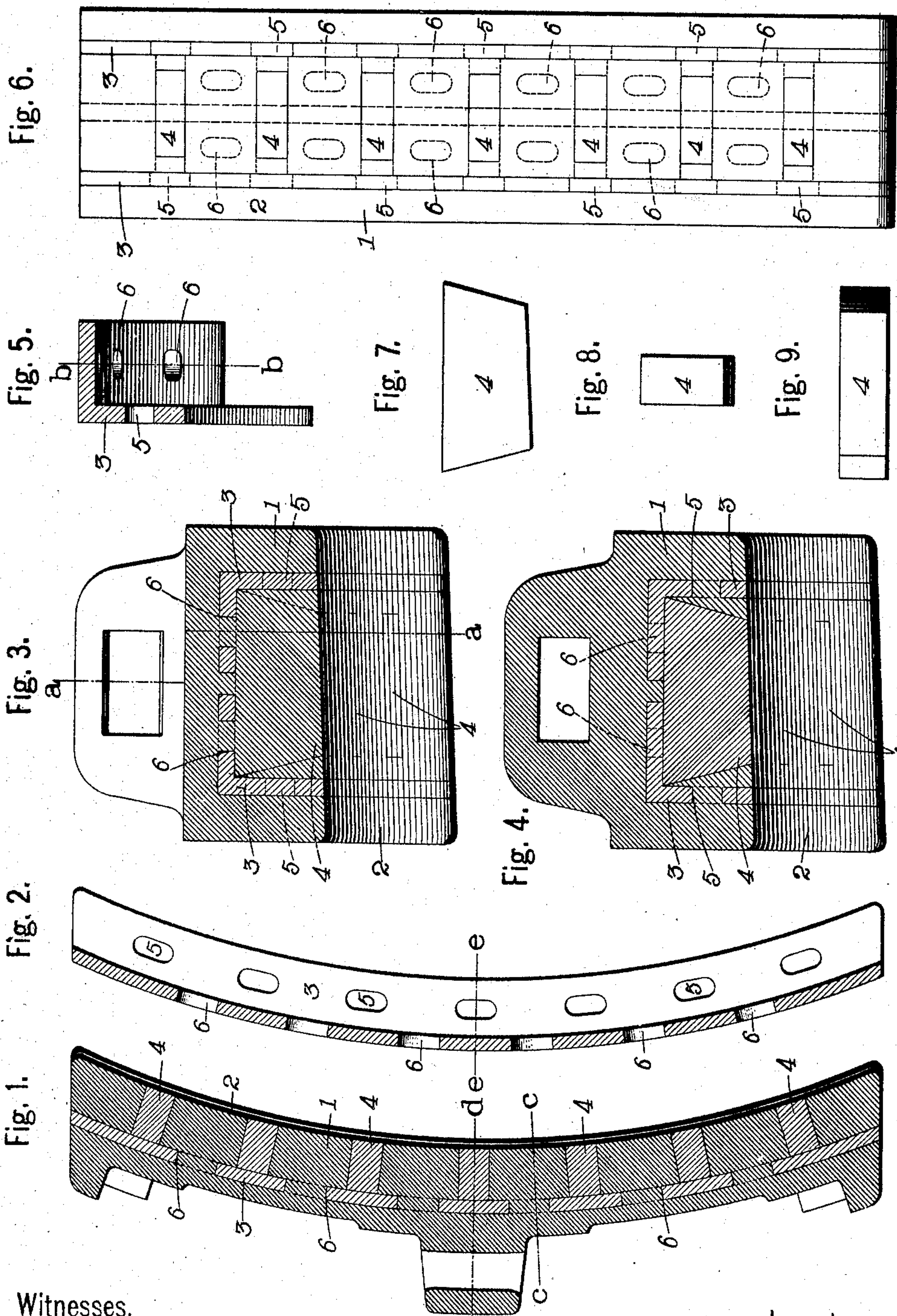


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W. P. TAYLOR.
BRAKE SHOE.

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WILLIAM PERRY TAYLOR, OF BUFFALO, NEW YORK.

BRAKE-SHOE.

No. 828,347.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM PERRY TAYLOR, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Brake-Shoes, of which the following is a specification.

This invention relates to an improved railway brake-shoe of that class which is strengthened by a reinforcement or reinforcements; and it comprises a body and at least one reinforcement in said body which is of angular cross-sectional form.

The principal object of the invention is to so form a reinforcement that it shall strengthen the shoe both longitudinally and transversely.

The invention also relates to certain details of construction, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section through a preferred form of the improved shoe on line *a a*, Fig. 3. Fig. 2 is a vertical longitudinal section through one of the angular reinforcements on line *b b*, Fig. 5. Fig. 3 is an enlarged vertical transverse section through the improved shoe on line *c c*, Fig. 1. Fig. 4 is an enlarged vertical transverse section through the improved shoe on line *d d*, Fig. 1. Fig. 5 is an enlarged vertical transverse section through one of the angular reinforcements on line *e e*, Fig. 2. Fig. 6 is a bottom or face view of the improved shoe looking upon the braking-face. Figs. 7, 8, and 9 are respectively face, end, and edge views of one of the inserts.

In referring to the drawings in detail like numerals designate like parts.

The adaptation of the invention illustrated in the drawings comprehends a body 1, of cast or analogous metal, and having a curved braking-face 2, two angular longitudinal reinforcements 3, and a series of transverse inserts 4. The longitudinal reinforcements 3 are each preferably stamped or otherwise formed from one piece of metal and substantially L-shaped or in the form of a right angle in cross-section, each of said reinforcements having a substantially horizontal portion and a substantially vertical portion. The horizontal portions are curved

to correspond with the curve of the braking-face of the shoe-body, and the vertical portions are straight like the sides of said body and have their lower edges extended to form a portion of the braking-face of the brake-shoe and curved to correspond with the curve of the remainder of the braking-face, as shown in Figs. 2, 3, 4, 5, and 6. The reinforcements are preferably provided in both their vertical portions and their horizontal portions with perforations or slots 5 and 6, which are arranged in longitudinal rows and constitute openings in which portions of the metal of the body fit to rigidly fasten the reinforcements in place in the body. The reinforcements are embedded in the shoe-body with their horizontal portions side by side in horizontal alinement near the top surface of the shoe and their vertical portions extending down from the outer margins of the horizontal portions to and through the bottom surface of the shoe. It will be noted that the reinforcements are embedded wholly beneath the surface of the cast body, so that they are surrounded on all sides by the cast metal, and thus locked very rigidly in place therein. The reinforcements are located in practically the two opposite upper corners of the cast body, and their horizontal portions extend toward each other, but not into contact, and their vertical portions extend downward to the braking-surface of the shoe which the lower edges of the vertical portions form a part.

Between the angular reinforcements are arranged a series of transverse inserts 4, located at intervals in approximately vertical position, with the bottom edge extending through the bottom surface or braking-face of the shoe. These inserts are of a flat formation with their two larger faces or surfaces substantially parallel and shaped like a trapezium.

It will be noted by referring to Figs. 3 and 4 that the inserts contact at the top with and serve to support the horizontal portions of the reinforcements and that they are wedge-locked in place in the body by having their wider part at the top. Owing to peculiar trapeziform shape of the inserts, they are not only wedged throughout their vertical extent in the body, but also fit at the top against the lower surface of the horizontal

portions of both of the reinforcements and extend at their lower edge in perfect alinement with the braking-face of the shoe of which they constitute a part. The reinforcements and inserts are stamped or otherwise formed of suitable metal, such as steel or iron, and are secured in the shoe when cast, being arranged in proper place in the mold before the molten metal from which the shoe is formed is poured, so that they will be embedded rigidly in the brake-shoe when finished.

The braking-face in this improved shoe is composed partially of the bottom surface of the body and partially of the bottom edges of the reinforcements and inserts, so that the braking portion of the body is divided and separated transversely at intervals by the bottom edges of the inserts and longitudinally by the bottom edges of the vertical portions of the reinforcements.

I claim as my invention—

1. In a brake-shoe of the class described, a body and a reinforcement in said body of an L shape in cross-section.

2. In a brake-shoe of the class described, a body and a longitudinal reinforcement in said body of an inverted-L shape in cross-section.

3. In a brake-shoe of the class described, a body and a reinforcement in said body curved to correspond to the curve of the body and having an inverted-L shape in cross-section.

4. In a brake-shoe of the class described, a body and a longitudinal reinforcement in said body embedded wholly beneath the surface of said body; and curved in correspondence with the curve of the shoe; said reinforcement having the form of L in cross-section.

5. In a brake-shoe of the class described, a body and a curved longitudinal reinforcement in said body having two members only of equal width extending at an angle to each other.

6. In a brake-shoe of the class described, a body and a longitudinal reinforcement in said body of angular cross-sectional form having an approximately horizontal portion embedded beneath the surface of the body and curving approximately in parallelism with the curve of the top surface of the body and an approximately vertical portion extending approximately parallel with the side of the body.

7. In a brake-shoe of the class described, a body and a curved longitudinal reinforcement in said body of angular cross-sectional form having an approximately horizontal portion and an approximately vertical portion, and both of said portions being wholly embedded beneath the surface of the body

and having a series of perforations in which portions of the body lock.

8. In a brake-shoe of the class described, a body and at least two reinforcements in said body having the form of an L in cross-section; said reinforcements being arranged longitudinally oppositely to each other.

9. In a brake-shoe of the class described, a body and at least two reinforcements in said body of L-shaped cross-sectional form.

10. In a brake-shoe of the class described, a body and two longitudinal reinforcements in said body of continuous angular cross-sectional form having substantially parallel vertical portions and substantially parallel horizontal portions.

11. In a brake-shoe of the class described, a body and two reinforcements in said body of angular cross-sectional form each having a vertical portion and a horizontal portion and a series of inserts in said body located between the vertical portions and below the horizontal portions.

12. In a brake-shoe of the class described, a body, at least two longitudinal reinforcements in said body of angular cross-sectional form and a series of inserts in said body located between the longitudinal reinforcements.

13. In a brake-shoe of the class described, a body, at least two longitudinal reinforcements in said body of angular cross-sectional form and a series of transverse inserts arranged at intervals in said body and partially inclosed between the longitudinal reinforcements.

14. In a brake-shoe of the class described, a body, at least two longitudinal reinforcements in said body of angular cross-sectional form and a series of transverse inserts arranged at intervals and wedge-locked in said body and located between portions of the longitudinal reinforcement.

15. In a brake-shoe of the class described, a body, at least two longitudinal reinforcements in said body of angular cross-sectional form and a series of transverse inserts arranged at intervals and wedge-locked in said body and located between portions of the longitudinal reinforcements; said inserts having opposite faces in form similar to a trapezium.

16. A brake-shoe having a body, two longitudinal reinforcements in said body having horizontal portions, and vertical portions extending from the outer edges of the horizontal portions to the braking-face of the shoe.

17. A brake-shoe having a body, two longitudinal reinforcements in said body having horizontal portions, and vertical portions extending from the outer edges of the horizontal portions to the braking-face of the shoe, and a series of transverse inserts in the body

between the vertical portions of the longitudinal reinforcements.

18. A brake-shoe having a body, two longitudinal reinforcements in said body having
5 horizontal portions curved to correspond to the curve of the shoe, vertical portions extending from the outer edges of the horizon-

tal portions to the braking-face of the shoe and having their edges curved to correspond to the curve of the shoe.

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