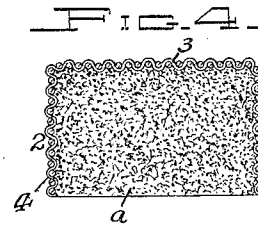
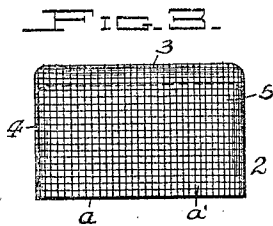
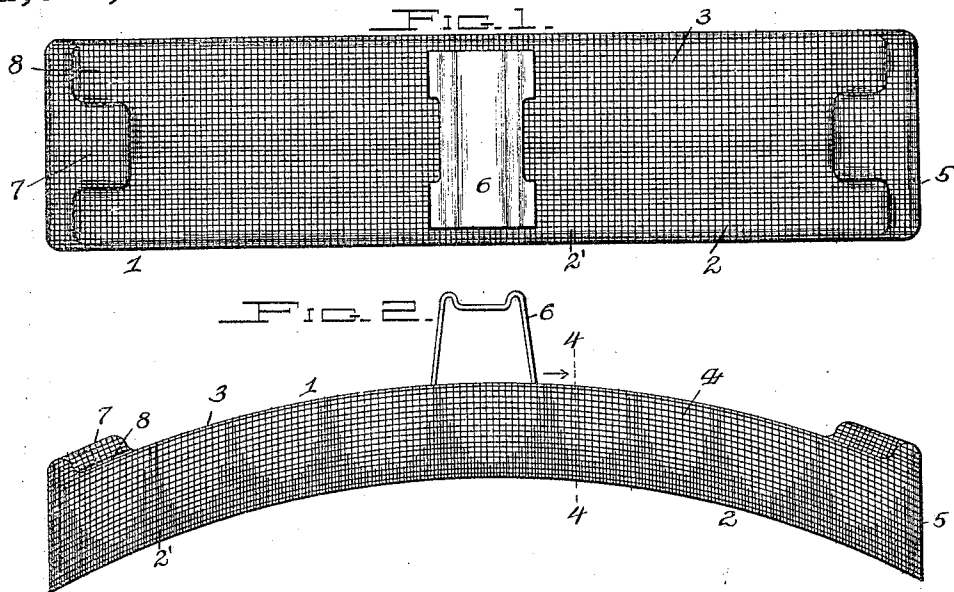


J. J. KINZER.
BRAKE SHOE.
APPLICATION FILED APR. 5, 1912.

1,046,423.

Patented Dec. 3, 1912.



Witnesses:

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UNITED STATES PATENT OFFICE.

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BRAKE-SHOE.

1,046,423.

Specification of Letters Patent.

Patented Dec. 3, 1912.

Application filed April 5, 1912. Serial No. 688,705.

To all whom it may concern:

Be it known that I, JOHN JACOB KINZER, a resident of Wildwood, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Brake-Shoes; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to brake shoes and has special reference to such class of shoes which are provided with an inclosed metallic casing around a filling of frictional material.

The object of my invention is to provide a cheap, simple and efficient form of a brake shoe in which the casing will be lighter than the ordinary forms of such casings, will enable a better support to the filling than such casings, and will lessen the weight of the shoe without injuring the same or rendering it less capable of performing the work.

To these ends my invention consists, generally stated, in the novel arrangement, construction and combination of parts, as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved brake shoe, I will describe the same more fully, referring to the accompanying drawings, in which—

Fig. 1 is a back view of my improved brake-shoe. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation of the shoe. Fig. 4 is a cross section on the line 4—4 of Fig. 2, looking in the direction of the arrow.

Like symbols of reference herein indicate like parts in each of the figures of the drawing.

As illustrated in the drawing 1 represents my improved brake shoe, which comprises an inclosing casing 2 and a filling *a* of frictional material inserted within said casing. As shown in Figs. 1 to 4, the casing 2 is formed from woven-wire or wire-cloth having a substantial degree of strength and ductility, such as steel or iron or any other suitable material, and it is formed preferably by pressing or bending in suitable dies thus producing a structure having an integral back-wall 3, side-walls 4 and end walls 5, and is open at its front for the in-

section of the filling material *a*, and curved substantially in accordance with the periphery of the car wheels on which the brake shoe is to be used.

The usual supporting lug 6 is connected or fixed to the back 3 of the casing 2 in any suitable manner for connecting the shoe 1 to the ordinary approved brake-head or hanger and is preferably made separate and connected to said casing by having its inner ends 6' pass through slots in said back and turned against the inner face of the same to connect said lug to said casing. Short bearing surfaces 7, which are adapted to abut against bearings on the ends of the brake-head or hanger, are formed on the back-wall 3 of the casing 2, adjoining its ends, and such bearing surfaces are preferably recessed, as at 8, while central or intermediate bearings on said head or hanger are adapted to abut against said back-wall and on each side of the lug 6.

The rubbing or frictional action of the brake-shoe 1 upon the wheel is exerted by the frictional member *a*, which consists of a filling of suitable material, such as cast iron, or a composition of matter specially prepared for the purpose, and of such character as to exert proper and sufficient friction upon the periphery of the wheel without imposition of undue or excessive pressure thereon, and compositions of this character are well known to those skilled in the art. This filling *a* is either cast into the casing 1 when set in a mold or inserted in such casing under pressure and retained in position after hardening by the walls 3, 4 and 5 of said casing, which filling is further secured to said walls by the material composing the same passing into the meshes or perforations 2' in said casing walls.

Various modifications and changes in the design and construction of my improved brake shoe may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

It will thus be seen that my improved brake shoe lessens the amount of metal to be worn away by the wheel and affords an entrance of air into the filling composition in the manufacturing process of placing the same in the casing to cause a more uniform hardening of said filling material. The filling material entering the holes in the casing will give a better hold to the casing on said

material, will lessen the waight of the shoe, and at the same time the full amount of casing support desired will be obtained.

What I claim as my invention and desire to secure by Letters-Patent is—

1. A brake shoe comprising an inclosing casing formed of wire-fabric and a filling of frictional material.
2. A brake shoe comprising an inclosing casing formed of wire-fabric and a filling of frictional material, the sides of said casing being corrugated.
3. A brake shoe comprising an inclosing casing having its sides, ends and back wall formed of wire fabric, and a filling of frictional material.
4. A brake shoe comprising an inclosing casing having its sides, ends and back wall formed of wire fabric, and a filling of frictional material, the sides of said casing being corrugated.
5. A brake shoe comprising an inclosing casing formed of a single sheet of wire fabric pressed into shape, and a filling of frictional material.
6. A brake shoe comprising an inclosing casing formed of a single sheet of wire

fabric pressed into shape, and a filling of frictional material, the sides of said casing being corrugated.

7. A brake shoe comprising an inclosing casing having its sides, ends and back wall formed of a single sheet of wire fabric pressed into shape, and a filling of frictional material.

8. A brake shoe comprising an inclosing casing having its sides, ends and back wall formed of a single sheet of wire fabric pressed into shape, and a filling of frictional material, the sides of said casing being corrugated.

9. As a new article of manufacture, a brake shoe inclosing casing having its sides, ends and back wall formed of wire fabric.

10. As a new article of manufacture, a brake shoe inclosing casing having its sides, ends and back wall formed of a single sheet of wire fabric pressed into shape.

In testimony whereof, I the said JOHN JACOB KINZER, have hereunto set my hand.

JOHN JACOB KINZER.

Witnesses:

JOHN E. McCALMONT,
J. N. COOKE.