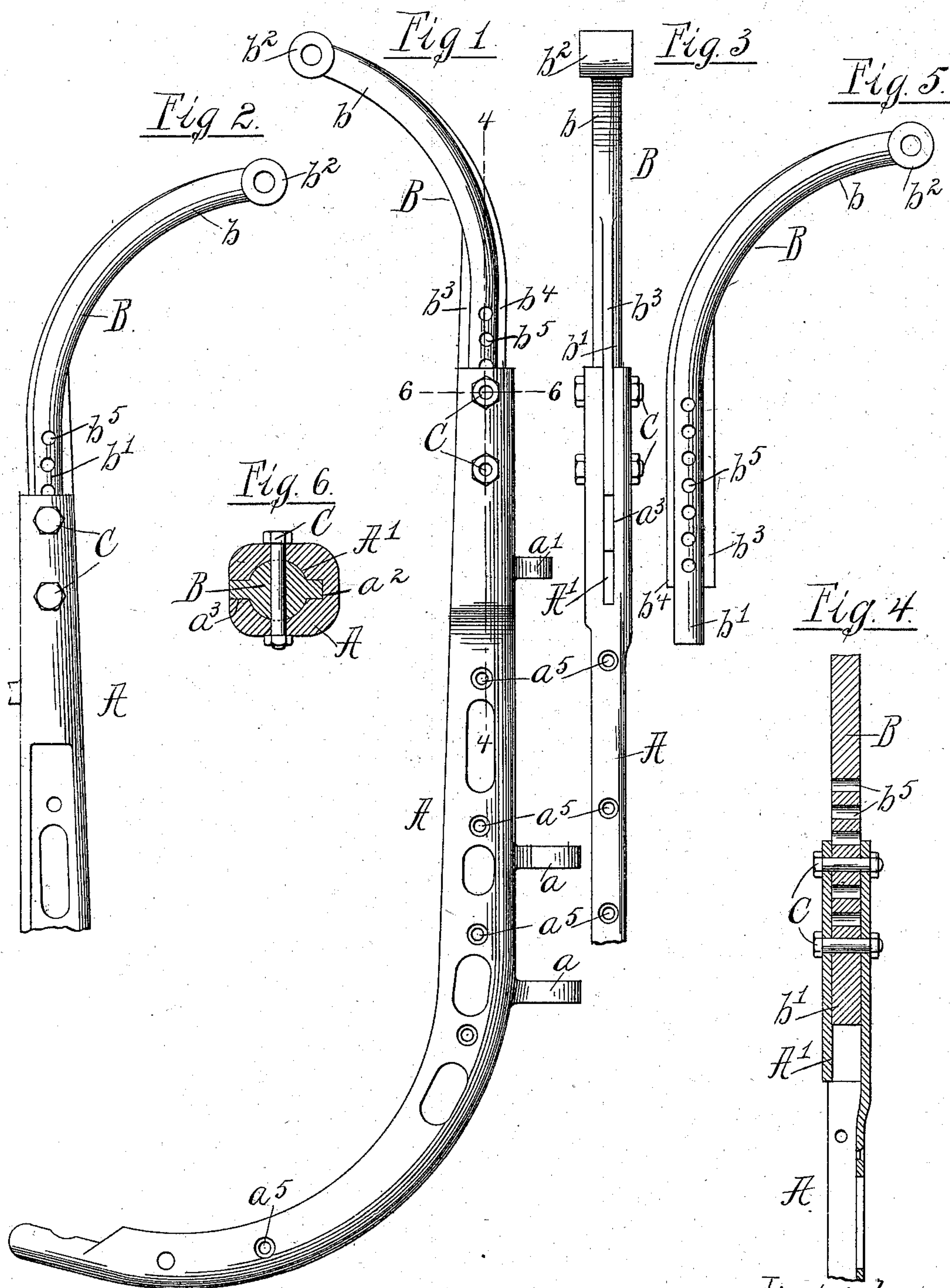


(No Model.)

R. G. ARMSTRONG.
ADJUSTABLE HAME.

No. 559,020.

Patented Apr. 28, 1896.



Witnesses

John W. Adams.
Louis H. F. Whitehead.

Inventor

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UNITED STATES PATENT OFFICE.

ROBERT G. ARMSTRONG, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS
TO JOHN M. GREEN AND STEPHAN N. LANE, OF SAME PLACE.

ADJUSTABLE HAME.

SPECIFICATION forming part of Letters Patent No. 559,020, dated April 28, 1896.

Application filed September 29, 1893. Serial No. 486,760. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. ARMSTRONG, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Adjustable Hames; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to adjustable hames, or those which may be lengthened or shortened to fit various-sized collars, the upper part of the hame being adapted to telescope into the lower part of the hame, wherein it is rigidly and adjustably secured.

The object of the invention is to provide in the hame of the kind above mentioned improved construction possessing maximum strength and rigidity and the same simplicity of construction adapted for most efficient use.

It has been common heretofore to construct an adjustable hame having one part adapted to telescope or slide within the other; but all such prior constructions have been open to serious objections, the connection between the parts being formed by one part sliding more or less loosely within the other and the parts being secured in their adjusted position by means of a pin, link, or other removable device, but no provision existed for securing an immovable rigid connection between the parts after adjustment. This is a serious objection, because owing to the flexibility of the collar and the manner in which the strain or drag of the tug comes upon the hame secured thereon (the ends of the pair of hames being secured at either end near the central longitudinal diameter of the collar, the drag of the tug would come on the hame at a point corresponding approximately with the outer end of the central transverse diameter of the collar) a torsional or twisting strain of great severity is brought upon the hame, which, unless specially provided for by means of some rigid and relatively immovable connection of the parts, will result in distortion of the hame itself and a displacement of the hame upon the collar, thus not only causing a constantly increasing

amount of wear and movement of said parts, but distortion of the collar itself, whereby the latter is caused to bear improperly upon the horse. The collar is also rapidly broken down and worn out, owing to the chafing of the hame upon it. Such movement of the connected parts of the hame with relation to each other and consequent distortion of the collar, even though very slight, renders the hame worse than useless, because, owing to the elastic nature of the collar and the constantly varying drag of the tug as the shoulder of the horse alternately moves forward and backward, such movement will produce a rolling or chafing action of the collar on the shoulder, which, if the work is heavy, results in galled shoulders.

My improvement is designed to overcome these and other objections; and it consists in the matters hereinafter described, and particularly pointed out in the appended claim.

The invention may be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a hame embodying my invention. Fig. 2 is a similar elevation of the upper part of the same, showing the reverse side thereof. Fig. 3 is an elevation of the parts shown in Fig. 2, looking at the same from a point at right angles to said figure and toward the concave side thereof. Fig. 4 is a partial longitudinal section of the hame, taken on line 4 4 of Fig. 1. Fig. 5 is a side elevation of the upper part removed from its socket. Fig. 6 is a transverse section through the parts, taken on line 6 6 of Fig. 1.

As shown in said drawings, A designates the lower main or horn part of the hame, B the adjustable upper part, and C C the bolts used in this instance to rigidly secure said parts in their adjusted position. Said part A is of any suitable metal, of proper shape to fit the crease of an ordinary collar, and is preferably cast or otherwise made hollow or in skeleton form, of approximately C form in cross-section throughout its main parts, in order to afford the proper size and configuration without unnecessary weight. At desired points on the outer circumference of said part A the usual lugs *a a* for the attachment of the

tug to the hame are provided, while at a point midway between said lugs a and the upper end of the part A is another lug a' for the attachment of the usual line-ring.

5 The upper end of the part A is so cast or formed as to provide a central longitudinal cylindrical bore A' , adapted to receive the lower end of the part B. Said part B consists of an upper curved part b , adapted to fit the upper part of the collar and provided at its end with a transverse eye b^2 , adapted to receive the usual link for the hame-strap, and a lower straight portion b' , adapted to fit and slide within the upper end of the part
15 A. In order that the two parts of the hame may be held rigidly in exact fixed relation to each other, the part B is provided with webs or flanges b^3b^4 , extending longitudinally along the inner and outer sides of the said straight
20 portion of the part B, said flanges being adapted to fit in corresponding grooves or ways a^2a^3 , extending outwardly from the central longitudinal bore A' of the upper end of the part A, as clearly shown in the section
25 Fig. 6, one of said grooves—in this case the inner one a^3 —being cut entirely through the side of the part A so as to form a slot extending from its upper end the depth of said longitudinal bore A' .

30 The parts A and B are secured together by bolts—in this instance two, C C—passing transversely through the parts, the part B being provided with plurality of bolt-holes b^5b^6 , so arranged as to permit the adjustment
35 of the length of the hame, as clearly shown in the drawings. The arrangement of the parts as described is of particular advantage, inasmuch as the webs or flanges and their corresponding grooves serve to insure the retention of the parts in proper non-rotative
40 relation to each other. The arrangement of the slot a^3 , extending through the side of the part A, permits the opposite sides of said part to be drawn together sufficiently to embrace
45 or clamp the part B tightly, thus absolutely preventing any looseness or play in said joint, while the flexibility of the metal is sufficient to permit such clamping. By thus clamping the parts immovably together all tendency of

the parts to work loose is prevented and the hame is in all respects as rigid as a solid hame.

As it is sometimes found desirable to fill in the skeleton or hollow part of the hame with wood or other suitable light material, screw-holes a^5a^5 are shown as formed through the shell of the part A, through which screws may be inserted to secure said filling.

It is to be understood that the hame may be provided with any of the usual connecting devices at its ends, this feature being no part of my invention. It will also be apparent that the telescopic connection may be reversed from that shown in the present instance—*i. e.*, the upper part arranged to embrace the lower—without departure from the spirit of my invention.

I claim as my invention—

An adjustable metal hame comprising two parts having telescopic connection with each other, one of said parts being provided with a pair of diametrically-opposite flanges arranged longitudinally on that portion of the part that has telescopic engagement with the other part of the hame, a plurality of apertures through said flanged part, the other portion of the hame being provided with a recess in which the first-mentioned part may be inserted, a longitudinal groove in one side of said recess or opening adapted to engage one of the flanges on the other part of the hame, and a slot, as a^3 , arranged diametrically opposite said groove and extending longitudinally of said part through it and into said recess, an aperture or apertures through said embracing slotted member, and a nut and bolt arranged to pass through the apertures in both parts, whereby said parts may be adjustably and positively clamped together and in fixed non-rotative relation to each other, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

ROBERT G. ARMSTRONG.

Witnesses:

TAYLOR E. BROWN,
ALBERT H. GRAVES.