

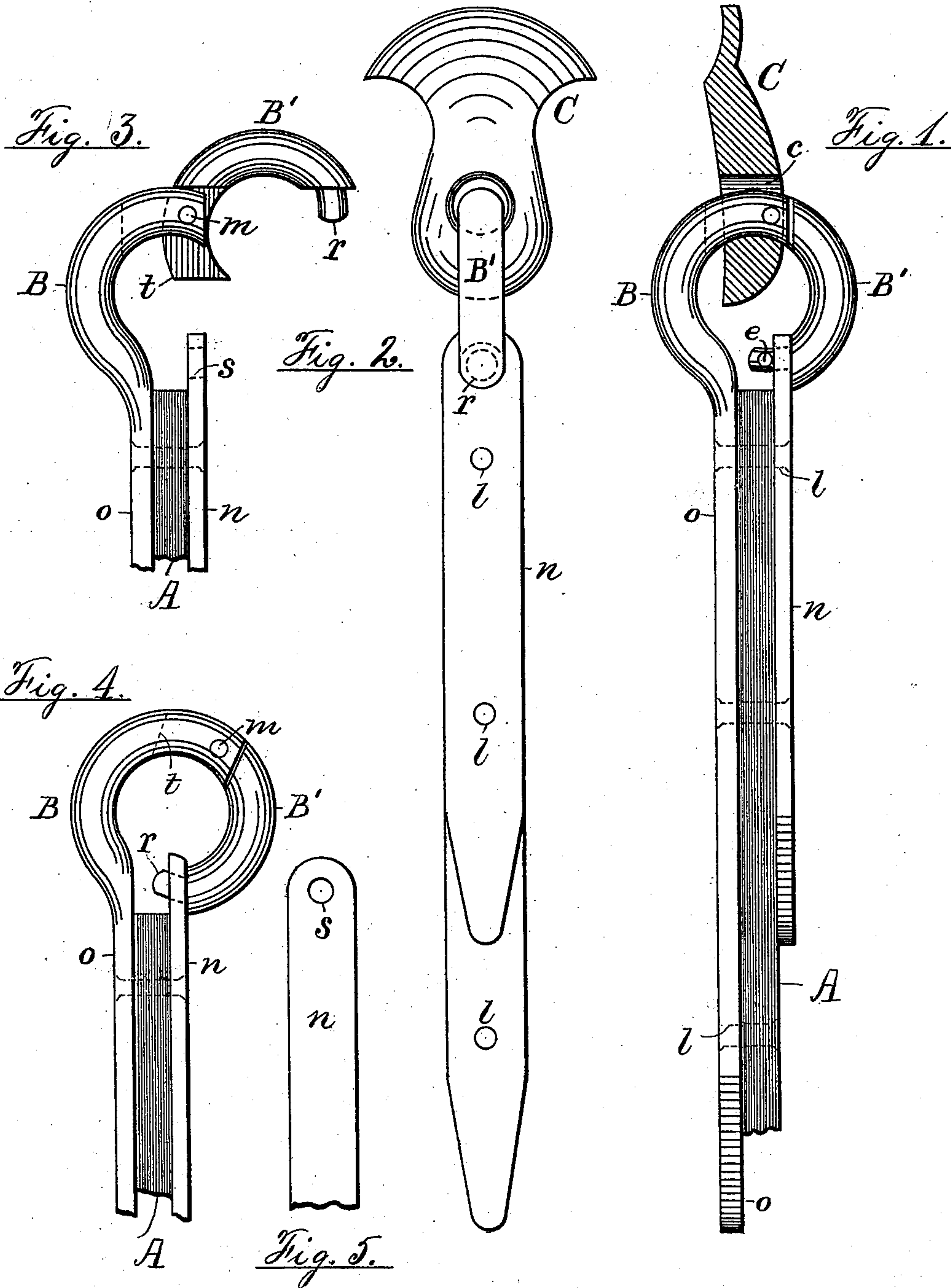
(No Model.)

S. A. WALL.

TUG CLIP.

No. 294,704.

Patented Mar. 4, 1884.



Attest:

J. Green

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Inventor

Stephen A. Wall, per

Thos. S. Crane, Atty.



# UNITED STATES PATENT OFFICE.

STEPHEN A. WALL, OF NEWARK, NEW JERSEY.

## TUG-CLIP.

SPECIFICATION forming part of Letters Patent No. 294,704, dated March 4, 1834.

Application filed May 12, 1883. Renewed January 24, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN A. WALL, a citizen of the United States, residing in the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Tug-Clips, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention consists in an improved construction for the tug-clip, whereby it can be readily detached from the hame-eye without first moving any fixtures or auxiliary fastenings.

15 The nature of the invention will be understood from the annexed drawings, in which Figure 1 is an edge view of the hame-tug A, clip B, and hame-eye C, the latter being shown in section, to exhibit the construction of the hole *c*. Fig. 2 is a side view of the same parts, the hame-eye being shown detached from the hame in both figures. In practice, the hame-eye is either cast or brazed upon the hame; but the latter is omitted from the drawings, on account of its great size. Fig. 3 is a view of the clip detached from the eye and opened, to show the operation of the joint *m*. Fig. 4 is an edge view of an alternative construction for the clip, and Fig. 5 is a detached view of the front strap, *n*.

30 The hame-eye C is made with a plain round hole, *c*, in my invention, and the hole is preferably made to fit the hook of the clip rather closely, so as to avoid lost motion or rattling and the resulting wear. The eye is also rounded where the draft of the hook comes upon it, to prevent the corners of the eye from wearing in the hook, as it does in those heretofore made.

40 To make the clip detachable, and thus interchangeable with others, I construct the front strap, *n*, entirely separate from the part which hooks into the eye C, instead of integral with the hook, as heretofore. The ring or hook part of the clip I form in two parts, B and B', and secure one of them to the rear strap, *o*, integrally, and the other to the front strap, *n*, by a dowel-pin, the two straps being attached to the hame-tug A by rivets *l*, in the usual manner. The ring of the clip can thus be opened, as shown in Fig. 3, and a hook formed which can be readily inserted in the closed eye

Cor removed therefrom at pleasure. The pivot *m*, forming the hinge-joint between the two parts B and B', is placed at one side of the center, so that the wear of the eye C will not come upon it, and the pivoted part B' is formed with a tenon, *t*, inserted in a mortise in the end of the hook part B, and projected past the center line of the hook, so that the eye C will press upon it when in use and hold the pivoted part B' shut. The tenon *t* stands somewhat inside the mouth of the clip when the pivoted part B' is opened, as seen in Fig. 3, but is pushed back into its place when the eye C is inserted, and then operates to keep the clip closed. The front strap, *n*, is shown separately in Fig. 5, to indicate the means for sustaining the strain upon the pivoted part of the clip when in use. Such strain is altogether indirect, and results from the springing of the hook B and the rivets *l*, but is fully sustained by a dowel, *r*, formed upon the free end of the part B' and fitted to a hole, *s*, in the adjacent end of the strap *n*. The dowel stands, when thus inserted, at right angles to the strain exerted upon the tug, and thus has no tendency to pull out when in use; but it may be provided with a hole, as at *e* in Fig. 1, inside the strap *n*, and be secured therein by a small pin or thong, if desired. A spring may also be combined with the hinged part B' to keep it closed normally, if desired; but in practice I do not consider it necessary.

85 In Fig. 4 is shown a construction intended to transfer nearly all the strain of the tug to the rear strap, *o*, and thus avoid any chance of injury to the movable part B'. It consists in setting the straps *n* *o* at one side of the center of the clip, and in thus removing the pivot *m* and dowel *r* almost entirely from the line of the hame-tug A.

The construction I have devised is not only useful in removing the tug from the hames when in use, but is especially convenient in fitting up sets of harness at the manufacturer's.

When a purchaser wants to have a different style of tug attached to the hame, or to use a hame of different size with an otherwise satisfactory harness, considerable delay and trouble is experienced in making the change when a solid tug-clip is riveted fast to the hame-tug in the usual way, while by my invention the hame-tug and clip are instantaneously remov-

able, and may be replaced by others without any delay or trouble. The formation of the eye C with a rounded surface in contact with the clip also increases the durability of the latter and obviates the tendency to wear caused by the mortising of the part B.

Having thus fully set forth my invention, I claim the same as follows:

The combination, with the hame-tug A, of the strap o, having the hook B, with pivoted part B' jointed thereto, and provided with the

dowel r, as described, and the strap n, provided with hole s, the whole arranged and operated substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

STEPHEN A. WALL.

Witnesses:

E. R. OGDEN,  
THOS. S. CRANE.