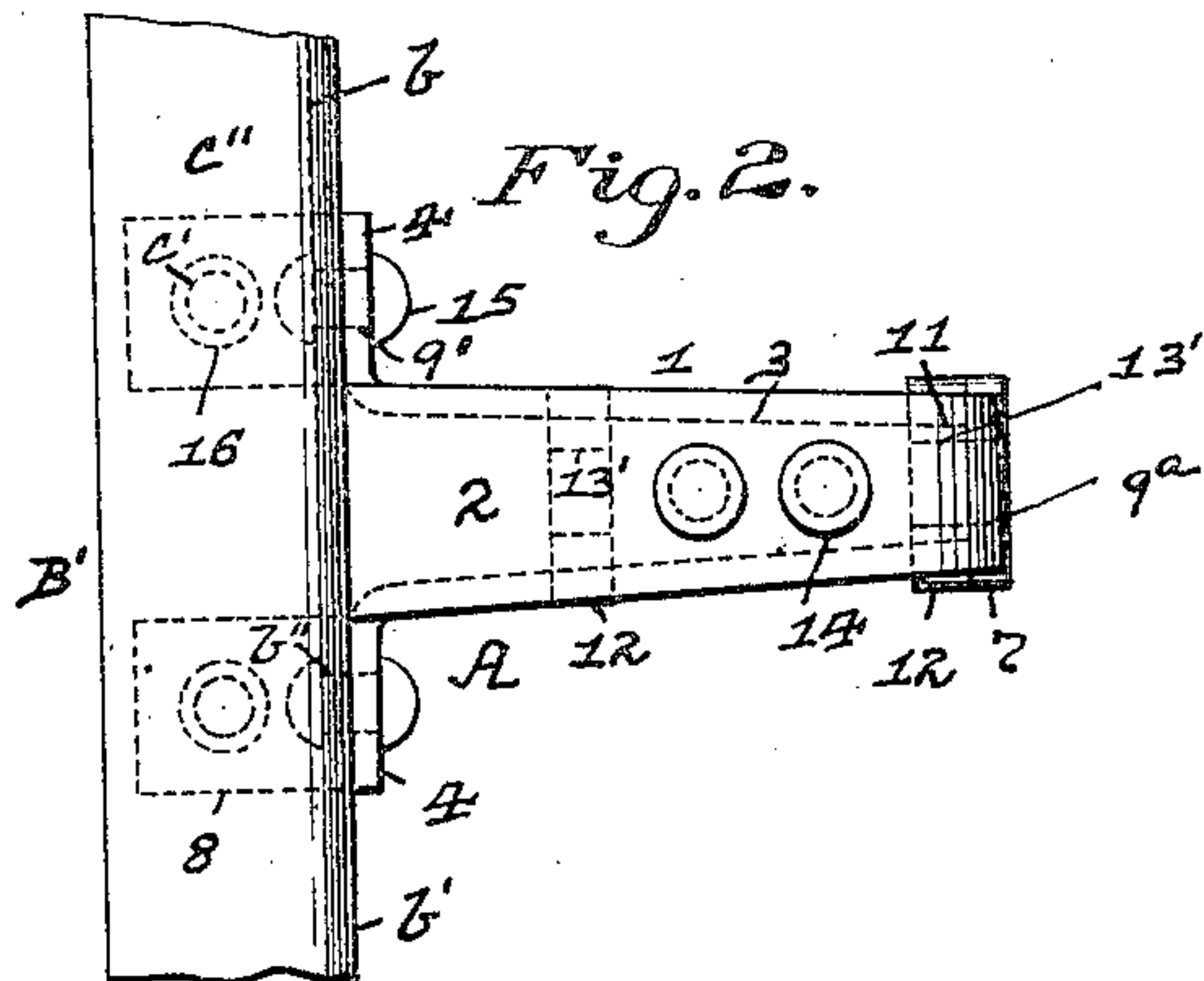
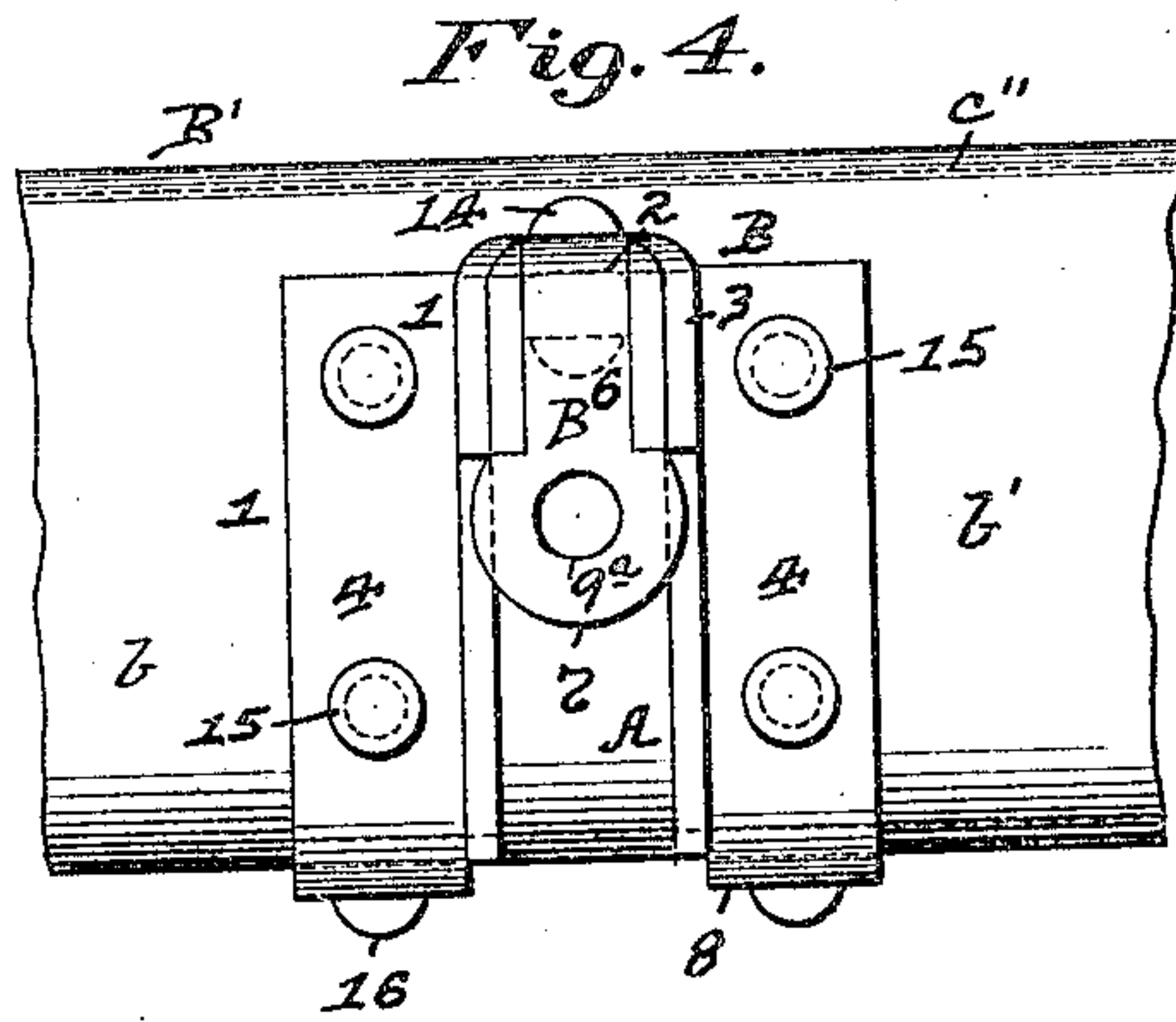
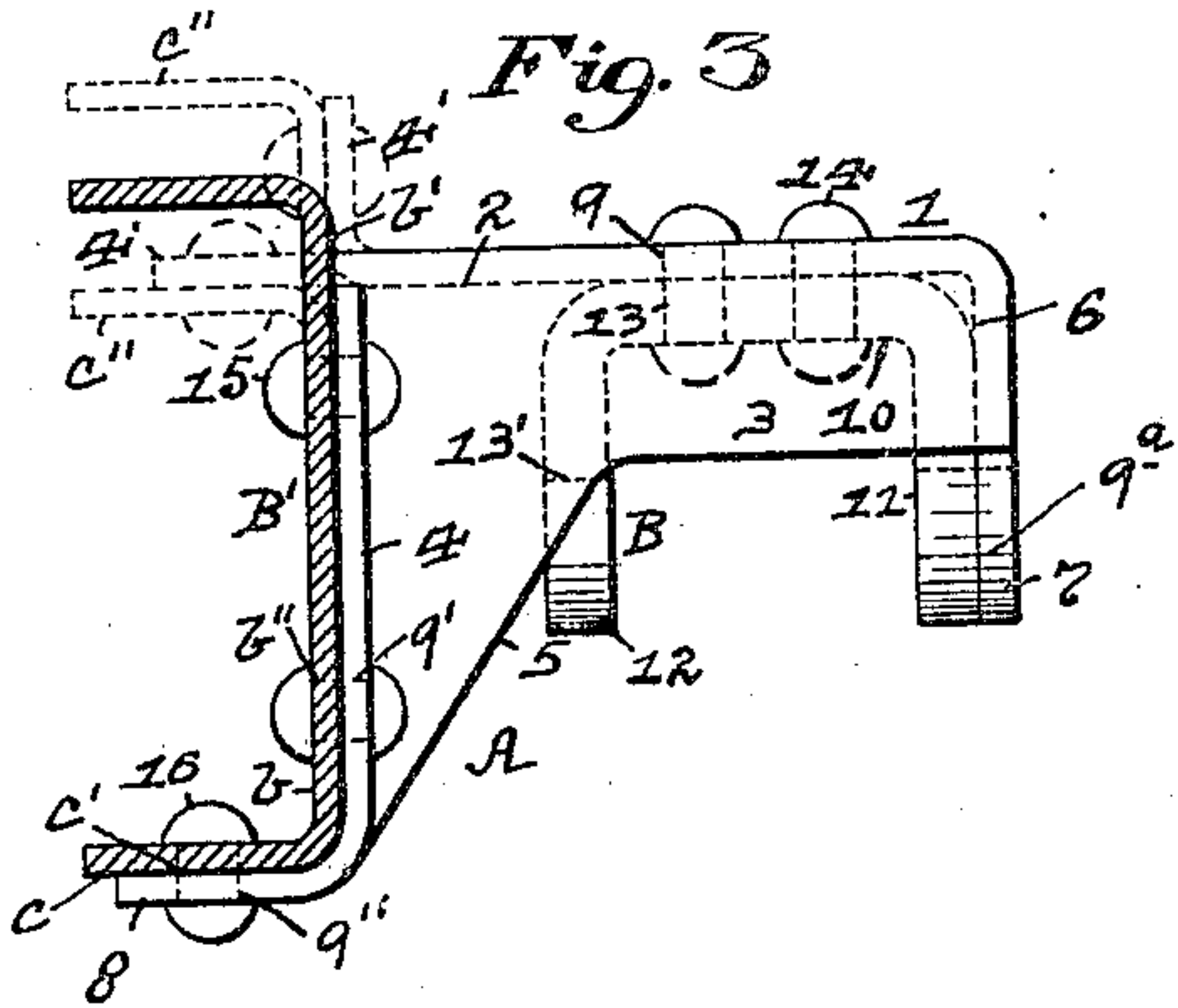
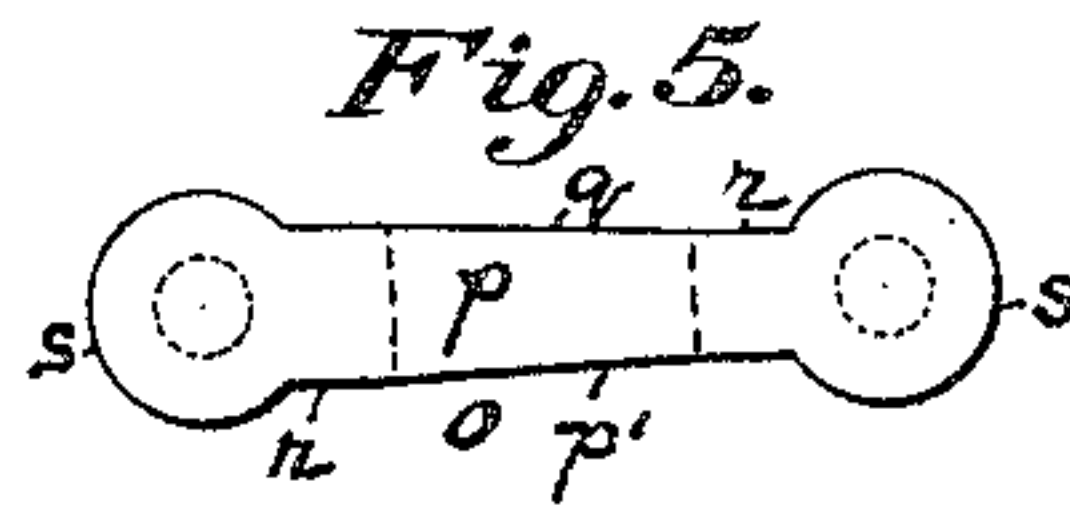
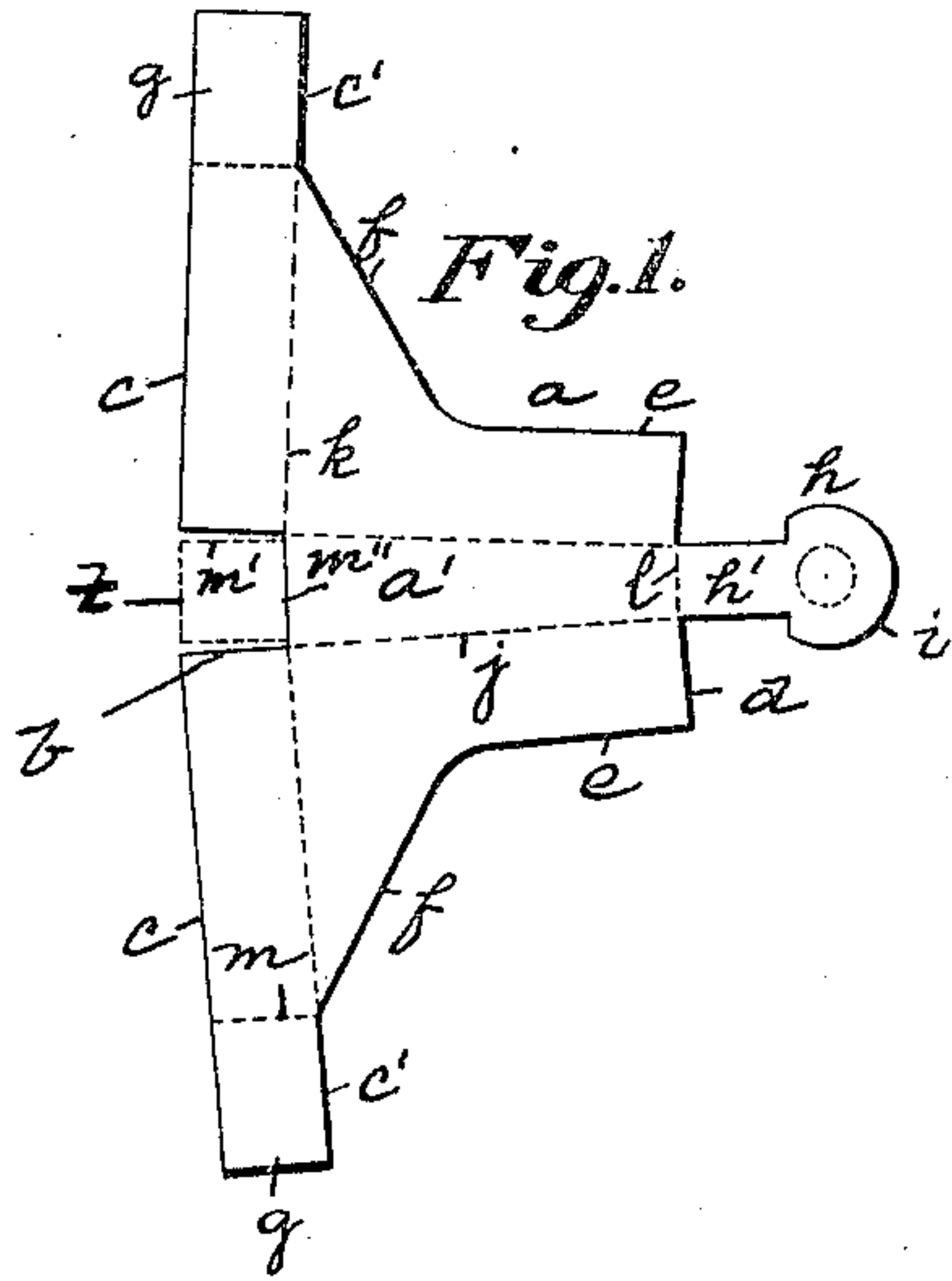


No. 804,341.

PATENTED NOV. 14, 1905.

T. W. PLUMB.
SPRING HANGER.
APPLICATION FILED FEB. 21, 1905.



WITNESSES

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SPRING-HANGER.

No. 804,341.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed February 21, 1905. Serial No. 246,709.

To all whom it may concern:

Be it known that I, THEODORE W. PLUMB, a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Spring Hangers or Supports; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to spring hangers or supports, and has special reference to the front hanger for the supporting of the rear spring used and connected to the frames of motor-vehicles. Heretofore these spring-hangers have been generally formed by castings or from and by drop-forgings, which rendered the same exceedingly heavy and cumbersome or were laborious and expensive to manufacture, so that the object of my invention is to form these hangers or supports in such a manner that they will be light in weight, easily, cheaply, and quickly manufactured, and will be strong and durable when in use.

My invention consists, generally stated, in the novel arrangement, construction, and combination of parts, as hereinafter more specifically set forth and described, and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved spring hanger or support, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a plan view of the plate for forming the spring-hanger. Fig. 2 is a top view of the finished hanger and showing it applied to the side frame of a motor-vehicle. Fig. 3 is a side view of the hanger, showing the side frame in section. Fig. 4 is a front view of the same. Fig. 5 is a plan view of the plate for forming the U-piece.

Like symbols of reference herein indicate like parts in each of the figures of the drawings.

As illustrated in Fig. 1 of the drawings, *a* represents a plate of sheet metal cut to the shape and size required and having a body portion *a'*, which is provided with the slotted portion *b*, extending into said body portion and from the outer edge of which the end edges *c* of said plate are inclined backwardly. The opposite end edges *d* of said plate *a* are also inclined in the same direction and connect with the outwardly-inclined side edges *e*, which terminate in the outwardly-extending

angular side edges *f*, having at their ends the outwardly-inclined inner side edges *c'*, which form with the end edges *c* the projecting side pieces *g*. The end edges *d* have the extension-piece *h* projecting out from their inner ends or central portion of the body portion *a'* on said plate *a* and is formed of the shank *h'*, provided with the enlarged circular end portion *i* thereon. The plate *a* in such form and size is adapted to be placed within and between suitable dies of a press and in its cold state is pressed or stamped at one operation on the dotted lines *j*, *k*, *l*, and *m* to form the finished and complete main portion of the spring-hanger A, (shown in Figs. 2, 3, and 4,) such plate being bent up on the lines *j* and *k* to form the tapered trough-shaped main or body portion 1, as shown in said figures, having the tapered top 2 and sides 3, with the side wings or flanges 4 extending out from said sides and such sides having the angular bracing portions thereon which connect with said flanges. The extension-piece *h* on said plate *a* is also bent up on said line *l* at the same operation, so that the shank *h* of said extension-piece forms the end 6 on the trough-shaped body 1 and the enlarged circular end portion *i* on said shank forms a circular or rounded supporting projection 7 for extending down below said sides 3 and ends 6, while at the same operation the projecting side pieces *g* on said plate *a* are bent outwardly from the side flanges 4 and on the line *m* to form the bottom flanges 8 on the main or body portion 1 of the hanger. The main body 1 or hanger proper being now completed, holes 9, 9', and 9" can be punched or drilled through the top 2, side flanges 4, and bottom flanges 8, respectively, for the reception of the rivets hereinafter mentioned, and a hole 9^a is also formed in like manner in the supporting projection 7 on the end of said body portion for the reception of one end of the bolt used for carrying the spring to be supported by said hanger.

A U-shaped piece B is formed for use in connection with the body portion 1 of the hanger A, and such piece is formed from a plate of sheet metal, (shown at *o* in Fig. 5,) and such plate is cut to the size and shape therein shown, so that it can be placed within and between suitable dies of a press in its cold state and pressed or stamped at one operation to form the complete and finished piece,

such as is shown in Figs. 2, 3, and 4. This plate *o* has the side edges *p'* of its body portion *p* formed on an incline at its central portion *q* and with straight side edges *r* connecting the same at the dotted lines in Fig. 5, while at the end of said edges *r* are the enlarged circular ends *s*, and such plate when placed within the dies is bent upon said dotted lines shown on the body portion *p* in said Fig. 5 to form the finished U-shaped piece B, (indicated in Figs. 2, 3, and 4,) having the tapered top 10, corresponding to the body portion 1 of the hanger A, and ends 11, provided with the circular or rounded portions 12 thereon. Holes 13 can now be punched or drilled through the top 10 and holes 13' through the circular portions 12 on the ends 11 of said U-piece B, and after this is done it can be placed within the trough-shaped body portion 1 with its tapered top 10 resting against the tapered top 2 of said body 1 and one of its ends 11 and circular portion 12 thereon resting against the end 6 and circular projection 7 on said portion 1, so that rivets 14 can be secured in the usual manner through the holes 9 and 13 in the tops 2 and 10 of the main body 1 and U-piece B, respectively, after which said U-piece can be brazed to the body portion 1 in the usual manner.

The hanger A is now ready for being secured to the side frame B of the motor-vehicle, and this can be done by placing the side flanges 4 of the body portion 1 against the outer face *b'* of the side *b* of said frame, so that rivets 15 can be secured in the usual manner through the holes 9' in said flanges and through holes *b''* in said side *b*. Rivets 16 are also secured in the usual manner through the holes 9'' in the bottom flanges 8 on said side flanges 4 and through holes *c'* in the bottom flange *c* of said side frame B'. After the hanger A has been thus secured in place upon the side frame B the spring can be hung by its bolt being passed through the holes 9^a in the projection 7 on the end of the body portion 1 and through the holes 13' on the circular end portions 12 of the U-piece, although it is evident that such U-piece may be dispensed with and such bolt held within the holes in the projecting portion on the end of the body portion and within holes formed in the side of the frame B'. If desired, the body *a'* of the plate *a* can have its body cut along the dotted lines *m'* on Fig. 1 to form the tongue-piece *t*, which can be bent up along the line *m''* on said figure at the one operation required for forming the finished main body 1 of the hanger and form the top lug or flange 4' on said main body, which flange can be riveted in the manner described to the top flange *c''* of a narrower or lighter side frame B' or to the face *b'* of the side *b* of a wider or heavier side frame, as indicated in dotted lines, Fig. 2.

It will be obvious that my improved hanger

can be used in connection with different kinds and shapes of frames as well as for supporting springs other than those used on motor-vehicles and for other purposes and uses, while various modifications and changes in the design and construction of my improved hanger may be resorted to without departing from the spirit of my invention or sacrificing any of its advantages.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A spring hanger or support pressed or stamped from a plate of sheet metal into a trough-shaped body having a spring-supporting portion at one end and flanges at the opposite end for attaching said body to a frame.

2. A spring hanger or support pressed or stamped from a plate of sheet metal into a trough-shaped body having a spring-supporting portion at one end and side flanges at the opposite end for attaching said body to a frame.

3. A spring hanger or support pressed or stamped from a plate of sheet metal into a trough-shaped body having a spring-supporting portion at one end and side flanges at the opposite side for attaching the same to the side of a frame, said side flanges having bottom flanges thereon for attaching the same to the bottom flange on said frame.

4. A spring hanger or support pressed or stamped from a plate of sheet metal into a trough-shaped form having a spring-supporting portion at one end and side flanges at the opposite end for attaching the same to a frame, and bracing side portions connecting said side flanges with sides of said body.

5. A spring hanger or support pressed or stamped from a plate of sheet metal into a trough-shaped body having a spring-supporting portion at one end and side flanges at the opposite end for attaching the same to a frame, and angular side portions connecting said side flanges with the sides of said body for bracing the same.

6. A spring hanger or support pressed or stamped from a plate of sheet metal into a trough-shaped body having a spring-supporting portion at one end and side flanges at the opposite end for attaching said body to a frame, and a U-piece pressed or stamped from a sheet of metal secured within said body having its projecting portions adapted to support the springs with the supporting end portion on said body.

7. A spring hanger or support pressed or stamped from a plate of sheet metal into a tapered trough-shaped body having a spring-supporting portion at one end and flanges at the opposite end for attaching said body to a frame.

8. A spring hanger or support pressed or stamped from a plate of sheet metal into a tapered trough-shaped body having a spring-supporting portion at one end and side flanges

at the opposite end for attaching said body to a frame.

5 9. A spring hanger or support pressed or stamped from a plate of sheet metal into a tapered trough-shaped body having a spring-supporting portion at one end and side flanges at the opposite side for attaching the same to the side of a frame, said side flanges having bottom flanges thereon for attaching the same
10 to the bottom flange on said frame.

15 10. A spring hanger or support pressed or stamped from a plate of sheet metal into a tapered trough-shaped form having a spring-supporting portion at one end and side flanges at the opposite end for attaching the same to a frame, and bracing side portions connecting said side flanges with sides of said body.

20 11. A spring hanger or support pressed or stamped from a plate of sheet metal into a tapered trough-shaped body having a spring-supporting portion at one end and side flanges

at the opposite end for attaching the same to a frame, and angular side portions connecting said side flanges with the sides of said body for bracing the same.

25 12. A spring hanger or support pressed or stamped from a plate of sheet metal into a tapered trough-shaped body having a spring-supporting portion at one end and side flanges at the opposite end for attaching the same to
30 a frame, and a U-piece pressed or stamped from a plate of sheet metal secured within said body and having a tapered body portion with projecting portions thereon adapted to support the spring with the supporting end
35 portion on said body.

In testimony whereof I, the said THEODORE W. PLUMB, have hereunto set my hand.

THEODORE W. PLUMB.

Witnesses:

J. C. STOUT,

R. R. HOLDEN.