

(No Model.)

2 Sheets—Sheet 1.

F. P. PFLEGHAR.
COACH HINGE.

No. 537,229.

Patented Apr. 9, 1895.

Fig. 1

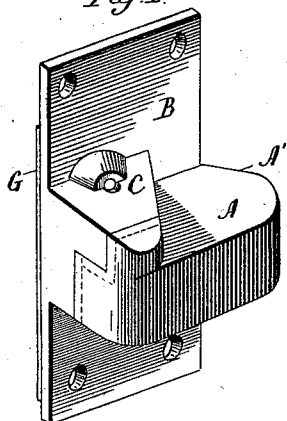


Fig. 2

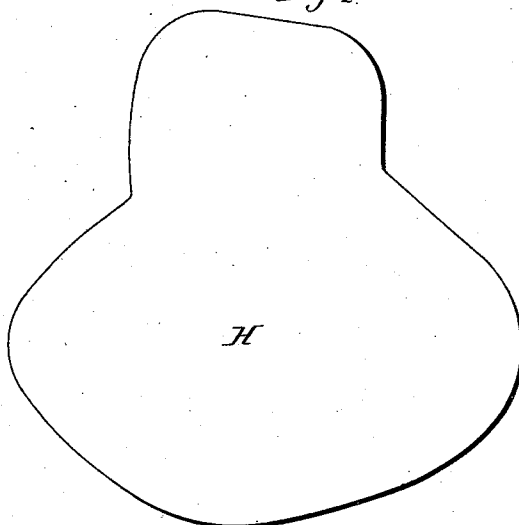


Fig. 3

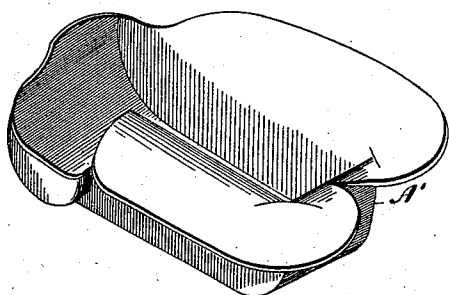


Fig. 4

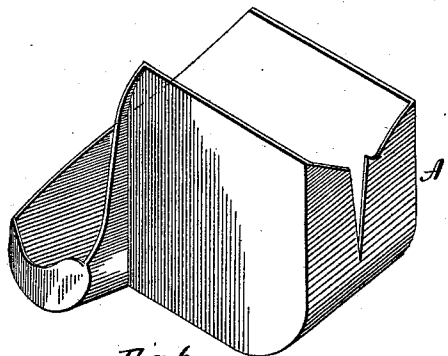


Fig. 5

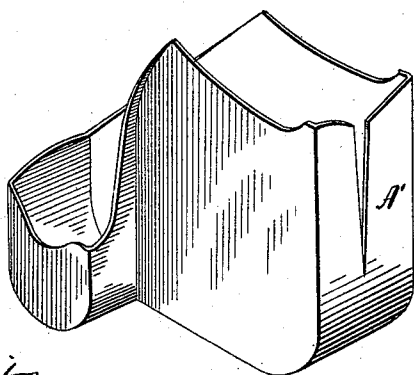
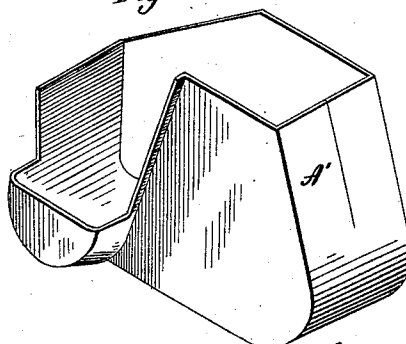


Fig. 6



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 7

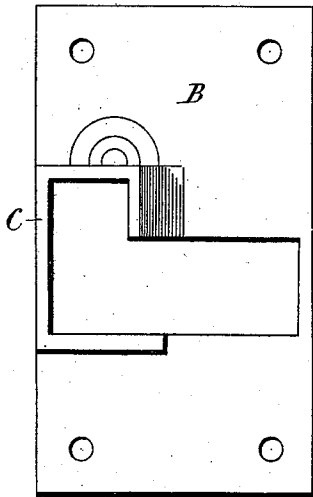


Fig. 8

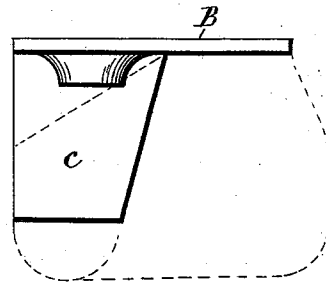


Fig. 9

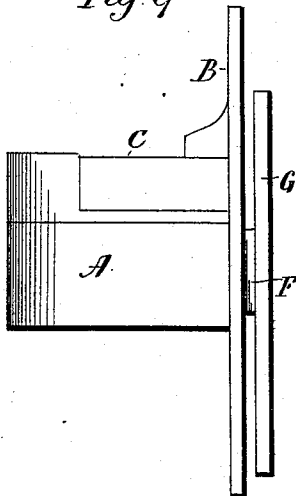
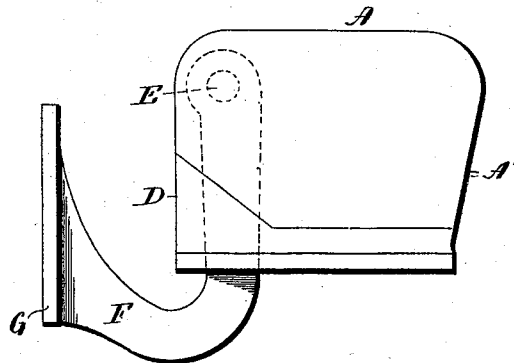


Fig. 10



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UNITED STATES PATENT OFFICE.

FRANK P. PFLEGHAR, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO
ENGLISH & MERSICK, OF SAME PLACE.

COACH-HINGE.

SPECIFICATION forming part of Letters Patent No. 537,229, dated April 9, 1895.

Application filed March 5, 1894. Serial No. 502,348. (No model.)

To all whom it may concern:

Be it known that I, FRANK P. PFLEGHAR, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Coach-Hinges; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a rear view in perspective of a coach-hinge constructed in accordance with my invention; Fig. 2, a plan view of such a blank as I may employ in producing my improved sheet-metal housing. Figs. 3, 4 and 5 show the blank in the process of development; Fig. 6, the perfected blank; Fig. 7, a detached view in rear elevation of the post-leaf with the housing removed; Fig. 8, a reverse plan view of the post-leaf with the housing indicated by broken lines; Fig. 9, a view of the hinge in side elevation; Fig. 10, a plan view of the hinge.

My invention relates to an improvement in that class of coach-hinges in which the post-leaf is constructed with an inwardly extending housing for the reception of the curved arm of the door-leaf and the pintle on which the said arm swings, the object being to reduce the size of the housings of such hinges without reducing their capacity or internal dimensions, whereby less cutting away of the post is necessary to receive the housing, with an obvious gain in the strength of the post.

A further object of my invention is to reduce the cost of producing coach-hinges of the character described.

With these ends in view, my invention consists in a coach-hinge having its post-leaf provided upon its inner face with an inwardly extending sheet-metal housing.

My invention further consists in an improved method of forming the said housing of sheet-metal.

My invention further consists in certain details of construction and steps in the method as will be hereinafter described.

Inasmuch as the construction of hinges of the class to which my invention relates is well known, I have not thought it necessary

to describe or show the device further than to disclose my invention, in carrying out which I form a sheet-metal housing A, which is applied to the rear face of the post-leaf B of the hinge, and supported in part by the open box C formed integral with, and also projecting from the inner face of the said leaf. This box is adapted in the usual manner to receive the pintle-arm D, which is of ordinary construction, and which is provided at its inner end with the pintle E upon which the curved arm F of the door-leaf G swings. The housing conforms in shape to the shape of the arm F, its outer wall A' being drawn inward as it approaches the rear face of the leaf B. On account of the peculiar shape of the housing, as described, it is difficult to draw. I have however succeeded in forming it, by beginning with a blank H, of substantially the form shown in Fig. 2 of the drawings. Such a blank I put in suitable dies and draw to the form shown by Fig. 3, in which the blank is drawn to only about half the depth of the housing. I then subject it to the drawing action of another pair of dies, and bring it into the form shown by Fig. 4 of the drawings, which leaves the blank in substantially its final outline. This partly developed blank is then subjected to the drawing action of another pair of dies, which bring it into the form shown by Fig. 5 of the drawings. It will be noticed that the outer wall A' is drawn substantially straight. When, however, the blank developed as seen in Fig. 5 is put into the last dies, the wall A' of the finished housing is inclined as shown in Fig. 6, and elsewhere in the drawings. Fig. 6 shows the blank not only drawn to final shape, but also trimmed to fit over the box C formed integral with the post leaf B. After the housing has been drawn to shape, as shown, it is applied to the post-leaf B, and soldered or otherwise fixed thereto, being lapped over the edges of the box C, as clearly shown by Fig. 1 of the drawings. I thus produce a sheet-metal housing, the walls of which are much thinner than the walls of a cast metal housing, so that although the housing may have the same internal dimensions that cast metal housings do, its external dimensions are as much smaller as sheet-metal is

thinner than cast metal. Obviously the more the housing is reduced in its external dimensions, the less the cutting away of the post to receive it, and the less the post is cut away, the stronger it is. My improved hinge containing a sheet-metal housing has therefore a marked advantage in the particulars mentioned, over hinges of prior construction. I am also enabled by the use of sheet-metal housings to produce hinges at a much lower rate than was possible under the old method.

I do not limit myself, of course, to making the housing in the exact form shown, nor to constructing the post-leaf in the form shown to receive it, nor do I limit myself to the exact succession of steps shown and described for drawing the housing, as more or less operations might be employed. I would therefore have it understood that I hold myself at liberty to make such changes and alterations herein as fairly fall within the spirit and scope of my invention.

I am aware that it is old to form in cast metal, a post-leaf hinge having upon its inner face a housing formed integral with it.

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

1. As a new article of manufacture, the herein described housing for the post-leaf of a coach-hinge, the said housing being drawn

from a single piece of sheet-metal, and having its inner end open to adapt it to be attached to the inner face of a coach-leaf, substantially as described.

2. A method of making housings for the post-leaves of coach-hinges, consisting in submitting a sheet-metal blank to drawing operations to bring it into the general form of a completed housing, and then trimming the drawn blank into the exact form required to permit it to be rigidly secured to the inner face of an independently formed post-leaf, substantially as described.

3. A method of making housings for the post-leaves of coach-hinges, consisting in submitting a sheet-metal blank to drawing operations, including an operation for drawing inward the outer edge of the blank for contracting the inner open end thereof, and finally in trimming the blank into the required form to adapt it to be rigidly secured to the inner face of an independently formed post leaf, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK P. PFLEGHAR.

Witnesses:

F. P. PFLEGHAR, Jr.,
H. STEPHENS.