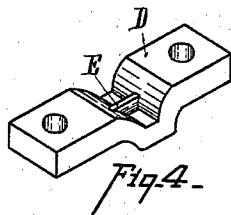
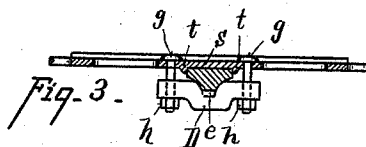
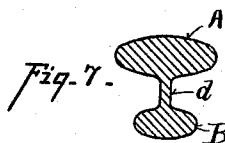
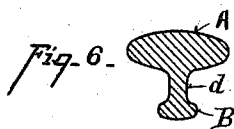
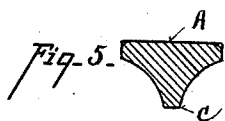
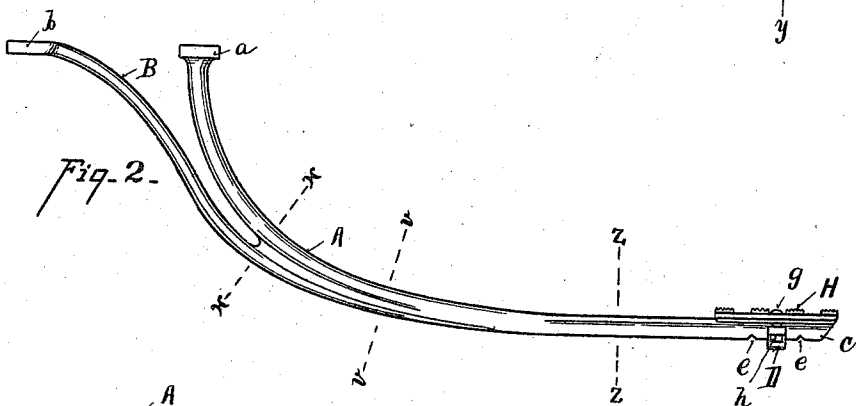
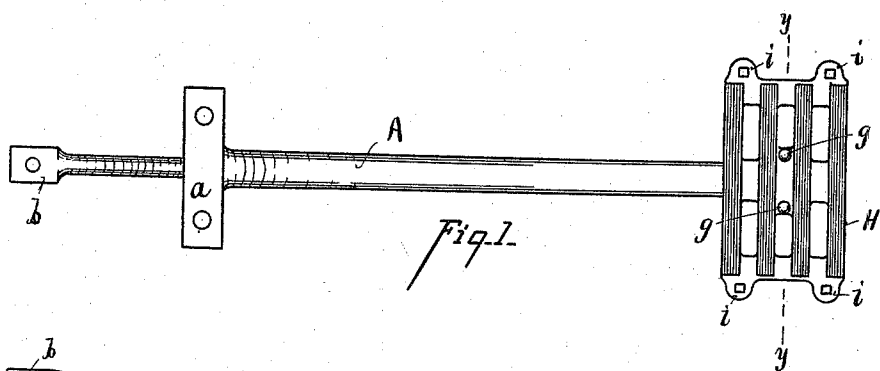


(No Model.)

W. J. KAUFFMAN.
CARRIAGE BRACKET AND STEP.

No. 537,775.

Patented Apr. 16, 1895.



Attest—
C. W. Miles,
Oliver B. Kaiser.

Inventor—
W. J. Kauffman
By Wood & Boyd atty

UNITED STATES PATENT OFFICE.

WILLIAM J. KAUFFMAN, OF MIAMISBURG, OHIO.

CARRIAGE BRACKET AND STEP.

SPECIFICATION forming part of Letters Patent No. 537,775, dated April 16, 1895.

Application filed April 30, 1894. Serial No. 509,551. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. KAUFFMAN, a citizen of the United States, residing at Miamisburg, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Carriage Brackets and Steps, of which the following is a specification.

My invention relates to an improvement in brackets and steps for carriages.

One of the objects of my invention is to provide a bracket to which the step is attached having a brace branch formed integral therewith effectually strengthening the bracket and which is neat and graceful in appearance.

The features of my invention will be fully set forth in the description of the accompanying drawings making a part of this specification, in which—

Figure 1, is a top plan view of my improvement. Fig. 2, is a side elevation of Fig. 1. Fig. 3, is a section on line *y. y.* Fig. 1. Fig. 4, is a detailed view of the step clamp. Fig. 5, is a section on line *z. z.* Fig. 2. Fig. 6, is a section on line *v. v.* Fig. 2. Fig. 7, is a section on line *x. x.* Fig. 2.

A represents the step bracket provided at the upper end with the usual fastening plate *a*.

B represents the brace which is formed integral with the bracket. This brace springs from and is a gradual extension of the rib *c* which extends from the lower end of the bracket and gradually increases in size to a point where the brace branches from the bracket.

In the preferred form of construction a web *d* is formed between the brace and bracket, the said intervening web *d* gradually decreasing in thickness. The rear end of the brace is provided with a fastening ear *b*. I thus provide a bracket of graceful outlines yet proportioning the metal so as to gradually increase in strength toward the rear of the heel, forming the branch by gradually swelling out lines of increase and without abrupt curves or swells, thereby securing a maximum amount of strength for a minimum amount of metal, and obtaining a tasty article. It is very desirable to have one pattern answer for all treads or gages of carriages, and to have the center of the step opposite to the center of the

wheels. I accomplish this by attaching the step to the bracket by means of a brace clip.

D represents a saddle shaped clip.

E represents a lug or catch at the apex of the saddle. The sides of the saddle conform to the contour of the bracket and rib *c*.

e represents notches cut in the rib with which the lug E engages.

g represents screw bolts which pass through the holes in the step plate and engage with similar holes in the saddle clip.

h represents nuts tapping on the bolts by means of which parts the step is rigidly connected to the bracket and yet readily adjustable from one notch to the other to suit the varying gages or treads of carriages.

i. i. represent ears attached to the step H to which fenders may be secured when they are employed.

t. t. represent lugs on the end of the face of the center step plate *s*, which engage with the edges of the bracket and hold the step from lateral movement and yet allow the step to be adjusted longitudinally when the saddle clip is released.

I thus obtain a graceful and appropriate carriage bracket that can be attached to carriages of varying gages or treads.

I am aware that it is not new to provide a step bracket with a brace integral with the shank, but owing to the difference in the thickness of these two parts the shrinkage is so uneven that when made of cast metal they soon break at the point of union, and I make no claim to such construction broadly, but by gradually increasing the thickness of the rib *c* and decreasing the thickness of the web *d* as they extend upward the bracket is so strengthened as to obviate this objection.

I claim—

1. A step-bracket having a rib *c* extending along its under side and having at its forward end the notches *e*, the brace B formed integral with the bracket and constituting a gradual extension of the said rib, a saddle D having a lug E at its center adapted to engage any one of the notches, a step plate arranged on the bracket, and bolts *g* engaging the step and saddle and holding the lug of the latter in engagement with one of the notches of the rib, substantially as described.

2. A step-bracket A having a brace B and provided at its outer end with a series of notches *e*, a saddle D having a lug E at its center adapted to engage any one of the notches, 5 a step-plate arranged on the bracket, and bolts *g* engaging the step-plate and the ends of the saddle and holding the lug of the latter in engagement with one of the notches, substantially as described.

10 3. A step bracket A, having a rib *c* extending along its under side, the brace B formed integral with the bracket and constituting a

gradual extension of said rib, a saddle D having a recess conforming to the contour of said rib and step, a step-plate resting on the face 15 of the bracket, and the bolts *g* engaging the step and saddle for clamping the step to the bracket, substantially as specified.

In testimony whereof I have hereunto set my hand.

WILLIAM J. KAUFFMAN.

Witnesses:

W. A. REITER,

A. F. GWINNER.