No. 792,387. PATENTED JUNE 13, 1905.

W. J. BAKER.

CARRIAGE TOP FRAME JOINT.

APPLICATION FILED FEB. 8, 1905.

2 SHEETS—SHEET 1.

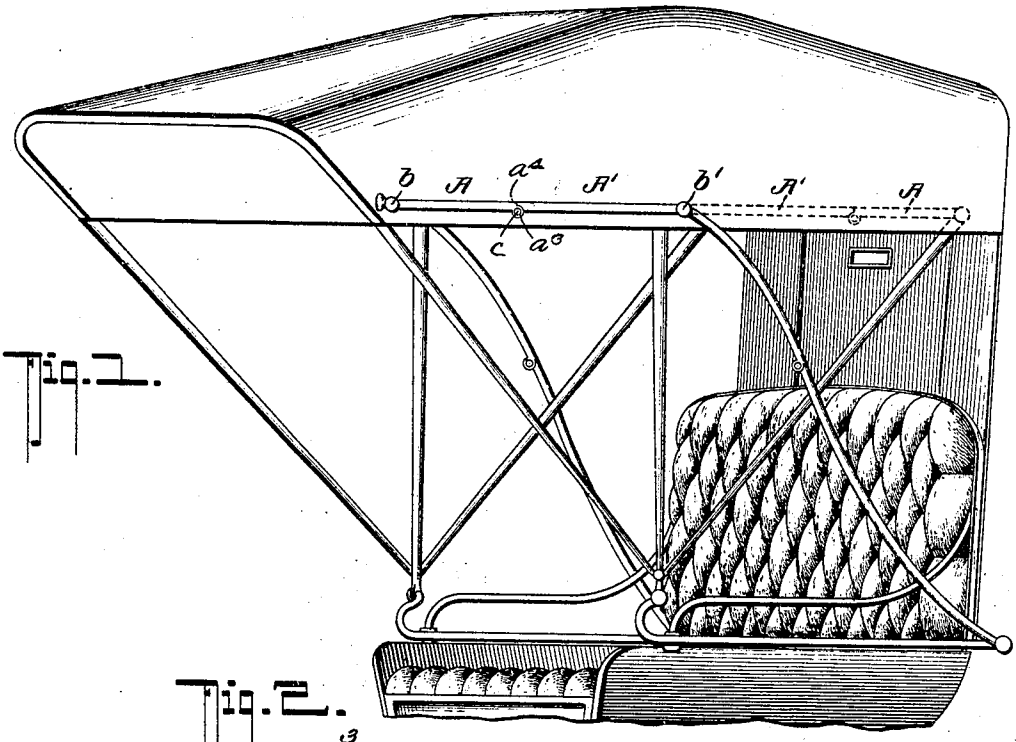


Fig. 1.

Fig. 2.

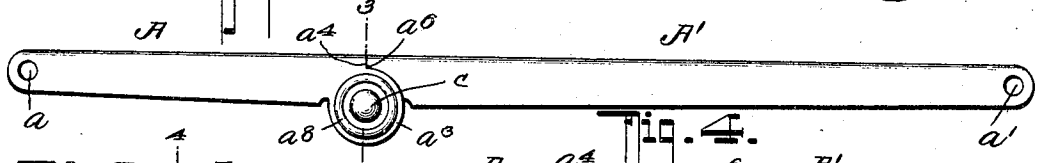


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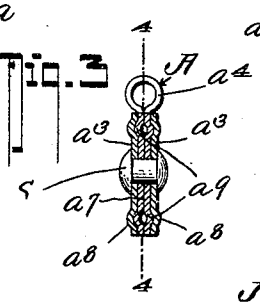
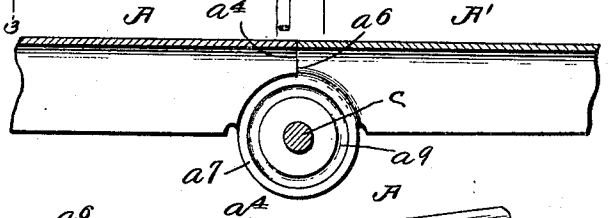


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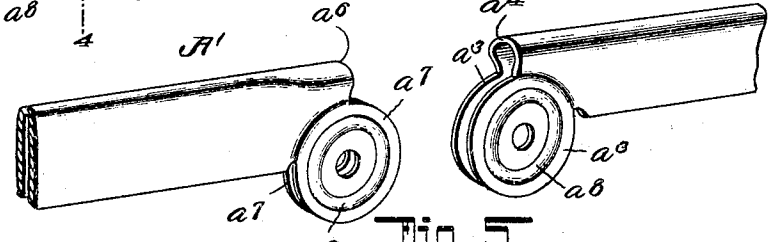


Fig. 5.

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2 SHEETS—SHEET 2.

Fig. 6.

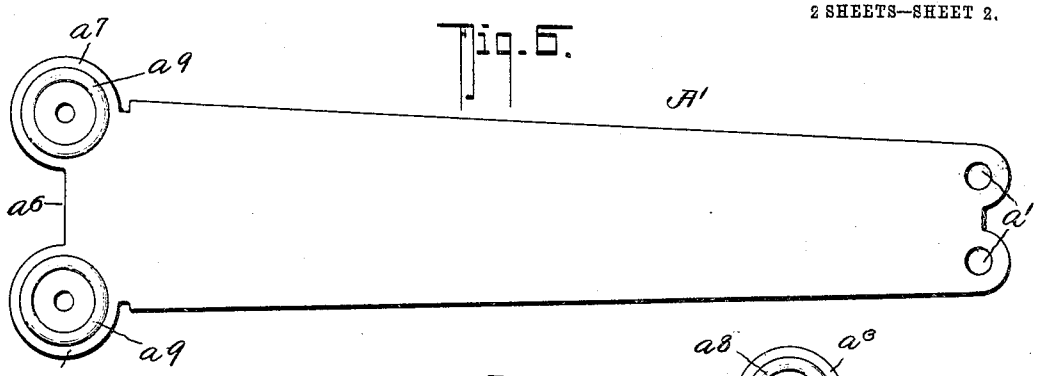


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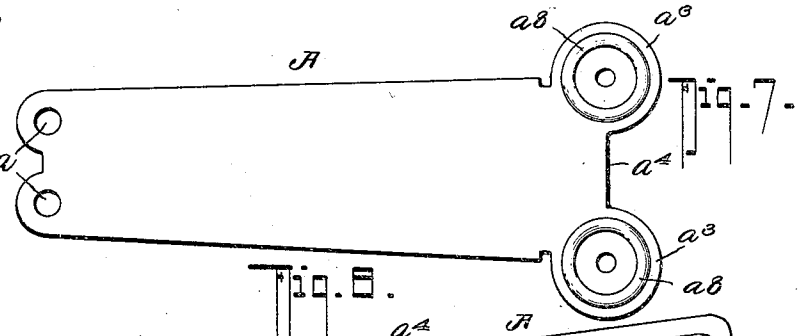


Fig. 12.

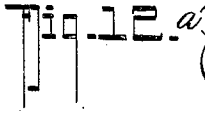


Fig. 8.

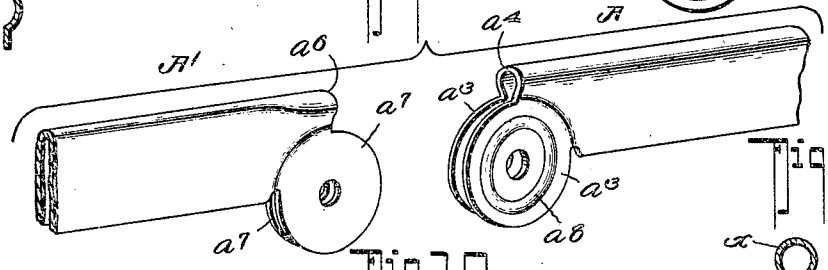
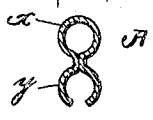


Fig. 10.

Fig. 11.



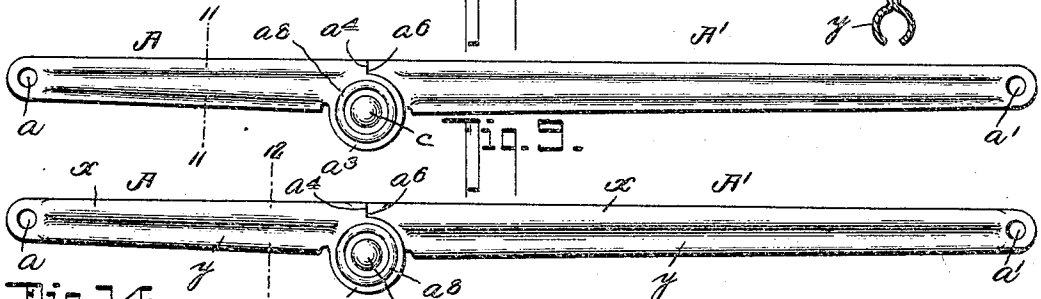
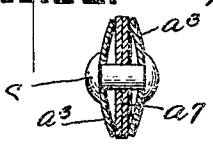


Fig. 9.

Fig. 14.



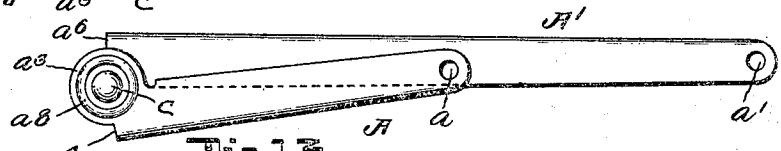


Fig. 13.

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No. 792,387. Patented June 13, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM J. BAKER, OF NEWPORT, KENTUCKY.

CARRIAGE-TOP-FRAME JOINT.

SPECIFICATION forming part of Letters Patent No. 792,387, dated June 13, 1905.

Application filed February 8, 1905. Serial No. 244,767.

To all whom it may concern:

Be it known that I, WILLIAM J. BAKER, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Carriage-Top-Frame Joints, of which the following is a specification.

This invention relates to metallic foldable frame-joints, and seeks to provide a new and improved top-frame member composed of foldable sections formed entirely of sheet metal and having a special coöperative arrangement of joint end, whereby a simple, economical, and easily-assembled sectional frame member is provided capable of withstanding considerable wear and strain and not adapted to be broken or snapped under ordinary use, as is frequently instant in the use of malleable and cast metal frames.

In its generic nature my invention comprehends a metallic frame member formed entirely of sheet metal bent to shape to form hinge-joint connections for attaching the said frame member with another like-constructed section, the said joint and ends being also formed of sheet-metal members bent to the desired shape.

In its more subordinate features my invention consists in a top-frame composed of sheet-metal members bent up to the desired shape out of a single piece of sheet metal and means for hingedly securing the several frame-sections; and the invention also consists in certain improvements on my copending application, filed December 5, 1904, Serial No. 235,536.

The invention also has for its object to provide a frame member of the character herein specified of a simple and durable construction; and the invention also consists in certain details of construction and combination of parts, all of which will be first described in detail and then specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view showing my invention as applied for use. Fig. 2 is a side elevation of one of the hinge frame members, showing the preferred form of my invention. Fig. 3 is a cross-section on the line 3 3 thereof. Fig. 4 is a vertical longitudinal section thereof on the line 4 4 of Fig. 3. Fig. 5 is a perspective view of the hinge end of the two sections, showing the construction thereof. Figs. 6 and 7 are views of the blank from which my invention is formed. Fig. 8 is a perspective view of a slightly-modified form of my invention. Figs. 9 and 10 are detail views of further modifications of my invention, showing the manner of bending the sections and forming them with corrugations to add strength thereto. Figs. 11 and 12 are cross-sections on the lines 11 11 and 12 12 of Figs. 10 and 9, respectively. Fig. 13 is a detail view hereinafter referred to. Fig. 14 is a detail view of a modification hereinafter referred to.

Referring now to the accompanying drawings, in which like letters of reference indicate like parts in all the figures, it will be seen that I form the frame member or top-prop of two sections, as is usual, and make the said sections each from a single piece of sheet metal, one of which, A′, has the shape of the blank shown in Fig. 6 and the other, A, has the shape of the blank shown in Fig. 7. Each of the blanks shown is bent up into tubular shape approximately U-shaped in cross-section, (see Figs. 3 and 5,) and the outer ends thereof are apertured, as at a a', to receive the pintle or screw pivots b b', as shown.

The inner or hinge end of the section A has a pair of apertured ears a^3 a^3 substantially circular in side elevation, and the said end has the usual shoulder or stop portion a^4, and the inner end of the section A′ has the stop portion a^6 and a pair of oppositely-disposed ears or lugs a^7 a^7 of like form as the ears a^3 a^3 and likewise apertured. The ears a^7 a^7 are normally sprung slightly apart to serve as spring members, so that when they are fitted within the ears a^3 a^3 they will tightly engage the walls of the said ears a^3 a^3. The ears a^3 a^3 are provided with a circular bead a^8 a^8 on the outer face, forming a groove on its inner face, which groove is circular and concentric with the rivet-aperture of the ear a^3. The section A′ has its ears a^7 a^7 similarly formed with beads a^9 a^9, which when the two sections are assembled seat into the grooves formed by the beads

a^8 a^8 in the ears a^3 a^3. A pivot bolt or stud c passes through the apertures of the ears a^3 a^7 and holds the sections together. The beads a^8 a^9 serve not only as bearings for their respective ears when the sections are assembled, but they also serve to strengthen said ears and prevent them becoming bent and distorted.

The section A is U-shaped in cross-section, and the section A′ is of a corresponding shape. The section A′, however, is narrower than the section A, so as to fit within the section A when the parts are folded up, as shown in Fig. 13.

In Fig. 8 I have shown a slightly-modified form of my invention in which the bead a^9 of the ear a^7 is not used, and the said ear a^7 in this form of my invention is perfectly flat.

In Figs. 9 and 11 I have shown a slightly-modified form of my invention in which the members A and A′ are formed with the longitudinal beads x and y running from substantially one end to the other thereof to stiffen the said members A and A′.

In Figs. 10 and 11 I have shown a further modification of my invention in which the members A and A′ are formed with corrugations running lengthwise thereof for the same purpose as those shown in Figs. 9 and 11.

In Figure 14 I have shown a cross-section of a slightly-modified form of my invention in which the ears of the outer section are dished to make them more springy to keep the joint rigid at all times after the rivet has been secured in place. In the other forms of my invention the outer ears tend to spread apart to give them the necessary spring action.

From the foregoing description, taken in connection with the accompanying drawings, the many advantages and complete construction of my invention will be readily apparent to those skilled in the art to which it appertains, and I desire to say that slight changes in the detail construction, operation, and arrangement of parts may be made without departing from the scope of the invention and the appended claims.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A carriage-top prop and joint therefor, formed wholly of two sheet-metal sections, each section comprising a member bent into a substantial U shape in cross-section and provided at one end with apertures and at the other end with apertured ears, the ears of one section fitting within those of the other section, the ears of one section having circular beads surrounding the apertures therein, the ears of the other section having similarly-formed beads to fit into the beads of the first section, the ears of the inner section being sprung apart so that when the sections are fitted together the beads of the inner ears will spring into the beads of the outer ears and hold the two sections locked together, substantially as shown and described.

2. A carriage-top prop and joint therefor, formed wholly of two sheet-metal sections, each section comprising a member bent into a substantial U shape in cross-section and provided at one end with apertures and at the other end with apertured ears, the ears of one section fitting within those of the other section, the ears of one section having circular beads surrounding the apertures therein, the ears of the other section having similarly-formed beads to fit into the beads of the first section, the ears of the inner section being sprung apart so that when the sections are fitted together, the beads of the inner ears will spring into the beads of the outer ears to hold the two sections locked together, and a rivet passing through the ear-apertures, substantially as shown and described.

WILLIAM J. BAKER.

Witnesses:
MAX SCHLOSS,
R. E. KLEIN.