

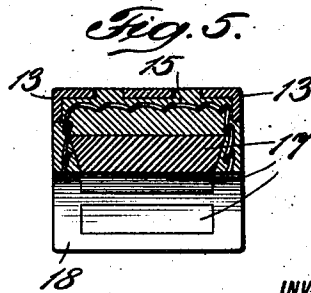
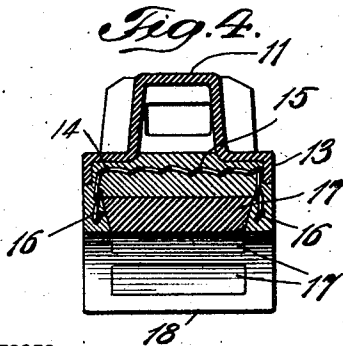
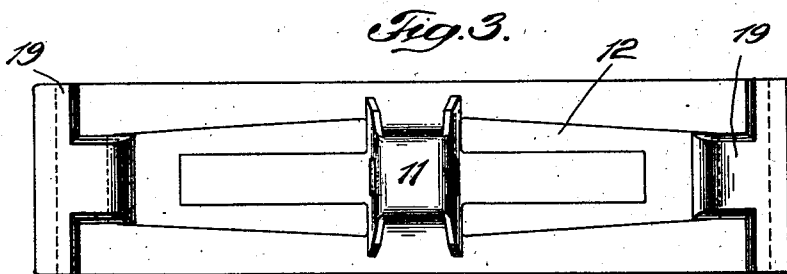
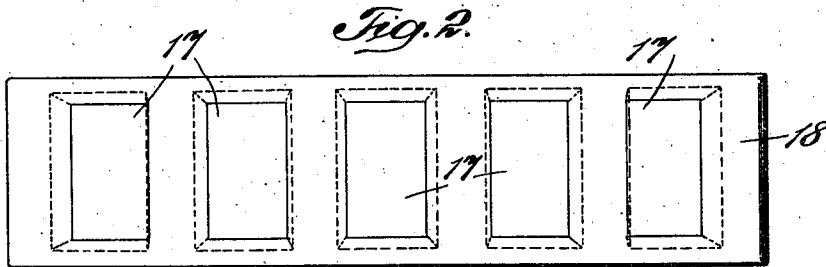
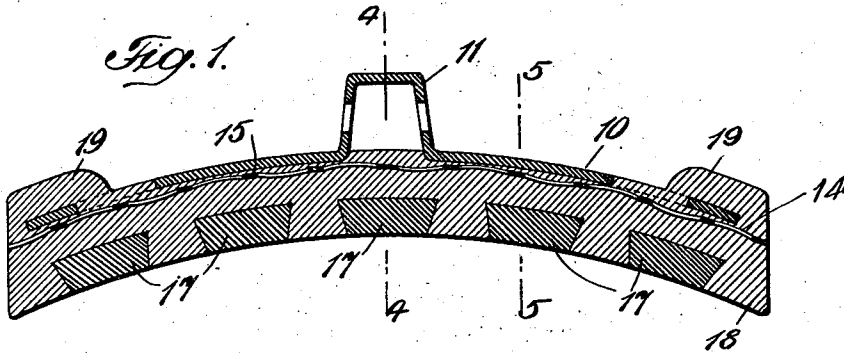
J. D. GALLAGHER & H. JONES.

BRAKE SHOE.

APPLICATION FILED MAY 4, 1915.

1,159,009.

Patented Nov. 2, 1915.



WITNESSES:

John C. Cook
George E. Cook

INVENTORS

JOSEPH D. GALLAGHER

HARRY JONES.

BY

John C. Cook ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH D. GALLAGHER, OF GLEN RIDGE, NEW JERSEY, AND HARRY JONES, OF SUFFERN, NEW YORK, ASSIGNORS TO AMERICAN BRAKE SHOE & FOUNDRY COMPANY, OF MAHWAH, NEW JERSEY, A CORPORATION OF NEW JERSEY.

BRAKE-SHOE.

1,159,009.

Specification of Letters Patent.

Patented Nov. 2, 1915.

Application filed May 4, 1915. Serial No. 25,687.

To all whom it may concern:

Be it known that we, JOSEPH D. GALLAGHER, a citizen of the United States, and a resident of Glen Ridge, county of Essex, and State of New Jersey, and HARRY JONES, a citizen of the United States, and a resident of Suffern, in the county of Rockland and State of New York, have made and invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification.

This invention relates to brake shoes and has for its object to provide improved means for reinforcing the wearing body of the shoe, and preventing any of the fragments should the shoe become broken in service, from becoming detached or separated from the shoe.

The invention more particularly relates to that type of shoe which includes wrought metal inserts in its wearing face, it being one of the purposes of the invention to reinforce and strengthen that part of the cast body of the shoe which is necessarily weakened by the inserts.

A further object is to provide a brake shoe with a steel reinforcing back to which is secured, during the process of manufacture, a cage formed of expanded metal or wire mesh, and around which the body metal of the shoe is cast. The body metal flows throughout the interstices of the open-work metal cage and is reinforced thereby, and at the same time, provides a composite wearing face for the shoe, the same being formed of cast and ductile metals.

A further object is to provide the wearing body of a brake shoe, which includes wrought metal inserts, with a reinforcing cage, embedded therein during the process of manufacture of the shoe, and which cage is formed of ductile open-work metal, reinforcing the body of the shoe throughout its entire length and preventing the separation of any parts of the body of the shoe from the back, should they become broken in service.

Other objects and advantages will appear as the description proceeds, wherein it is to be understood that changes in the precise embodiment of the invention, can be made

within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings, the preferred embodiment of our invention is disclosed, wherein:—

Figure 1 is a longitudinal vertical section of a brake shoe embodying the characteristic features of our invention; Fig. 2 is a plan view of the wearing face thereof; Fig. 3 is a plan view of the shoe back; Fig. 4 is a view in cross-section taken on the line 4—4 of Fig. 1; and Fig. 5 is a view in cross-section taken on the line 5—5 of Fig. 1.

Referring specifically to the several views wherein corresponding parts are indicated by similar reference numerals, the brake shoe is formed with the steel reinforcing back 10, which includes the integral attaching lug 11 and the longitudinally extending openings 12, the steel reinforcing back, as thus constituted being of the usual and preferred form. The edges of the steel reinforcing back are turned over so as to define the side walls 13, and between which is located a reinforcing cage 14, preferably formed of expanded metal or wire mesh. The reinforcing cage 14 extends the entire length of the steel reinforcing back and is formed with the bottom wall 15 and sides 16, the latter being contained between and protruding some little distance beyond the extremities of the side walls 13 of the steel reinforcing back.

The spaced sides 16 of the reinforcing cage embrace therebetween the wrought metal inserts 17, around which the body of the shoe is cast. The body metal 18 flows up through the openings 12 in the steel reinforcing back and also around the ends thereof, resulting in the formation of the end stops 19 and the secure anchorage of the body to the back.

The sides of the reinforcing cage project beyond the ends of the inserts 17, and reinforce throughout its entire length that portion of the cast body of the shoe which is necessarily weakened by the presence of the inserts. The reinforcing cage will therefore prevent any portion of the body of the shoe

from becoming separated therefrom should parts of the shoe become broken or fractured in service. The wrought metal inserts 17 are preferably provided with beveled side edges 5 which render more secure their anchorage within the cast metal wearing body of the shoe.

What we claim is:—

1. A brake shoe comprising a cast metal 10 body with inserts embedded therein, and an openwork metal reinforcing cage embedded within said body and including a back and spaced sides.

2. A brake shoe comprising a cast metal 15 body with inserts embedded therein, and an openwork metal reinforcing cage embedded within said body and including a back and spaced sides, said sides embracing said inserts therebetween.

20 3. A brake shoe comprising a cast metal body with inserts embedded therein, and an expanded metal reinforcing cage embedded within said body and including a back and spaced sides, said sides embracing said in- 25 serts therebetween.

4. A brake shoe comprising a reinforcing back, a cast metal body anchored thereto, an openwork metal reinforcing cage embedded within said body, and wrought metal inserts 30 provided in the wearing face of said body.

5. A brake shoe comprising a reinforcing back, a cast metal body carried thereby, a reinforcing member formed of openwork metal and including a back and sides ex- 35 tending lengthwise of said back and embedded within the cast metal of the body of

the shoe, and inserts provided in the wearing face of said body and embraced between the sides of said reinforcing member.

6. A brake shoe comprising a reinforcing 40 back, a cast metal body carried thereby, a reinforcing member formed of expanded metal and including a back and sides extending lengthwise of said back and embedded within the cast metal of the body of 45 the shoe, and inserts provided in the wearing face of said body and embraced between the sides of said reinforcing member.

7. A brake shoe comprising a reinforcing back, a cast metal body anchored thereto, an 50 openwork metal cage extending lengthwise of, and embedded within, the cast metal of said shoe body, said cage including a back and spaced sides, and wrought metal inserts formed in the body of said shoe and in- 55 cluded between the sides of said reinforcing cage.

Signed at New York, in the county of New York, and State of New York, this 27 day of April, 1915.

JOSEPH D. GALLAGHER.

Witnesses:

ANNA V. WALSH,

GEORGE E. COOK.

Signed at Suffern, in the county of Rockland, and State of New York, this 30th day of April, 1915.

HARRY JONES.

Witnesses:

FRED B. HOAGLAND,

WALLACE SUTHERLAND.