Sept. 23, 1930. M. D. TUCKER 1,776,303

BLOCK CONSTRUCTION

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Fig. 1.

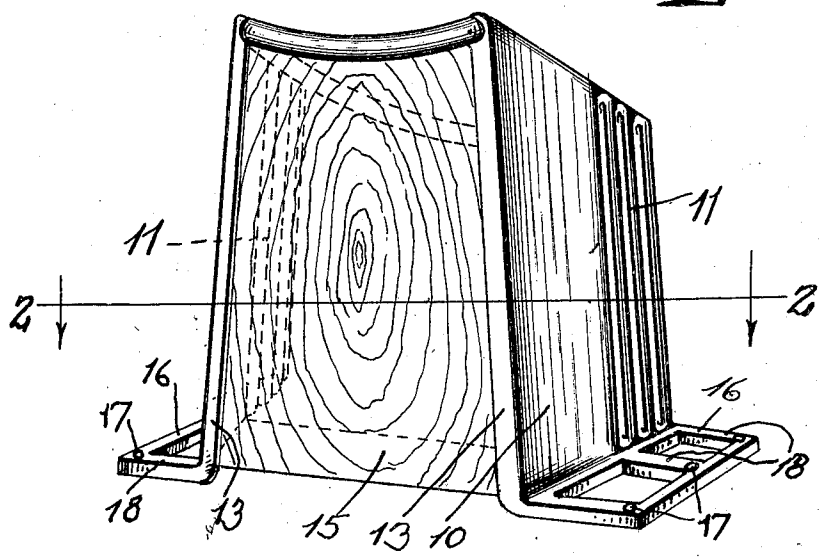


Fig. 2.

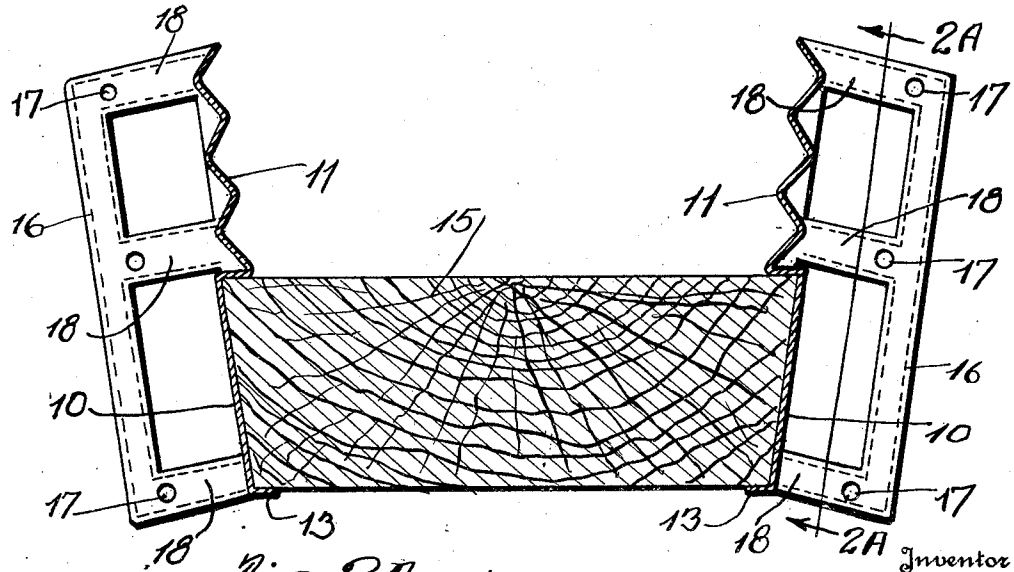
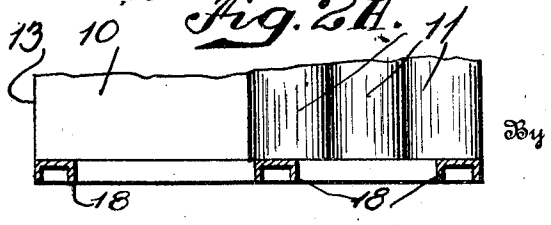


Fig. 2A.



Inventor
M. D. Tucker.

By

Attorney

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Fig. 3.

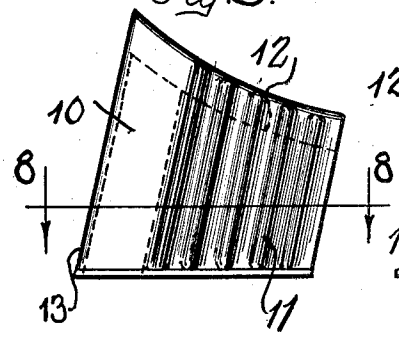


Fig. 4.

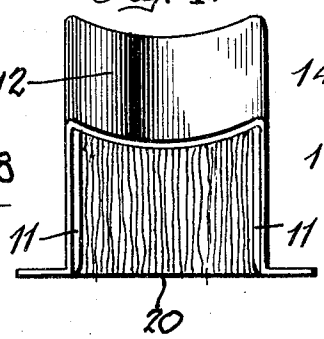


Fig. 5.

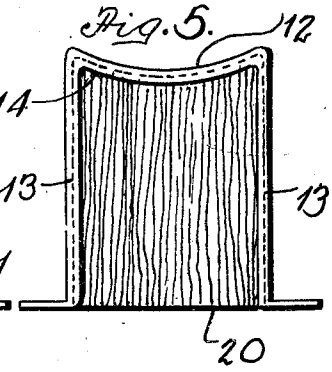


Fig. 6.

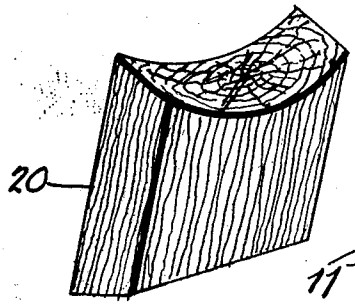


Fig. 7.

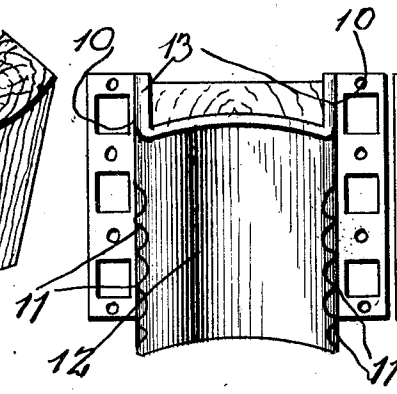


Fig. 8.

Fig. 9.

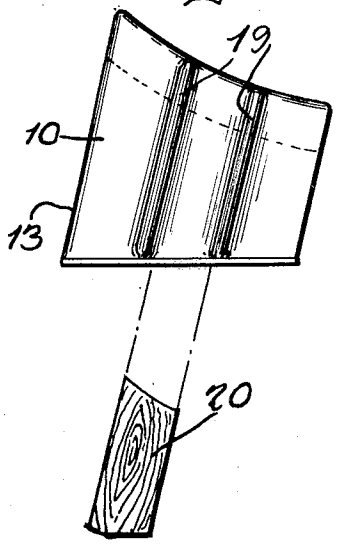


Fig. 10.

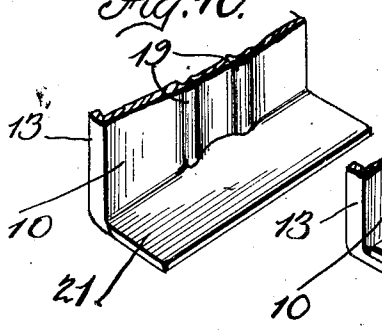
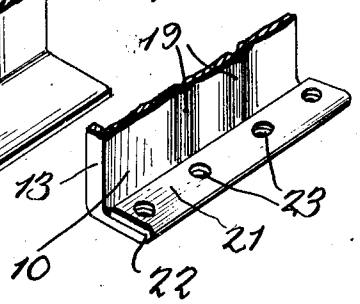


Fig. 11.



Inventor

M. D. Tucker.

By

Attorney.

Patented Sept. 23, 1930

1,776,303

UNITED STATES PATENT OFFICE

MAX D. TUCKER, OF DETROIT, MICHIGAN, ASSIGNOR TO THE EVANS AUTO LOADING CO., INC., OF DETROIT, MICHIGAN

BLOCK CONSTRUCTION

Application filed September 13, 1929. Serial No. 392,474.

This invention relates to automobile chock blocks of the kind which are placed against the wheels of automobiles in shipping the latter in freight cars to keep the automobiles from rolling to and fro in the cars.

Commonly such blocks have been made of wood with the grain parallel to the base or side on which the block rests. These blocks are held in position on the floor of the car by nailing or spiking through the block from top to base and it is obvious that the grain of the wood must be substantially parallel to the car floor as, if the grain were vertical, the block would be so liable to be split by the nails as to render such method of manufacture impracticable. Nevertheless it is much better to have the grain of the wood as nearly as possible in line with the compressive stress exerted on the block (that is, nearly vertical) since the compressive strength of wood is much greater with the grain than across the grain. For instance, white ash has a compressive strength parallel to the grain of about five times its strength perpendicular to the grain and the corresponding ratio in red oak is six and one half to one. The variation in soft woods is even greater, measuring in some instances about nine to one. Thus, a very much smaller chock can be used if the stress is kept parallel to the grain than if it is exerted crosswise of the grain.

Metal chocks for this purpose, even if made hollow, must have walls of considerable thickness to prevent such chocks from collapsing by the buckling of their walls. This means that the expense attendant on the use of such metal chocks renders them commercially impracticable.

One important object of the present invention is the provision of an improved composite wood and metal chock wherein the wood is used to resist the stress exerted by the automobile, the metal being thin and simply forming a sheath to hold the wood in proper end grain position and forming means by which the chock may be secured to a car floor.

A second important object of the invention is to provide a novel sheet metal chock so formed and constructed as to permit the insertion of a wood block filler with the grain in and on position to the exerted stresses on the chock.

With the above and other objects in view, as will be hereinafter apparent, the invention consists of certain novel features of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and

Figure 1 is a perspective view of one form of the improved chock;

Figure 2 is a section thereof on a horizontal plane through the line 2—2 of Figure 1;

Figure 2ª is a detail section on the line A—A of Fig. 2;

Figure 3 is a side elevation, to reduced scale, of a slightly modified form of chock;

Figure 4 is a front view of such modification;

Figure 5 is a rear view thereof;

Figure 6 is a perspective view of the wooden block used therewith;

Figure 7 is a plan view thereof;

Figure 8 is a section on the line 8—8 of Figure 3;

Figure 9 is a side elevation of a second modification showing the wood block in position for insertion therein;

Figure 10 is a perspective detail showing the first step in the formation of a modified form of flange;

Figure 11 is a similar view showing the completed flange.

In the forms of the invention shown in Figures 1 to 8 inclusive, there is provided a stamped metal casing preferably made from light gauge sheet steel. This casing is stamped, pressed or otherwise formed to provide a pair of side walls having flat rear portions 10 and vertically corrugated forward portions 11. The top edges of these side walls taper downwardly from rear to front and are joined by a trough like top 12 concavely curved in transverse section and, in the form shown in Figure 3, the top edges are not only tapered but longitudinally curved as can be seen from that fig-

ure. The upright rear edges of the side walls are flanged inwardly as at 13 and the rear edge of the top is flanged downwardly at 14. The flanges 13 are parallel to the nearest corrugations so that a wood filler block, shaped to conform to the space between the smooth side walls, will fit snugly therein. This block 15 is cut so that the grain runs in an upright direction and is curved on top to fit the top plate 12 closely. The bottom of the block is flat and, with the device in use, rests on the car floor or other surface whereon the chock is seated. Thus any weight placed on the concave surface of the top is supported by the wood block endwise of the grain and so in its strongest position.

Flanges 16 are turned outwardly at the lower edges of the side walls and are provided with nail or spike holes 17. These flanges are preferably punched and formed to provide downwardly extending stiffening ribs 18.

In the form shown in Figure 9, each side wall is provided with two widely spaced corrugations 19 located on opposite sides of the longitudinal center line so that a filler block 20 of the same type as that above described may be placed in the casing and held centrally by these corrugations.

In the form shown in Figures 10 and 11, the flanges are formed to form a flat portion 21 of the plate by doubling such portions as at 22 and punching the nail holes 23.

In each of these forms it will be seen that the light steel casing takes but little of the stress, by far the larger portion of such stress being supported on the wood block in the endwise position of the grain. Thus the chock can be made very light so that it can be readily handled and but little wood is used and that used will not have its strength weakened by nails or the like being driven therethrough.

It is obvious that minor changes may be made in the form and construction of the device so that it is to be understood that the present invention covers all forms which come within the scope claimed.

Having thus described the invention, what is claimed is new is:—

1. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, and a top for said casing connecting said guides and resting in part on the upper end of said block.

2. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, and a top for said casing connecting said guides and resting in part on the upper end of said block, and top and the upper end of the block being transversely concave.

3. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, a top for said casing connecting said guides and resting in part on the upper end of said block, and top and the upper end of the block being transversely concave, and inclined downwardly from rear to front.

4. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, a top for said casing connecting said guides and resting in part on the upper end of said block and top and the upper end of the block being transversely concave and inclined downwardly from rear to front in a longitudinally extending arc.

5. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, and a top for said casing connecting said guides and resting in part on the upper end of said block, said side walls being vertically corrugated adjacent said block.

6. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its

lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, and a top for said casing connecting said guides and resting in part on the upper end of said block, and top and the upper end of the block being transversely concave, said side walls being vertically corrugated adjacent said block.

7. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, a top for said casing connecting said guides and resting in part on the upper end of said block and top and the upper end of the block being transversely concave, and inclined downwardly from rear to front, said side walls being vertically corrugated adjacent said block.

8. A wheel chock for shipping vehicles consisting of a casing having upstanding side walls provided with spaced upstanding guides, said casing being open at the bottom, attaching flanges formed on the bottom edges of said side walls, a wood block fitted in said casing between said guides and having its lower end flush with the open bottom of the casing, said block being positioned to rest on the grain of the block endwise, a top of said casing connecting said guides and resting in part on the upper end of said block and top and the upper end of the block being transversely concave and inclined downwardly from rear to front in a longitudinally extending arc, said side walls being vertically corrugated adjacent said block.

In testimony whereof I affix my signature.

MAX D. TUCKER.