July 2, 1929 R. J. BURTON 1,719,211

BRAKE SHOE

Filed Feb. 23, 1928

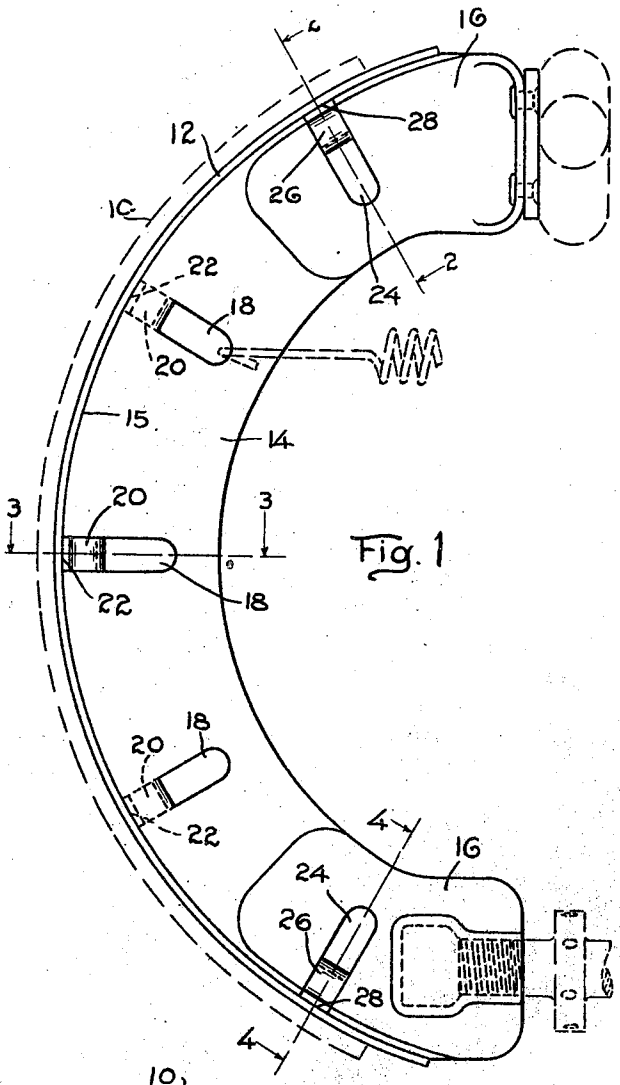


Fig. 1

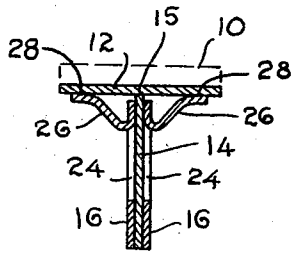


Fig. 2

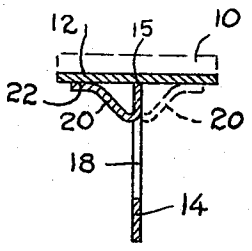


Fig. 3

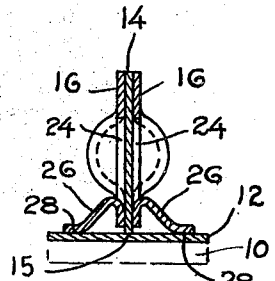


Fig. 4

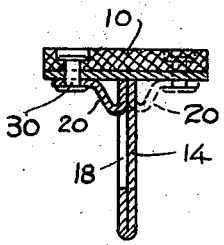


Fig. 5

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UNITED STATES PATENT OFFICE.

RALPH J. BURTON, OF DETROIT, MICHIGAN, ASSIGNOR TO BENDIX BRAKE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BRAKE SHOE.

Application filed February 23, 1928. Serial No. 256,128.

My invention relates to an improved sheet metal brake shoe.

An object is to provide a brake shoe of the character described of simple, strong, sturdy and inexpensive construction characterized by the provision of an arcuate web member arranged perpendicularly with respect to an arcuate face plate and with one edge of the web substantially uninterruptedly engaging the face plate and with integral portions punched laterally from the web, preferably on both sides into supporting relationship with the face plate.

A meritorious feature lies in the provision of a shoe of this character wherein a supporting web having one edge engaging the face plate substantially midway between the two linear edges thereof has portions formed integrally with the web offset laterally alternately on both sides thereof into engagement with the face plate in supporting relationship in proximity to its linear edges; and wherein the face plate is secured not only to the edge of the web but to the offset lateral projections thereof and wherein, if desired, the friction facing may be secured to the web with the same means which are employed to secure in part the web to the face plate.

Other meritorious advantages of my invention will appear from the following description, appended claims and accompanying drawing, wherein—

Fig. 1 is a side elevation of a brake shoe embodying my invention.

Figs. 2, 3 and 4 are cross-sectional views taken on lines 2—2, 3—3, and 4—4, respectively of Fig. 1, and,

Fig. 5 is a horizontal sectional view of a modified form of construction.

In the construction disclosed in the drawing I provide an arcuate sheet metal face plate 12 upon the outer periphery of which is secured a brake lining 10 and upon the inner periphery of which is arranged in perpendicular relationship thereto a web member 14. Reinforcing end portions 16 are arranged on opposite sides of the web at the end in engagement with the face plate. The edge 15 of the web may be welded at intervals throughout its length to the face plate.

In the construction illustrated in Figs. 1 to 4 the web member is shown as consisting of a single thickness of metal and tongues 20 are punched laterally outwardly therefrom into supporting engagement with the face plate 12 leaving apertures 18 in the web. These tongues may be welded at 22 to the web. Tongues 26 are punched laterally outwardly from the end pieces 16 on opposite sides of the web into engagement with the face plate and are shown as welded at 28 to the face plate and as leaving apertures 24 in the reinforcing portions. The laterally projecting integral portions 20 are preferably punched from the web alternately on opposite sides as illustrated in Fig. 1.

In Fig. 5 I have illustrated a slightly modified form wherein the web is formed of a double thickness of material folded upon itself as illustrated in such figure and the tongues 20 are punched laterally outwardly upon one side from one thickness and upon the other side from the other thickness, leaving a substantially unbroken web support for the face plate. I have here shown these tongues as secured by rivets 30 to the face plate, which rivets also hold the friction facing 10 thereon. Obviously the tongues 20 might be secured to the face plate in any suitable desired manner.

What I claim is:

1. A brake shoe comprising a sheet metal face plate and having a sheet metal web extending linearly along one side thereof and arranged perpendicularly with respect thereto, said web having a substantially unbroken edge in engagement with the face plate and having integral portions punched from the web laterally into engagement with the face plate on both sides of the web.

2. A brake shoe comprising a sheet metal face plate and a sheet metal web extending linearly along one side thereof and arranged perpendicularly with respect thereto, said web having one edge engaging the face plate and having integral tongues punched laterally therefrom and engaging the face plate upon opposite sides of the web.

3. A brake shoe comprising a sheet metal face plate and a sheet metal web extending linearly along one side thereof and arranged perpendicularly with respect thereto, said web having one edge engaging the face plate and having integral portions offset laterally engaging the face plate spaced from said edge.

4. A brake shoe comprising a sheet metal face plate and a sheet metal web extending linearly along one side thereof and arranged perpendicularly with respect thereto, said

web having one edge engaging the face plate and having integral portions offset laterally engaging the face plate spaced from said edge, said face plate being welded to said offset integral portions and to the edge of the web.

5. A brake shoe comprising a sheet metal face plate and a sheet metal web extending linearly along one side thereof and arranged perpendicularly with respect thereto, said web having laterally offset integral portions punched therefrom without interrupting the edge of the web adjacent to the face plate, which portions supportingly engage said face plate.

6. A brake shoe comprising an arcuate face plate, an arcuate web arranged perpendicularly with respect thereto along one side thereof, said web having integral laterally offset portions supportingly engaging the face plate upon opposite sides of the web, said portions being punched from the web without interrupting the edge adjacent to the face plate, said face plate being secured to the edge of the web at intervals and being secured to said offset portions.

7. A brake shoe comprising an arcuate sheet metal face plate and an arcuate sheet metal web extending linearly thereof along one side and arranged perpendicularly with respect thereto, said web having one edge in engagement with the face plate and having portions punched through the web laterally and engaging the face plate at a point spaced from the web.

8. A brake shoe comprising an arcuate sheet metal face plate and an arcuate sheet metal web extending linearly thereof along one side and arranged perpendicularly with respect thereto, and having its edge in engagement therewith, said web having integral portions projecting laterally therefrom alternately on opposite sides of the web into supporting engagement with the face plate.

9. A brake shoe comprising an arcuate sheet metal face plate and an arcuate sheet metal web extending linearly thereof along one side and arranged perpendicularly with respect thereto, said web being formed of material of double thickness and having integral portions projecting laterally upon one side from one thickness and supportingly engaging the face plate and having integral portions projecting laterally upon the opposite side from the other thickness and supportingly engaging the face plate.

10. A brake shoe comprising an arcuate sheet metal face plate and an arcuate sheet metal web extending linearly thereof along one side and arranged perpendicularly with respect thereto and having continuous line contact therewith throughout its length and interrupted contact therewith along a line spaced from and extending substantially parallel with said line of continuous contact.

11. A brake shoe comprising an arcuate sheet metal face plate and an arcuate sheet metal web extending linearly thereof along one side and arranged perpendicularly with respect thereto, having one edge in engagement therewith and having integral portions punched therefrom and doubled back outwardly thereover toward said edge into engagement with the face plate at points spaced from the edge of the web.

12. A brake shoe comprising an arcuate sheet metal face plate and an arcuate sheet metal web extending linearly thereof along one side and arranged perpendicularly with respect thereto and having one edge engaged substantially throughout its length with the face plate and having integral portions punched therefrom on both sides engaged in supporting relationship with the face plate at spaced intervals throughout its length, said integral portions being so punched from the web as to be each connected therewith at the end adjacent to said edge and doubled outwardly therefrom toward said edge into engagement with the face plate.

13. A brake shoe comprising a sheet metal face plate and a sheet metal web extending linearly along one side thereof and arranged perpendicularly with respect thereto, said web having one edge engaging the face plate and having integral tongues punched laterally therefrom and forming arches engaging the face plate upon both sides of the web at points spaced from the edge of the web.

14. A brake shoe comprising a sheet metal face plate and a sheet metal web extending linearly along one side thereof and arranged perpendicularly with respect thereto, said web having one edge engaging the face plate and having integral arched portions formed therefrom engaging the face plate along a line spaced from the line of engagement formed therewith by the edge of the web.

15. A brake shoe comprising an arcuate metal face plate, an arcuate metal web arranged perpendicularly thereto with one edge thereof secured to one side of the face plate, an end-thrust member for the web having spaced apart walls arranged on opposite sides of the web and secured thereto, each wall having a tongue punched therefrom away from the web and outwardly into engagement with the face plate and being secured to the face plate.

16. A brake shoe comprising an arcuate metal face plate, an arcuate metal web arranged perpendicularly thereto with one edge thereof secured to one side of the face plate, an end-thrust member for the web having a side wall arranged along one side of the web and secured thereto and having a tongue punched therefrom and pointing outwardly into supporting engagement with the face plate.

17. A brake shoe comprising an arcuate

metal face plate, an arcuate metal web arranged perpendicularly thereto with one edge thereof secured to one side of the face plate, an end-thrust member for the web having a part overlapping one side of the web in proximity its end provided with a portion formed therefrom and integral therewith bent outwardly into supporting engagement with the face plate.

18. A brake shoe comprising an arcuate metal face plate, an arcuate metal web arranged perpendicularly thereto with one edge thereof secured to one side of the face plate, an end-thrust member for the web having a thrust portion positioned beyond the end of the web and a web-engaging portion overlapping one side of the web and secured thereto and provided with a part integral therewith bent outwardly therefrom towards the face plate forming a supporting arch engaging the face plate.

In testimony whereof, I, RALPH J. BURTON, sign this specification.

RALPH J. BURTON.