

No. 640,788.

Patented Jan. 9, 1900.

J. MEDWAY.
BRAKE SHOE.

(Application filed Apr. 24, 1899.)

(No Model.)

Fig. 1.

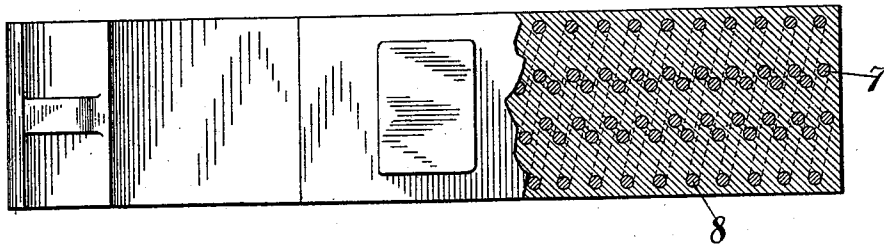


Fig. 2.

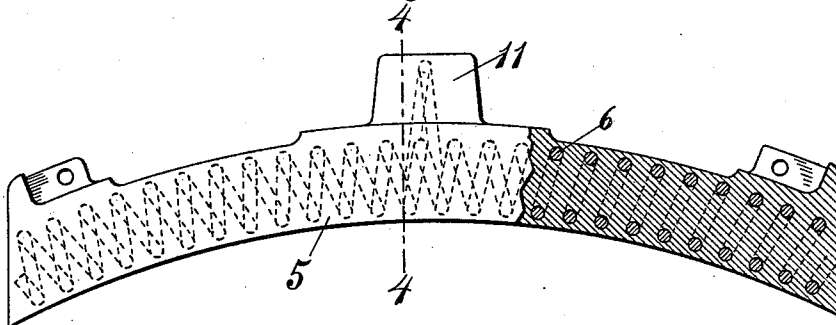


Fig. 3.

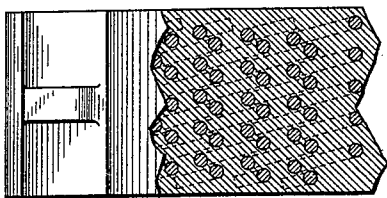
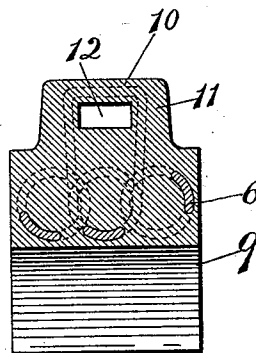


Fig. 4.



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JOHN MEDWAY, OF CHICAGO, ILLINOIS.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 640,788, dated January 9, 1900.

Application filed April 24, 1899. Serial No. 714,157. (No model.)

To all whom it may concern:

Be it known that I, JOHN MEDWAY, a citizen of the United States, residing in Chicago, Cook county, Illinois, have invented a certain new and Improved Brake-Shoe, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of shoe in which an insert of some metal, preferably of wrought or tough consistency, is embedded within a cast-metal body, and has for its object the provision of a shoe of the type mentioned which will be stronger, more durable, and more economical than other shoes of like kind heretofore in use.

More specifically, my invention has for its object the construction of a brake-shoe comprising a cast-metal body having embedded therein one or more inserts of approximately a coiled or twisted shape, said inserts being preferably arranged in a direction longitudinal to the shoe. In order to more securely bind the parts of the shoe together, I arrange the coils or twists of the inserts so that the various turns thereof will progress through a constantly-changing plane, the change taking place not only in one direction, but in every direction. Constructions have been heretofore proposed in which inserts composed of wire-netting or perforated sheets of metal, or of what is known as "expanded" metal, have been employed in various arrangements, one such arrangement being what may be termed a "sinuous form." By my invention I aim particularly to secure a construction which, unlike such prior devices, will not have a marked chilling effect upon the cast metal of the body of the shoe and which will not cause the same tendency of the parts to divide the shoe into what might be called "various planes of cleavage or separation."

Another object of my invention is the provision of a brake-shoe of the type specified having a fastening-lug of usual construction and a staple or insert extending outwardly from the body of the shoe and surrounding the key opening or hole in the fastening-lug. Such staple or insert I prefer to make by an extension or side projection of one of the coils or twisted inserts of the body of the shoe.

The above, as well as such other objects as

may hereinafter appear, I attain by means of a construction which I have illustrated in preferred form in the accompanying drawings, in which—

Figure 1 is a view showing the back of a shoe embodying my invention, a portion thereof being indicated in section. Fig. 2 is a side elevation of the shoe with a portion shown in section. Fig. 3 is a partial section showing the twisted or coiled inserts which I employ extending transversely of the shoe, this being a modification which may be used, if preferred. Fig. 4 represents a section on the line 4 4 of Fig. 2 and is designed to show the means which I provide for strengthening the fastening-lug.

Referring now more particularly to Figs. 1 and 2, it will be seen that in the practice of my invention I provide, first, a cast-metal body 5, within which are embedded one or more coils 6, of wire or other like material, said coils being arranged as clearly shown in the drawings and preferably extending from end to end of the shoe, the various turns passing each other, so as to be, as it were, interlocked, as indicated at the point marked 7 in Fig. 1. In the making of the shoe these coils are arranged in the mold and the metal poured around them. It will now be obvious that in the operation or use of my shoe as the face of the shoe wears down there will be points, as 8, in which the wire will present a bearing-surface against the tread of the wheel, the cast-iron filling the space between. It will also be obvious that by virtue of the arrangement of the coils, as described, the cast metal will flow in and around them in such a way that the coils will bind the whole structure together securely and make a compact and strong mass, besides resulting in a constant change of the position of the bearing-points 8 as the face of the shoe wears down. Another advantage which my construction secures is the better combination between the insert and the shoe, for the wire being small and fine and arranged with the freest kind of openings between the loops it does not have such a chilling action upon the metal as would interfere with the proper flow of the same into all parts of the mold.

It is obvious that, broadly speaking, it

would be immaterial if the shape of the coils or the direction in which they are placed in the shoe were somewhat changed. For example, I have shown as such a modification an arrangement (illustrated in Fig. 3) in which the coils extend transversely of the body of the shoe.

In Fig. 4 I have illustrated one of the coils 9 as constructed with an outwardly-extending loop 10, which is embedded in the lug 11 and surrounds the keyhole 12 thereof, binding the lug firmly to the body of the shoe and greatly strengthening the construction thereof.

I wish it to be understood that I do not desire to limit myself in any particular to the precise construction which I have described in detail, but would include all equivalents within the scope of my claims.

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

1. A brake-shoe comprising a cast-metal body having embedded therein one or more inserts of approximately a coiled or twisted shape, substantially as described.

2. A brake-shoe having a fastening-lug cast integral therewith, a key-opening in said lug, and a strengthening staple or insert embedded in the metal of the shoe and the lug and

extending through a portion of the body of the shoe and around said key-opening.

3. A brake-shoe comprising a cast-metal body having embedded therein a plurality of inserts of approximately coiled or twisted shape, one of the turns of one of said coils being extended out to surround the key-opening in the lug of the shoe, substantially as described.

4. A brake-shoe comprising a cast-metal body having embedded therein a plurality of longitudinally-disposed coils.

5. A brake-shoe comprising a cast-metal body having embedded therein a plurality of longitudinally-disposed coils, the turns of said coils extending past each other, substantially as described.

6. A brake-shoe comprising a cast-metal body having embedded therein a plurality of coils, the turns of said coils being interwoven or intertwisted, substantially as shown.

7. A brake-shoe having a fastening-lug cast integral therewith and a strengthening staple or insert embedded in the cast metal, and extending through a portion of the shoe and the lug, substantially as described.

JOHN MEDWAY.

Witnesses:

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