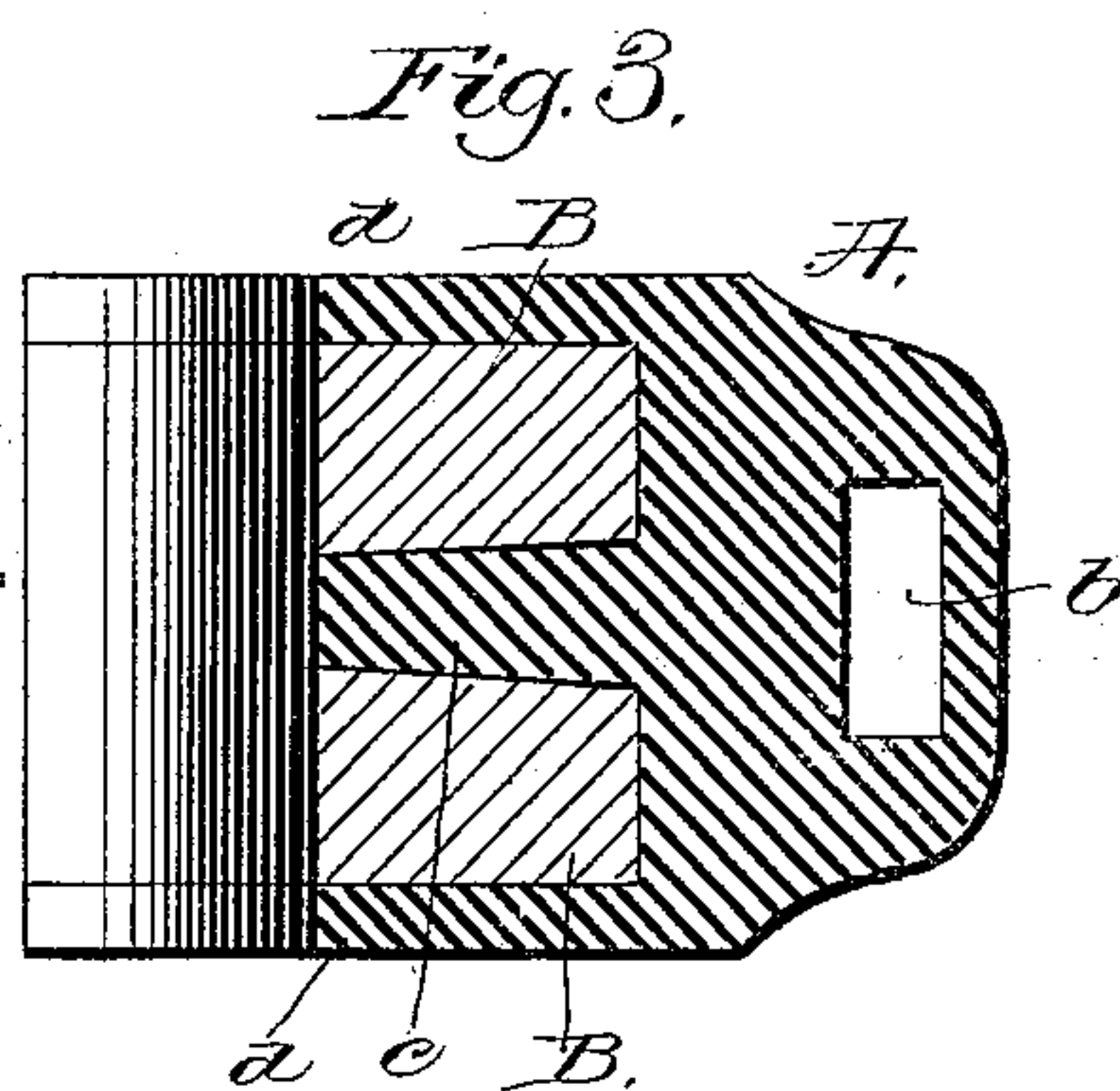
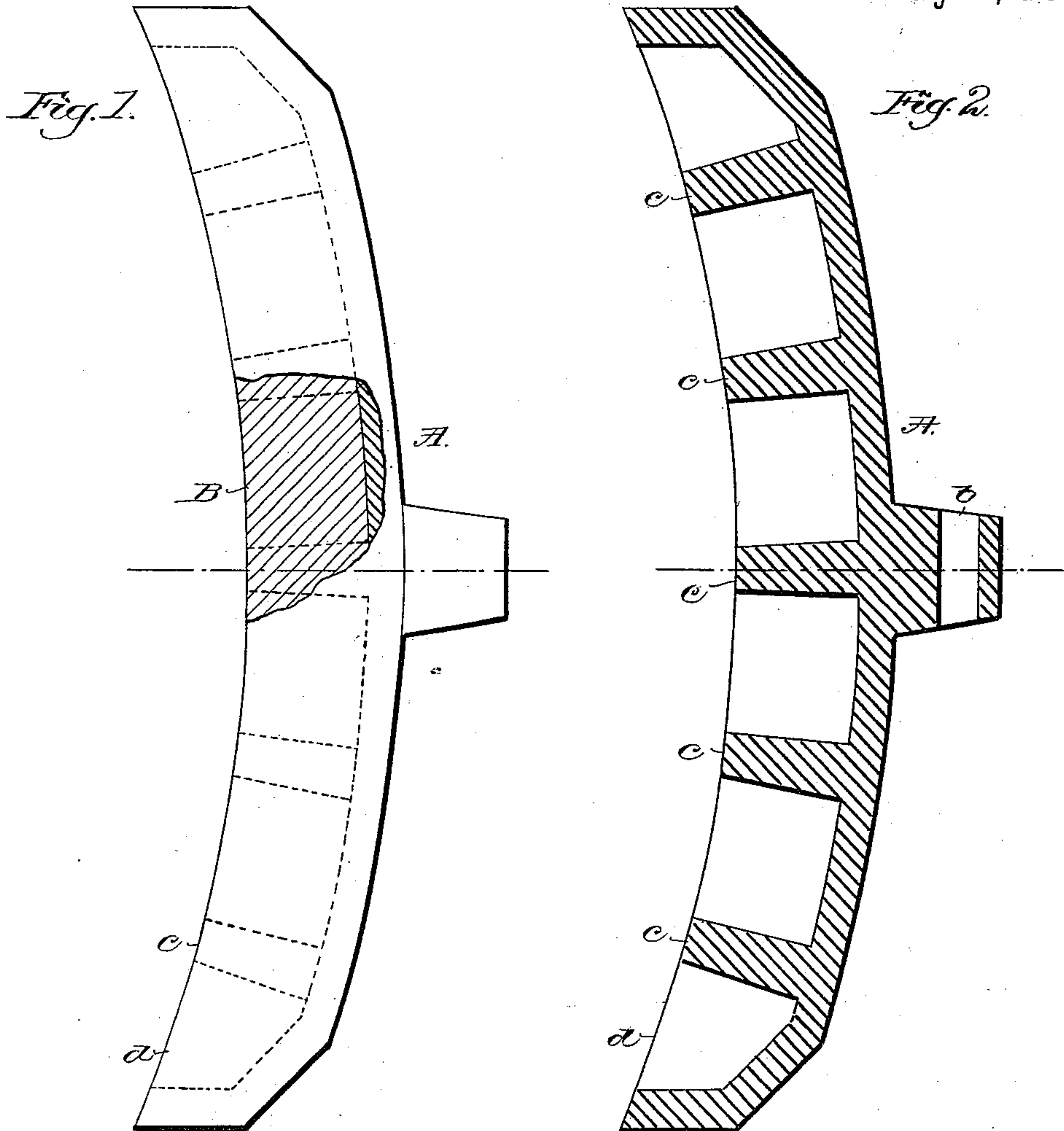


(No Model.)

C. F. BRIGHAM.
BRAKE SHOE.

No. 298,283.

Patented May 6, 1884.



Witnesses:
John F. P. P. P.
James J. Noyes.

Inventor:
Charles F. Brigham
by Crosby & Gregory
attys.

UNITED STATES PATENT OFFICE.

CHARLES F. BRIGHAM, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF
THREE-FOURTHS TO D. AUSTIN BROWN, TRUSTEE.

BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 298,283, dated May 6, 1884.

Application filed September 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. BRIGHAM, of Worcester, county of Worcester, State of Massachusetts, have invented an Improvement
5 in Car and other Brakes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of an improved brake-shoe, composed of
10 metal and molded fibrous material.

In the manufacture of a brake-shoe in accordance with my invention, I take a metal frame and cover it more or less with molded
15 fibrous material composed, preferably, of asbestos in fibrous state, and oxide of magnesium tempered preferably with chloride of magnesium to render the same suitable to be molded into shape.

Figure 1 represents in elevation a brake-shoe embodying my invention shaped to render it applicable as a shoe for a railway-car wheel; and Fig. 2 is a like view of the skeleton metallic form; and Fig. 3 is a section of Fig. 1
20 on the dotted line *x x*.

The skeleton frame A, made preferably from cast metal, and, as herein shown, having an eye, *b*, to receive the usual key or other appliance which fastens the shoe to the brake-
30 head, is made as a hollow box, within which is a series of lugs or projections, *c c*, which extend from the main part or back of the frame toward what is to be the wearing-face of the shoe, and so as to constitute a portion of the
35 wearing-face of the same. Upon this skeleton frame A, it being placed in a suitable mold, I mold and attach the wearing surface or body B, made from a plastic compound composed of fibrous material, preferably asbestos fiber and
40 oxide of magnesium mixed and rendered plastic by the use of chloride of magnesium, I preferably employing about equal portions in

weight of the said fiber and oxide of magnesium. The fiber and oxide of magnesium, having been rendered plastic, are shaped in a mold
45 in which the skeleton frame is placed, and the body B is permitted to set or harden. The body B, unlike wood, is indestructible by the action of heat arising from friction, and will not cut the car-wheel as rapidly as a shoe
50 entirely of iron. The fibrous body B will hold as well as wood, and better than will a metal shoe.

I do not desire to limit my invention to the shape of the metal frame A, as it may be variously modified; as, for instance, I might omit
55 the box part or surrounding walls *d d*, or I might omit the lugs or projections, and in such event the edges of the walls *d d* may act as a part of the wearing-face of the shoe.

If desired, I may add to the animal or vegetable fiber used an extended or cheapening material composed of any substance commonly added to asbestos to resist heat—such as plumbago, lime, or earth; but this is not essential.
60

I claim—

1. As an improved article of manufacture, a brake-shoe consisting of a metal frame, and a contained molded body, B, composed of asbestos hardened, substantially as described.
70

2. As an improved article of manufacture, a brake-shoe consisting of a metal frame, and a contained molded body, B, composed of asbestos hardened, substantially as described, and mixed with an extending heat-resisting
75 material—such as plumbago, lime, or earth—as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES F. BRIGHAM.

Witnesses:

G. W. GREGORY,
B. J. NOYES.