

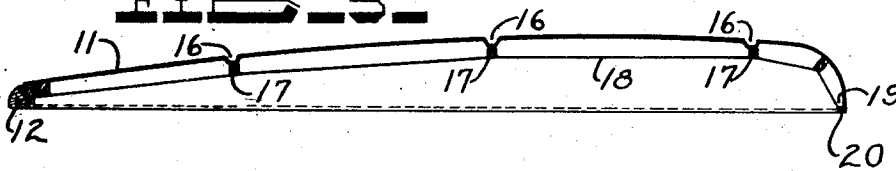
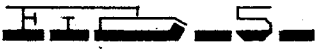
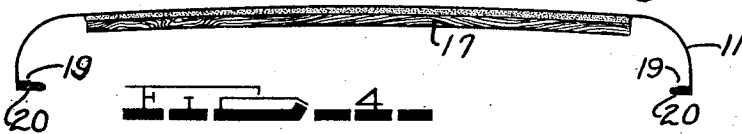
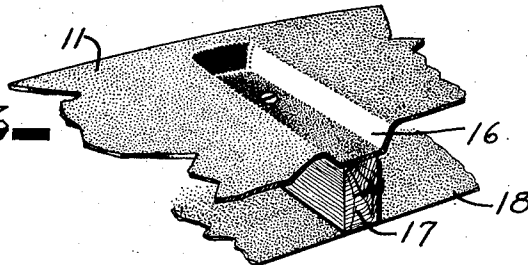
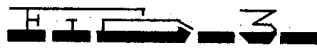
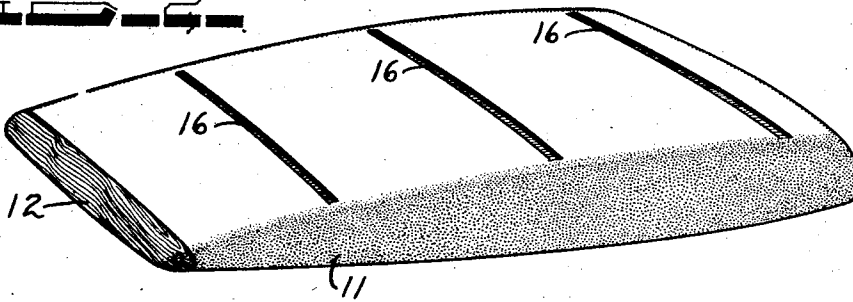
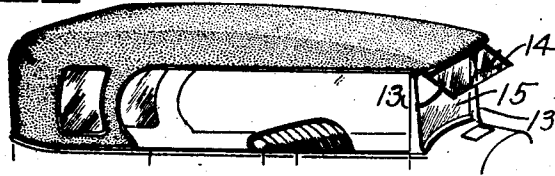
Sept. 21, 1926.

1,600,533

J. H. BOURGON

TOP CONSTRUCTION

Filed Dec. 13, 1924



INVENTOR

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BY

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## UNITED STATES PATENT OFFICE.

JOSEPH H. BOURGON, OF DETROIT, MICHIGAN, ASSIGNOR TO THE STUDEBAKER CORPORATION, OF SOUTH BEND, INDIANA, AND DETROIT, MICHIGAN, A CORPORATION OF NEW JERSEY.

### TOP CONSTRUCTION.

Application filed December 13, 1924. Serial No. 755,728.

This invention relates to tops for motor vehicles and the like and particularly to tops of the permanent type and has for one of its objects to provide a top frame composed of sheet metal of such a construction that the top of which it forms a part will not be subject to the drumming usually associated with tops previously used.

Another object is to provide a permanent top frame shaped from a continuous sheet of metal to which the various other top frame members may be applied to form a permanent unitary structure.

Another object is to provide a permanent top frame formed from a continuous sheet of metal with transverse trough-like depressions spaced at frequent intervals which extend substantially across the same along the upper portion thereof.

A further object is to provide a permanent top frame formed from a continuous piece of sheet metal and having a plurality of trough-like depressions formed therein extending substantially across the same, with a plurality of wooden cross ribs which are secured to the bottom of the trough-like depressions to strengthen the same and to provide a tacking strip for securing the top lining thereto.

A still further object is to provide a permanent top shaped from a continuous sheet of metal having the bottom edges of the metal bent inwardly at the sides and rear portion substantially perpendicularly to the same forming a horizontally disposed flange, the frame also having a continuous wooden tacking member secured to the flange extending around the sides and rear portion thereof for securing the top covering thereto.

The above being among the objects of the present invention the same consists of certain features of construction and combination of parts to be hereinafter described with reference to the accompanying drawing, and then claimed, having the above and other objects in view.

In the accompanying drawing which illustrates a suitable embodiment of the present invention and in which like numerals

refer to like parts throughout the several views,

Figure 1 is a perspective view of the finished top as it appears assembled on an automobile body.

Figure 2 is a perspective view of the top frame as it appears before the top lining, covering and other finishing parts have been assembled thereto.

Figure 3 is a fragmentary perspective view of a portion of the top frame showing the depressions formed therein, the wooden cross rib secured to the under surface of the bottom of the depression and the top lining tacked to the cross rib.

Figure 4 is a transverse section taken through the top frame at a point adjacent one of the cross ribs.

Figure 5 is a longitudinal section taken through the central portion of the top and showing the top lining secured to the inside of the top frame.

In tops heretofore used, wherein the central portion was bridged by sheet metal or where the top frame was formed from a continuous piece of sheet metal, drumming has been much in evidence, which was caused by the tendency of the sheet metal forming the frame to vibrate in harmony with other vibrations present in the automobile or with the explosions of the engine similar to the manner in which a drum head may be made to vibrate in unison with other vibrations. The present invention overcomes this objection and also provides a structure which is strong and serviceable, yet of relatively light weight, and economical to manufacture.

The top frame 11 is formed from a continuous piece of sheet metal to the desired shape, that is to the shape of the usual top constructions as shown in Figures 1 and 2, but preferably such that no flat spots are present at any place on its surface to assist in eliminating any drumming sound that may develop, as it is well known that a curved surface will not vibrate as much as a flat surface.

A wooden front cross member 12, as shown in Figures 2 and 4, is secured to the front end

of the top and provides a means for more easily securing the front top supports 13, rainshield 14 and windshield 15 thereto, but if it is desired this cross member may be eliminated and the front edge of the metal may be formed to provide an attaching means.

At frequent intervals depressions 16 are provided in the central portion of the top frame 11 extending substantially across the same. These depressions are preferably formed to provide ribs, which strengthen the top in a plane perpendicular to its surface to eliminate the "drumming" above referred to. To further insure against "drumming" wooden strips or ribs 17 are secured to the under surface of the bottoms of the depressions 16 which also constitute a convenient means for securing the top lining 18 thereto.

Another disagreeable feature previously encountered in tops of this general character is the crackling or snapping sound which is caused by the "weaving" of the top when the automobile, of which it forms a part, is passing over rough or uneven roads, which is caused by a change or reversal of stresses set up in the different portions of top when the same is weaving, which stresses may tend to buckle the metal in one direction or portion and to pull it apart in another direction or portion, there having been no provision to absorb these stresses. The depressions 16 mentioned in the preceding paragraph absorb and break up these shifting stresses and accomplish this result by reason of their vertical walls which give slightly to stresses acting in the longitudinal plane of the top, and which walls, although giving flexibility to the top in the plane of its surface, act at the same time to give the top greater strength perpendicular to its plane.

The bottom edge of the metal at the sides and rear portion is bent inwardly substantially perpendicular to the same to form a continuous horizontal flange 19 extending around the sides and back thereof to which a wooden member 20 may be suitably secured which may be utilized in several ways such as a tacking strip for the outer covering or the like.

Although in the foregoing description and in the following claims the frame is referred to as being formed from a continuous piece of sheet metal, it is to be understood that the present invention is not limited to a construction formed from a single sheet of metal as it applies equally as well to and includes those constructions made up of a plu-

rality of metal units welded, riveted or otherwise suitably secured together to form a continuous sheet of metal.

It is also to be understood that, although the drawing shows the frame 11 as being applied to an open type of automobile body, it may equally well be applied to bodies of the closed type with equal advantages.

Formal changes may be made in the specific embodiment of the invention without departing from the spirit or substance of the broad invention, the scope of which is commensurate with the appended claims.

What I claim is:—

1. In combination with an automobile top comprising a frame formed from a continuous sheet of metal into a shape having vertically disposed side and rear portions and a substantially horizontally disposed upper surface, a plurality of transverse depressions formed in said upper surface, tacking strips secured to said depressions, a horizontally disposed flange formed at the edge of the metal extending around said sides and rear portion, a tacking strip secured to said flange, and a top lining secured to said tacking strips on said depressions and flange to conceal said depressions, tacking strips and flange from view.

2. In combination with an automobile top frame having cover sides and back, and a substantially horizontal top portion formed from a continuous sheet of metal, transverse depressions formed in the horizontal portion of said top, terminating intermediate and adjacent to said cover sides, said depressions having converging side and end walls, and a horizontal bottom wall, and tacking strips secured to said horizontal walls of said depressions, said strips forming reinforcing means for said top frame.

3. In combination with an automobile top frame having cover sides and back, and a substantially horizontal top portion formed from a continuous sheet of metal, transverse depressions formed in the horizontal portion of said top, said depressions having converging side and end walls, and a horizontal bottom wall, tacking strips secured to said horizontal walls of said depressions, said strips forming reinforcing means for said top frame, and a flexible top lining secured to said tacking strips to conceal the bottom of said frame, depressions and tacking strips.

Signed by me at Detroit, Michigan, U. S. A., this 5th day of December, 1924.

JOSEPH H. BOURGON.

**Certificate of Correction.**

It is hereby certified that in Letters Patent No. 1,600,533, granted September 21, 1926, upon the application of Joseph H. Bourgon, of Detroit, Michigan, for an improvement in "Top Construction," errors appear in the printed specification requiring correction as follows: Page 2, lines 89 and 94, claim 2, and line 101, claim 3, for the word "cover" read *coved*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 12th day of October, A. D. 1926.

[SEAL.]

M. J. MOORE,  
*Acting Commissioner of Patents.*