

No. 813,175.

PATENTED FEB. 20, 1906.

A. E. SCHAAF & F. S. DAVIS.

AUTOMOBILE FRAME.

APPLICATION FILED AUG. 27, 1904.

Fig. 1.

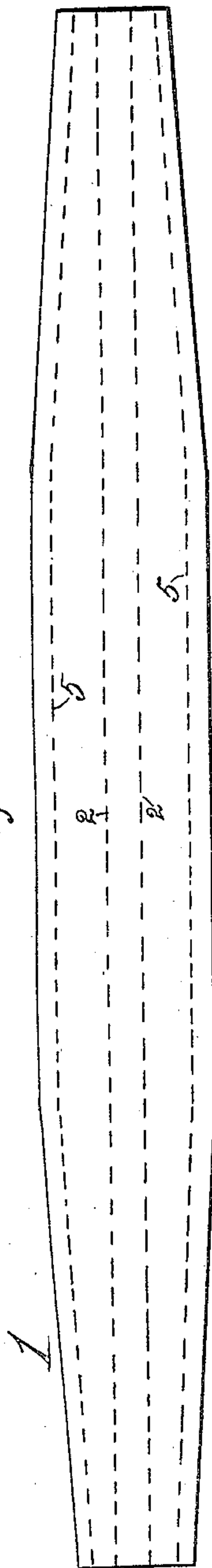


Fig. 2.

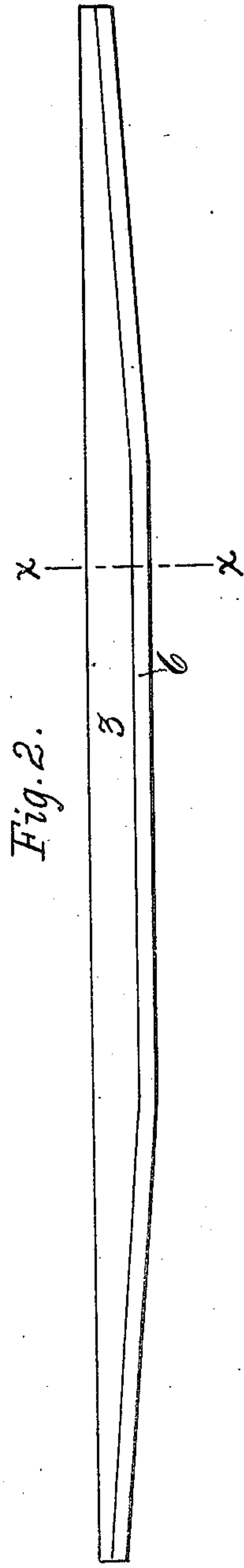
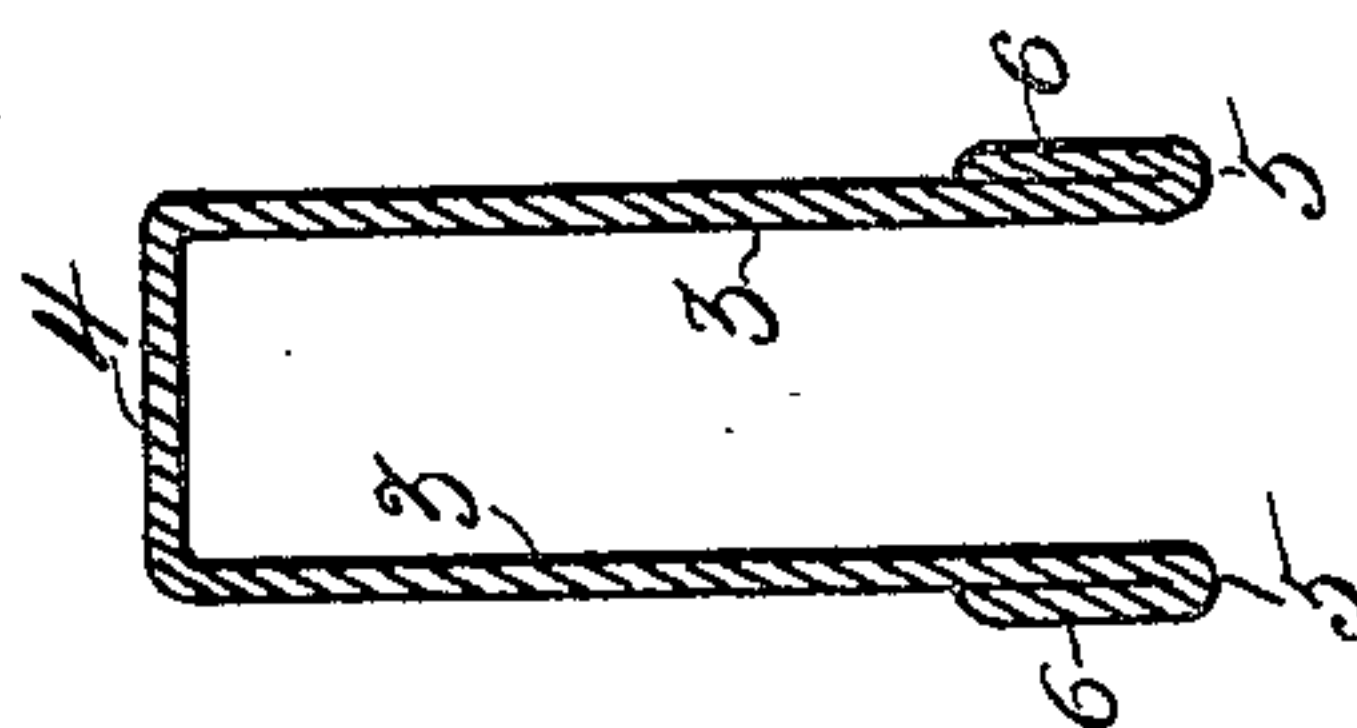


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ALBERT E. SCHAAF AND FRANK S. DAVIS, OF TOLEDO, OHIO.

## AUTOMOBILE-FRAME.

No. 813,175.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed August 27, 1904. Serial No. 222,390.

*To all whom it may concern:*

Be it known that we, ALBERT E. SCHAAF and FRANK S. DAVIS, citizens of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Automobile-Frames; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to automobile-frames, and more particularly to that class of frames which is composed of strips of sheet metal formed in cross-section in angular U shape. Frames formed of members of this character are found in practice to be light and fairly strong and rigid.

The object of our invention is to largely add to the strength and rigidity of frames composed of members of this character without adding materially to the weight of the structure. We accomplish this result by means of the devices and arrangement of parts hereinafter described, and shown and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a blank for a side bar for an automobile-frame; Fig. 2, a side elevation of such side bar formed from the blank shown in Fig. 1; and Fig. 3, a transverse sectional elevation of the same, on an enlarged scale, taken on line *xx*, Fig. 2.

Like numerals of reference indicate like parts throughout the drawings.

In the drawings, 1 is a flat elongated piece of sheet metal slightly tapering toward each end. The sides of this blank are bent on lines 2 2 at a right angle to the plane of the blank and into parallel relation to form the two sides 3 3 and the connecting portion 4 of the side bar. The margins of the parallel sides are turned outwardly and backwardly on

line 5 against the outer surfaces of the portions 3, thus forming a thickened or reinforced bead or rib 6 at each longitudinal edge of the bar.

The bends above referred to may be formed upon any suitable machinery, such as brakes, die-presses, rolls, or the like. The ribs or beads 6, formed upon the margins of the bar, not only give a neat smooth finish to the edges of the bar, but add greatly to the strength and rigidity of the member and overcome any tendency of the metal to crack or yield at its margins when heavy strains are imposed upon the upper or closed portion 4.

While we have for illustration shown in the drawings a side bar of an automobile-frame, the blank for the bar being tapered at each end, it is obvious that other members of the frame may be formed as illustrated in cross-section in Fig. 3, the blanks for such bars being of rectangular or any other desired outline. It will also be seen that various methods may be employed for forming the beads 6.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

A member for automobile-frames comprising a metallic bar bent to present an exterior bearing-surface as 4 and substantially parallel supporting members as 3, said supporting members being approximately perpendicular to the said bearing-surface and longitudinal strengthening-beads, as 6, formed upon the outer margins of the said supporting members, said strengthening-beads being formed by folding back upon themselves the margins of the supporting members 3 substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ALBERT E. SCHAAF.  
FRANK S. DAVIS.

Witnesses:

CLEM V. WAGNER,  
M. L. MARKS.