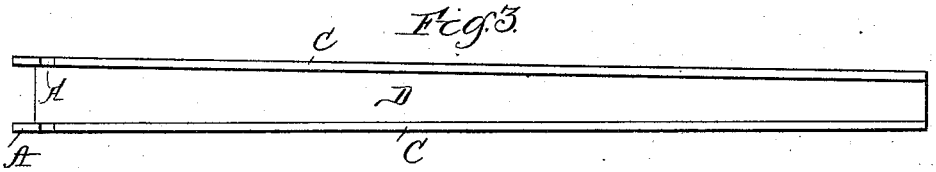


Fig. 4.

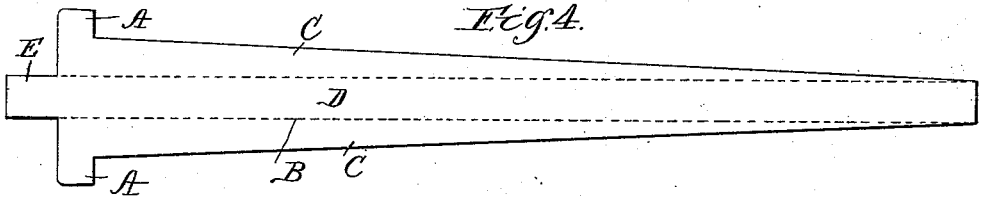


Fig. 5.

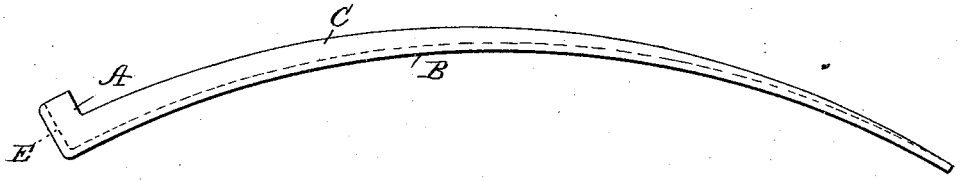


Fig. 6.

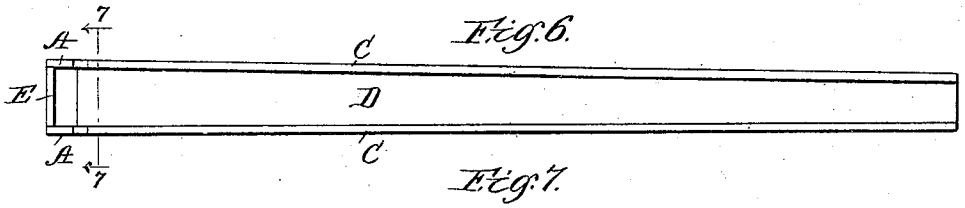
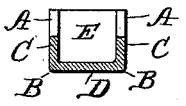


Fig. 7.



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UNITED STATES PATENT OFFICE.

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KEY FOR BRAKE-SHOES.

SPECIFICATION forming part of Letters Patent No. 492,839, dated March 7, 1893.

Application filed December 8, 1892. Serial No. 454,456. (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 specification, reference being had to the accompanying drawings.

This invention relates to improvements in keys employed for holding together the brake-shoes and heads of car brakes, but is more especially designed as an improvement upon that class of keys of which the "Christie key" is a type and which ordinarily consist of a drop forged solid key of suitable dimensions bent and formed into a curved wedge and having a head forged on the larger end thereof to prevent the key from dropping out of place.

The prime object of this invention is to materially lessen the weight and consequently the amount of stock or metal employed in the manufacture of brake-shoe keys and thereby effect a corresponding saving and economy in the manufacture thereof; and further, to avoid the necessity for heating the blank in bending and forming the key, and thus effect a further saving in the cost of manufacture.

A further object is to have a key formed of sheet metal of novel construction, light and durable, and yet possessing all the advantages of the drop forged key.

These and other objects hereinafter set forth, are attained by the devices illustrated in the accompanying drawings in which

Figure 1 represents a plan view of the blank from which my key is formed; Fig. 2 a side elevation of the finished key embodying my invention; Fig. 3 a plan view thereof; Fig. 4 a plan view of a modified form of blank for a key embodying my invention; Fig. 5 a side elevation of the finished key formed from the blank shown in Fig. 4; Fig. 6 a plan view thereof; and, Fig. 7 a transverse, vertical section on the line 7—7 of Fig. 6 looking in the direction indicated by the arrows.

Similar letters of reference indicate the same parts in the several figures of the drawings.

Referring now to the accompanying drawings, Fig. 1 represents the preferred form of blank from which my key is formed, consisting of sheet metal tapering from end to end at the wider end provided with laterally projecting ears A which form the head of the key when the latter is bent to a finished form, the opposite and smaller end of the blank having a width equal to that of the point of the key to be formed therefrom. This blank is first bent laterally at each side of the center on the diverging lines D, D so that the sides C, C when upturned stand at a right angle to the center or body portion of the key, which tapers from the head to the point of the key. The blank is then bent longitudinally on the arc of a circle as illustrated in Fig. 2, 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 one side of the broader end thereof, similar to the head of the ordinary drop forged key, which it is intended to counterfeit, and for all the uses of which it is intended.

It will be observed that the finished key has a point substantially the full width of the blank at the smaller extreme end and a slightly greater width at its opposite end or head, thus giving the key a slight taper in plan view, while the up-turned sides C gives the key in side elevation, a decided taper or wedge shape from the point to the head of the key, at the point being of the width equal to the thickness of the blank, while at the head the width is that of the greatest width of the up-turned sides C. The ears or lateral extensions A which both project to the same side of the key when finished, serve as a stop to retain the key in position between the brake-shoe and head and prevent its falling too low in the event any play should arise between these parts.

In Fig. 4 I have shown a blank for producing a key indentical with that produced by the blank in Fig. 1 with the exception of the longitudinal extension E at the wider end or head of the blank which is simply intended to be bent up between the sides C as illustrated in Figs. 5, 6 and 7, so as to close the head of the key.

Obviously in the formation of the head of the key many variations in the shape thereof may be effected without departing from the spirit of my invention. Such, for instance, as attaching the extension E to one of the sides C instead of to the center or body portion D

of the blank; or, again, such as making the extension E of sufficient length to be folded over and form a complete hollow head for the key between the lateral or side extensions A thereof, such variations being governed only by the choice of the manufacturer or user, either to the end of increasing the strength or improving the appearance of the finished key.

In the manufacture of these keys the steps of forming and bending the blanks may be performed in separate and successive operations, or they may be formed in one continuous operation and practically simultaneously.

A brake-shoe key made in accordance with my invention, while subserving every purpose to which the ordinary solid drop forged key may be put, at the same time is much lighter than the drop forged key, containing from forty to fifty per cent. less of metal, and consequently, is much cheaper, while a still further economy is effected in the cost of manufacturing the keys in the operation of forming the key out of sheet metal, which of itself is cheaper than the dropping forge, while at the same time it dispenses with the necessity of heating the stock or blank from which the key is formed.

Having 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 the wider end thereof with extensions to form the head of the key, said blank at its narrower end having a width substantially equal to the point of the finished key, substantially as described.

2. A key for brake-shoes composed of sheet metal bent to form a body portion with wedge shaped sides extending laterally from each side of the body portion, said sides being provided with extensions forming the head of the key, substantially as described.

3. 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 being provided with lateral extensions at the wider end thereof, forming a head for the finished key, substantially as described.

4. A key for brake-shoes consisting wholly of sheet metal bent and curved laterally and longitudinally having the tapering body portion D, the wedge shaped sides C, C, extending from the point to the head of the key, and the lateral extensions A, A forming the head of the key, substantially as described.

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