(No Model.)

J. G. & W. H. HAGLOCK.

ADJUSTABLE HAME STAPLE.

No. 483,111. Patented Sept. 20, 1892.

Fig 1

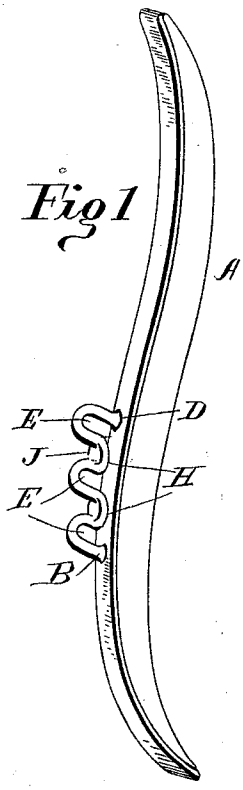


Fig 2

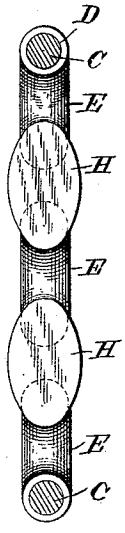
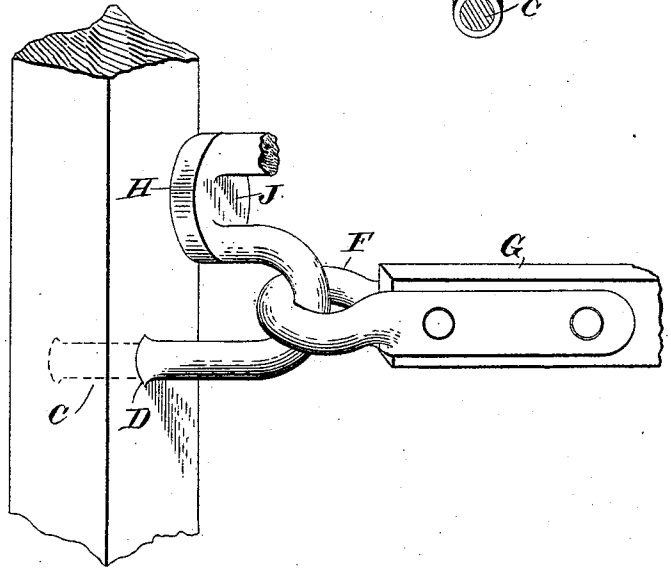


Fig 3



WITNESSES:
C. C. Burdine
W. S. Boyd

INVENTORS
John G. Haglock.
William H. Haglock.
By John G. Manahan.
Their ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN G. HAGLOCK AND WILLIAM H. HAGLOCK, OF STERLING, ILLINOIS.

ADJUSTABLE HAME-STAPLE.

SPECIFICATION forming part of Letters Patent No. 483,111, dated September 20, 1892.

Application filed September 8, 1891. Serial No. 405,084. (No model.)

To all whom it may concern:

Be it known that we, JOHN G. HAGLOCK and WILLIAM H. HAGLOCK, citizens of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Adjustable Hame-Staples; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention has reference to hames, and more particularly to the construction of the staple whereby the point of adjustment of the tug-clip may be varied in altitude to accommodate the draft of horses of different size, horses of different-shaped shoulders, and for different points of rear-draft adjustment for the same horse.

Our invention therefore consists in the construction of the body of the staple with a series of loops lying in the same plane with its ends and connected at their ends by guards adjacent to the hame, the length of the loops from the arch to the base of the guard being less than the length of the aperture of the clip, as will be hereinafter more fully set forth.

It is well known to those familiar with the use of horses, particularly in agricultural operations, that aside from the advantages of adjusting the attachment of the tug to the hame at variant angles to comport with the size of the horse or shape of his shoulders the altitude of the rear attachment so varies from the surface of the ground (as in the case of a harrow) to nearly or quite the horizontal plane of the lower part of the animal's shoulder that such vertical adjustment of the tug to the hame is not only comfortable and advantageous to the animal, but also renders feasible the application of the draft of the whiffletree in the line to produce the best results.

In devices of this kind heretofore constructed, in which the main portion of the staple was continuous from the upper to the lower leg and the tug was changed from one position to another by moving it over a projection, the main portion has been made perfectly straight from top to bottom and the projections simply extend from said straight portion; but the trouble with such a construction is that as soon as the tug has been moved around to bring the opening in the clip in a line with the projection the tug could then be moved from one end of the staple to the other without changing or varying its position in the least, and in handling the harness there is a great liability of the tug being turned relatively to the hame so that the opening in the clip will register with the projection and the tug will be accidentally moved from one notch to the other. To obviate this difficulty, we have formed the main portion of the staple with external recesses and have placed the projections at the lower end or bottom of these recesses, whereby the tug must be rotated on its axis, as well as to be turned laterally relatively to the hame and the staple. As this rotation of the tug upon its axis must be in opposite directions to move from one loop of the staple to the next, it is evident that it would be simply impossible for the tug to be accidentally moved from one loop to the other in the handling of the harness.

In the drawings, Figure 1 is a perspective view of a hame provided with our improvements. Fig. 2 is a view of the inner face of the staple. Fig. 3 is a perspective view of a section of the hame with the staple-clip and front end of the tug in place.

Similar letters refer to similar parts throughout the several views.

A is the ordinary hame of any of the forms in common use, and B is the staple provided at its upper and lower ends with a projecting leg C, adapted to pass through the hame A from the outside and to be riveted upon the inner surface of the latter in the usual manner.

D D are annular enlargements upon the legs C to gage the extent of insertion of said legs into the hame A.

E E is a series of loops formed in the main portion of the staple B between the legs C and projecting outwardly from the hame A for the reception, respectively, in their inner faces of the clip F, which latter is seated in

the usual mode on the front end of the tug G. These loops virtually form short staples, the ends of which, except the end ones, which are projected into the leg C, terminate in contiguous guards H and are formed integrally with such guards in pairs—that is to say, the adjacent ends of the several loops E are thus integral with the guard H, interposed between each pair of such loops.

The guards H have an oblong formation viewed from the adjacent face of the hame A, being somewhat oblate at their outer centers, and may have flat or convex inner and outer faces. The ends of the loops E are formed into the guards H, respectively, at the ends of said guards, leaving on the outer surface of each of said guards an interval or recess J of sufficient width to permit the clip F to be turned therein in the adjustment hereinafter mentioned. The width of the guards H and their distance from the hame is such that the clip F cannot pass over said guards when said clip is in the line of prolongation of the staple B or in any other position than that of right angles to said staple, and therefore the clip F cannot pass from one of the loops E to the other ones unless it is turned one-quarter of a revolution on its axis when at right angles with the legs C of the staple B, then one-quarter of a revolution back into its original position to get it onto the guard, then another quarter of a revolution in the same direction to get it off the guard and onto the leg of the next loop, and then one-quarter of a revolution in the opposite direction to get it onto the outer portion of said loop. The rotation of the tug and the clip on its axis, which is absolutely necessary to change the adjustment of the tug, are positions which the clip F can never assume in use.

In the drawings the staple B is shown provided with the outer series of three loops E; but our invention is practicable and will operate satisfactorily with any number of said loops.

The construction of our invention is as follows: The staple B, provided with the loops E and intervening guards H and interposed exterior intervals J, is inserted in the hame A to the locality of the annular enlargements D. The clip F is then passed over either one of the outer limbs of the staple B and turned into one of the loops E and is then riveted in the usual mode to the tug G. The tug G approaches so far into the margin of the eye of the clip F that when the tug is in its normal or any casual position, the distance from the end of the tug across the eye of the clip being less than the inside length of the loop E from its arch to the base of the guard H, the end of the clip F cannot pass over the guard H; but if the end of the tug should become worn and permit the clip F to approach the hame A sufficiently to rest upon the upper end of the guard H the width of the latter is such as to prevent said clip from dropping out of its loop E and when the tug again becomes taut said clip will return to its original position. When it is desired to adjust the tug G vertically, the clip F or front end of the tug is grasped with the hand and turned in either direction at right angles with the line of the staple B, in which position said clip will pass over the guard H, whose width is less than the length of the aperture of the clip, by being turned into an approximate external recess J, and can be entered optionally into any one of the loops E, when it will remain until manually removed therefrom, as aforesaid.

The advantages of our invention are that, first, it requires no change in the form or size of the ordinary clip; second, that the staple B is formed in one integral piece of uniform strength throughout, and, third, that there is an absolute impossibility of any casual shifting of the clip F from one of the loops E to another.

What we claim, and desire to secure by Letters Patent, is—

The combination, with a hame, of a staple secured thereto, the body or main part of the staple being formed into a series of loops lying in the same plane with the ends of the staple, said loops being connected at their ends by guards near the side of the hame, the loops having a length from the arch to the base of the guards greater than the length of the aperture of the clip to be secured thereby, the dimensions of the guards and their distance from the hame being such that the clip cannot pass over the guards, except when it is turned substantially at right angles to the plane of the loops, substantially as set forth.

In witness whereof we affix our names hereto in the presence of two witnesses.

JOHN G. HAGLOCK.
WILLIAM H. HAGLOCK.

Witnesses:
MATTIE W. BARRETT,
ZODOK T. GALT.