May 17, 1955 H. G. KATES 2,708,495

LUGGAGE FRAMES

Filed Jan. 26, 1954

Fig. 3.

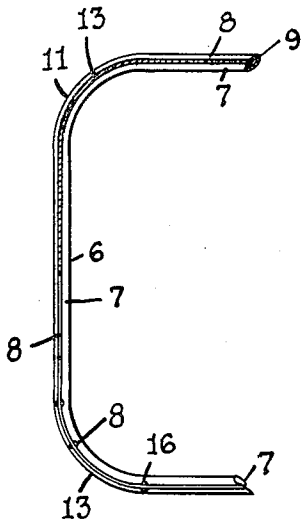


Fig. 2.

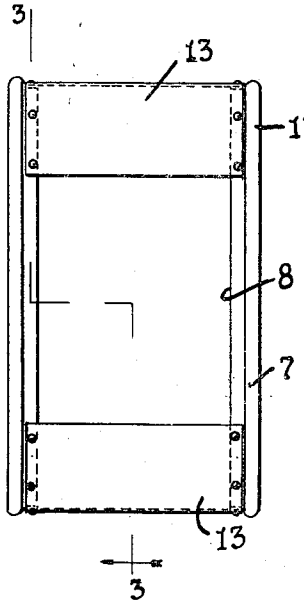


Fig. 4.

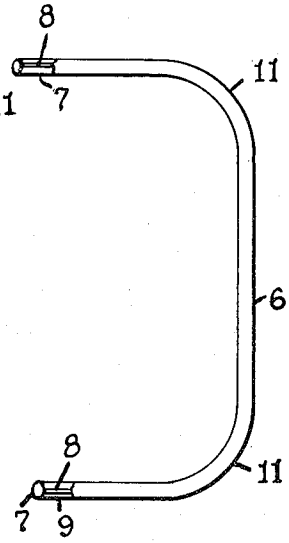
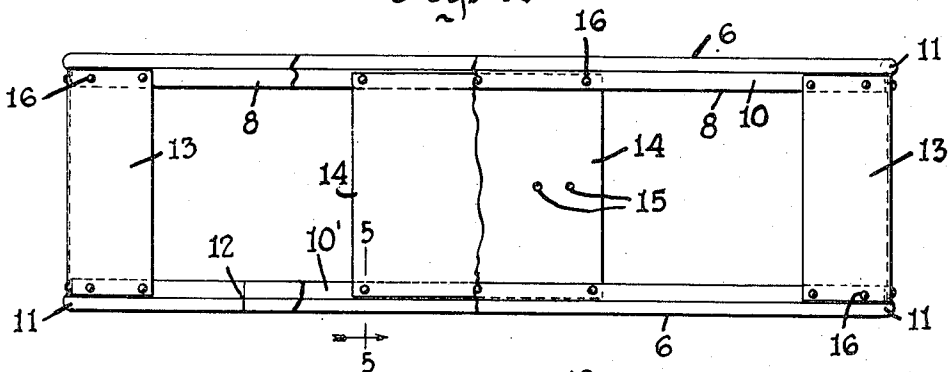


Fig. 1.



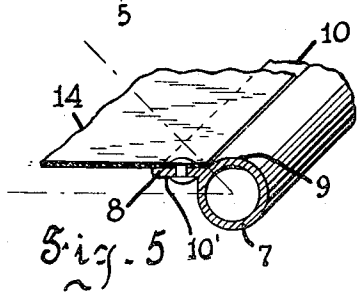


Fig. 5

INVENTOR.
H. G. Kates.

BY

Hoffe Att.

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LUGGAGE FRAMES

Hyman Gordon Kates, New York, N. Y.

Application January 26, 1954, Serial No. 406,293
4 Claims. (Cl. 190—49)

My invention relates to luggage frames of the light weight tubular type and has reference to a lateral flange integral and coextensive with the tube, offset from the proximate peripheral portion of the tube to provide clearance for bracing means of the frame below the said peripheral portion of the tube on the flange.

An object of the invention is to provide an assembled luggage frame of greater strength and rigidity that requires less costly operation in its fabrication.

Another object of the invention is to provide a luggage frame suitable for covering material of either flexible or rigid type.

A further object of the invention is to locate the bracing means of the frame so that no pressure or chafing is exerted on the frame covering.

In the appended drawing forming part of this application:

Fig. 1 is a side elevation of a frame embodying my invention with portions thereof broken away to better illustrate the construction;

Fig. 2 is an end elevation of the frame;

Fig. 3 is a section on line 3—3 of Fig. 2 showing a fragment of an end portion of the frame;

Fig. 4 is an elevation of the opposite end fragment of the frame; and

Fig. 5 is an enlarged cross-section on line 5—5, Fig. 1, partly in perspective.

Referring to the drawing the main frame elements **6** are each formed of a tubular member **7** (see Fig. 5) provided with a lateral flange **8** integral with the tube and running parallel with its axis. The flange **8** is offset from the proximate highest peripheral portion **9** which runs parallel with the upper surface **10** of the flange to provide clearance thereat below said peripheral highest portion **9** with reference to said surface **10** of the flange **8**. Each of the frame elements **6** is bent to form a substantially rectangular frame with the corners rounded as shown at **11**. The butting ends **12** of the tubular frame members **6** of which only one is shown are pinned to an interior plug not shown to maintain the frame in shape and prevent the frame ends from separating.

The two frame members **6** are spaced by arched struts **13** having the curvature corresponding to that of the corners **11**. The struts **13** are positioned on the upper face **10** of the flange **8** of the corresponding rounded corners **11** to abut with their ends the adjacent peripheries of the tubes **7**. In addition to the arcuated struts **13** located at the ends of the frame members **6** intermediate struts **14** are provided on the sides of the frame. These intermediate struts **14** are preferably made to engage the corresponding lower surface **10'** of the flange **8**. The strut **14** which is to receive the handle for the luggage frame is indicated by perforations **15** and must always be engaged with the lower face **10'** of the flange **8** so that when the luggage is carried the brunt of same is carried not only by the rivets but by the flanges **8**.

By providing the tubular frame members with a flange the same can be punched to receive rivets **16** that tie the struts to the frame members in lieu of drilling the frame members. By offsetting the flange **8** below the proximate peripheral portion **9** of the tube, the rivets **16** coupling the struts to the flange are below said peripheral portion **9**. In consequence when the assembled

frame is covered with suitable material, there is no pressure on the fabric whatever the covering may be and therefore no possibility of injury to the fabric. By bringing the butting edges of the struts against the proximate peripheral surface of the tube the frame when subjected to stresses along the struts will resist not only by the rivets but by the frame members **6** in addition.

The amount of offset of the flange from the proximate highest peripheral portion **9** of the tube is substantially constant no matter what the diameter of the tube is. In Fig. 5, ½" tubing is shown in which the offset is about at an angle of 45° at the intersection at the upper surface **10** of the flange **8** with the periphery of the tube and a plane passing through the intersection and the axis of the tube. But if a larger diameter of the tube is used the angle of the flange with the axis of the tube will be different for the offset of the flange from the proximate highest peripheral portion of the tube will be substantially the same as that of the ½" tubing.

I claim:

1. In a luggage frame two substantially rectangular shaped frame members spaced from each other and each having rounded corners, each of said members being of tubular cross-section provided with an integral flange offset from the proximate highest outer peripheral portion and running parallel to said peripheral portion, the flanges of said frame members being opposite to each other, arched struts coupled to the flanges at said rounded corners, and struts coupled to said flanges intermediate said arched struts, one of said last mentioned struts preferably engaging the inner faces of the flanges.

2. In a luggage frame two substantially rectangular shaped frame members spaced from each other and each having rounded corners, each of said members being of tubular cross-section provided with an integral flange offset from the proximate highest outer peripheral portion and running parallel to said peripheral portion, the flanges of said frame members being opposite to each other, arched struts coupled to the flanges at said rounded corners, the ends of said arched struts abutting against the respective peripheral tubular portions at the flanges, and struts coupled to said flanges intermediate the arched struts in the longer rectangular sides of the frame members, one of said struts intermediate the arched struts preferably engaging the inner faces of the flanges.

3. In a luggage frame two substantially rectangular shaped frame members spaced from each other and each having rounded corners, each of said members being of tubular cross-section provided with an integral flange offset from the proximate highest outer peripheral portion and running parallel to said peripheral portion, the flanges of said frame members being opposite to each other, arched struts coupled to the upper surface of said flanges at the rounded corner to butt against the proximate peripheral tubular portion, and struts coupled to said lower surface of said flanges intermediate the arched struts in the longer rectangular sides of the frame members, also butting against the proximate peripheral surface of the tube.

4. As an article of manufacture a Duralumin tube having an integral lateral flange coextensive with the tube and offset from the proximate highest outer peripheral portion of the tube and the axis of the tube and parallel thereto to provide a predetermined clearance below said peripheral portion said flange forming an acute angle with a plane passing through the axis of the tube and the intersection of the flange with the tube.

References Cited in the file of this patent

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