(No Model.) 2 Sheets—Sheet 1.

F. E. WILCOX.

ART OF MANUFACTURING FIFTH WHEELS FOR VEHICLES.

No. 549,414. Patented Nov. 5, 1895.

Fig. 1.

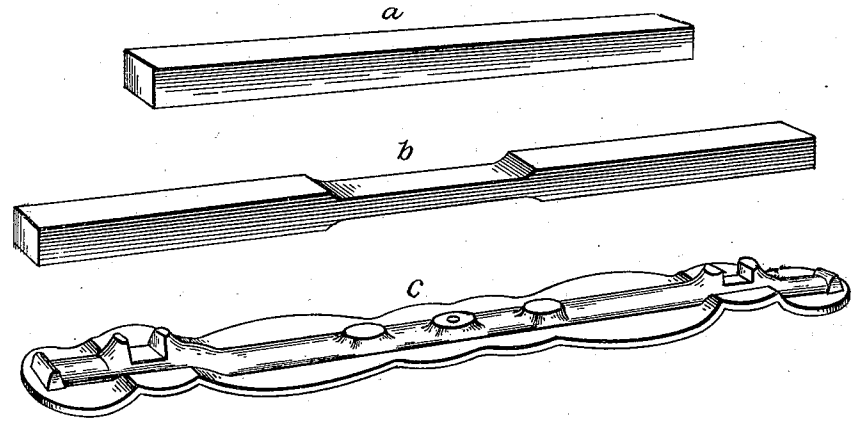
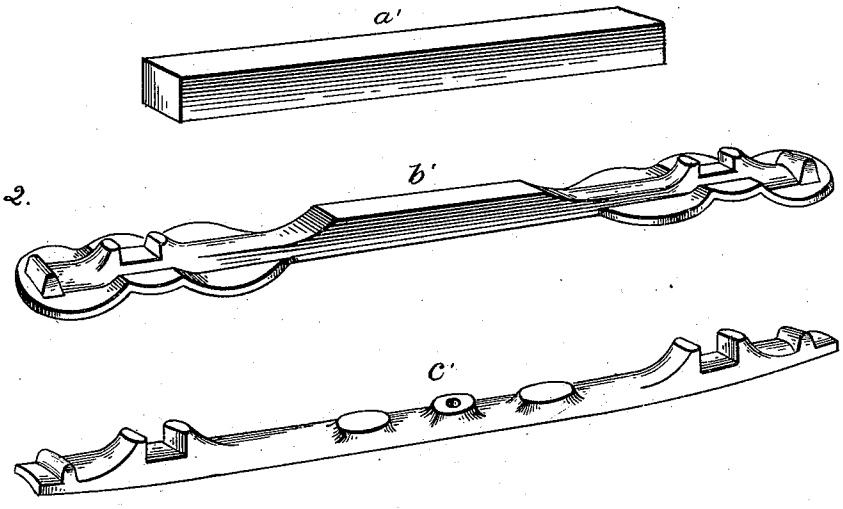


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

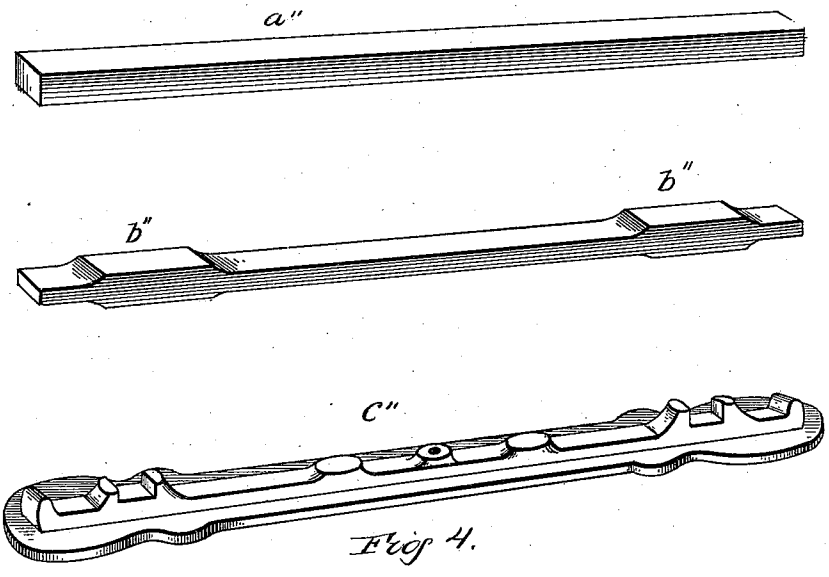
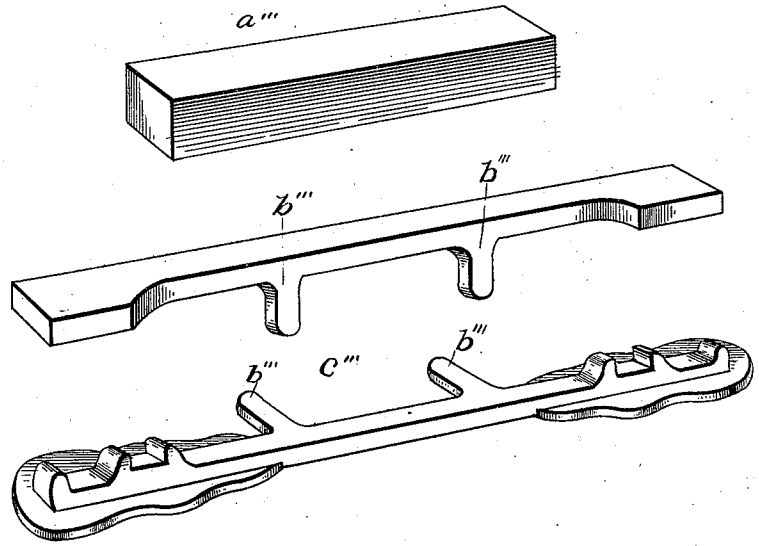


Fig 4.



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UNITED STATES PATENT OFFICE.

FRANK E. WILCOX, OF MECHANICSBURG, PENNSYLVANIA.

ART OF MANUFACTURING FIFTH-WHEELS FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 549,414, dated November 5, 1895.

Application filed May 18, 1895. Serial No. 549,773. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. WILCOX, a citizen of the United States, residing at Mechanicsburg, in the county of Cumberland and State of Pennsylvania, have invented certain new and useful Improvements in the Art of Manufacturing Fifth-Wheels for Vehicles; and I do hereby 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.

The invention relates to a novel method of manufacturing fifth-wheels for vehicles; and it consists in forming the same out of a single integral piece of stock of practically uniform size, and providing ears for the head-block by hammering, rolling, or swaging the center of the block, and raising the ears for the head-block by swaging.

The object of the invention is to avoid the customary method of making the wheel in separate pieces and welding them together, and also to facilitate the operation of forming the same, to cheapen its construction, as well as to produce a superior and more finished article.

Referring to the drawings forming a part of this specification, and on which like letters of reference indicate corresponding parts in the different views, Figure 1 is a perspective view of the blank, the blank reduced at the central portion thereof, and the blank as it comes from the dies with the ears and spots found thereon and with the fin which is to be afterward removed. Fig. 2 is a perspective view of a modification, showing the blank, the ends swaged and formed with the ears, and the completed blank with the fin removed ready to be bent into form. Fig. 3 is a perspective view of another modification, showing the blank, the same with the ends upset to secure the required thickness of stock, and the swaged blank with the ears and spots, but with the fin still attached. Fig. 4 is a perspective view of still another modification, showing the blank, the same with the ends enlarged and with lugs for the reaches, and the blank formed with the lugs and ears, but with the fins at the ends.

Referring to Fig. 1, the blank is represented at a and is of a single piece of suitable metal of uniform size throughout and of any desired form in cross-section. This blank is reduced for a considerable distance at each side of its center, as shown at b, by any known method, preferably by hammering or rolling. By this operation the material is left of full size at the ends of the blank out of which to form the ears for the head-block, and the center is reduced to such size that the article may be formed half-round and with spots for the reaches. The blank with the reduced center is then inserted in dies of the proper form for the purpose and it is swaged into a form with the ears and spots, as shown at c, leaving a fin surrounding the swaged article. This fin is afterward removed to complete the article, which is then in condition to be bent into the required shape. It will be understood, of course, that the blank is heated to the proper temperature while undergoing the different steps in the method.

In Fig. 2 the operation is practically the same, the time of the steps of the operation only being changed. In this view, a' is the blank, also integral and of uniform size. In this instance the ends are first swaged and the ears formed, leaving the center unreduced, as at b'. The center is reduced after the ends are swaged and the fins at the ends removed, and the result is the completely-formed article shown at c', ready for subsequently bending into shape.

In the modified form represented in Fig. 3, a'' is a blank, which is of practically the size of the central portion. The ends of this blank are upset, as shown at b'', and when thus prepared it is inserted in the dies and the ears and spots swaged thereon, as shown at c''. The fin is next removed, and the article is then ready to be bent into proper shape. The blanks may be square, round, or oval, as the manufacturer may desire or elect.

In Fig. 4 a''' represents the blank, which is the proper size to enable lugs for the reaches to be formed therefrom, as represented at b''', and at the same time the lugs are formed the central portion is reduced, leaving sufficient material at the ends out of which to form the ears for the head-block. The blank thus prepared is then placed in proper dies and the ends swaged, producing

the ears for the head-block. Fins, of course, are left, which are afterward removed, and the article, provided with lugs for the reaches and ears for the head-block, is ready to be bent into proper shape. It will be seen that the gist of the invention is the same in all the views of the drawings.

In Figs. 1 and 4, for example, the center is first reduced, leaving the metal of full size out of which to form the ears for the head-block.

In Fig. 2 the ears are first formed out of the full thickness of the metal and the center reduced afterward.

In Fig. 3 the blank is similar to that in Fig. 1, the only difference being in the single step by which the ends are enlarged—viz., by upsetting them; but the operation of obtaining the article with its spots and ears is the same.

It is therefore apparent that the same generic invention pervades the different forms obtained by the novel process or method described and is common to all.

By adopting this mode of construction I do away altogether with the operation of welding in the manufacture of fifth-wheels and am enabled to construct them of a single integral piece of metal of practically uniform thickness throughout. I am also enabled to form such articles very readily and rapidly, as well as to cheapen their construction and produce a neater and more finished article.

Minor changes may be made in the steps of the process, as described above, without departing from the scope or sacrificing any of the advantages of my invention.

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

1. That improvement in the art of manufacturing fifth wheels for vehicles which consists in first heating an integral piece of stock of uniform size throughout, second, reducing the middle portion thereof, leaving the ends the full size of the stock, third, swaging ears for the head block out of the full sized ends and also forming the spots for the reaches as well as the body portion of the article and then removing the fin, substantially as described.

2. That improvement in the art of manufacturing fifth wheels for vehicles which consists in first heating an integral piece of stock of uniform size throughout, second, reducing the middle portion thereof, leaving the ends the full size of the stock, third, swaging ears for the head block out of the full sized ends and also forming the lugs for the reaches, as well as the body portion, fourth, removing the fin, and then bending the article into curved form, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK E. WILCOX.

Witnesses:
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