No. 796,028. PATENTED AUG. 1, 1905.

W. G. YOUNGS.

HAME FASTENER.

APPLICATION FILED MAY 23, 1904.

Fig. 1.

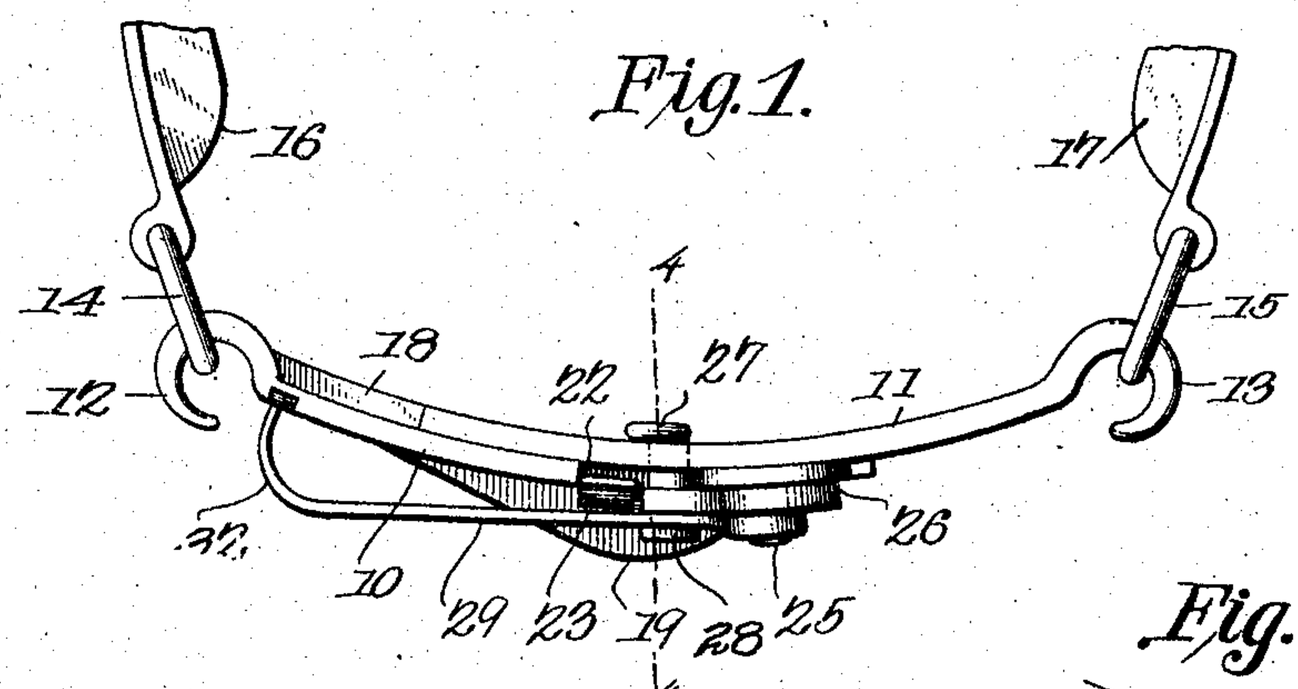


Fig. 2.

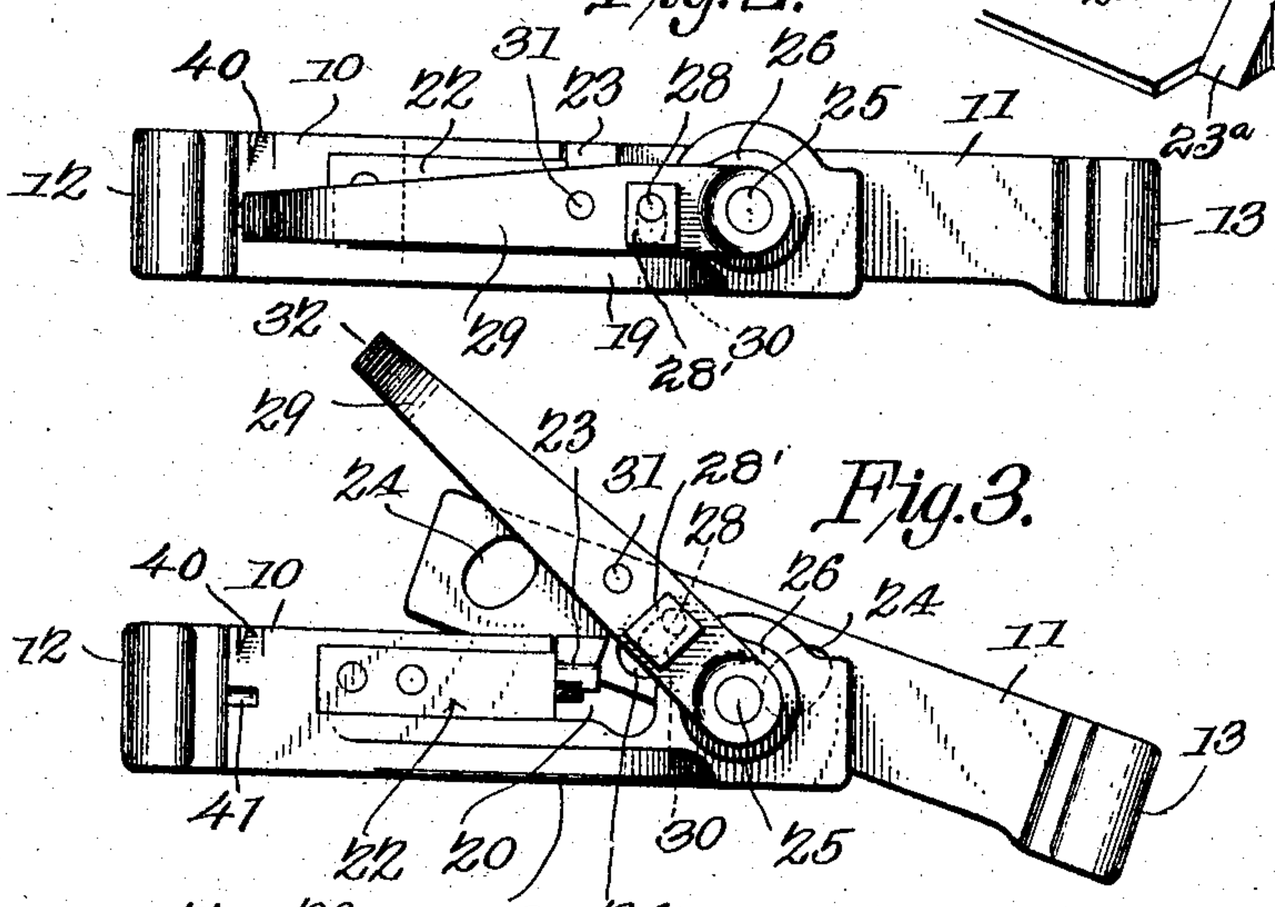


Fig. 8.

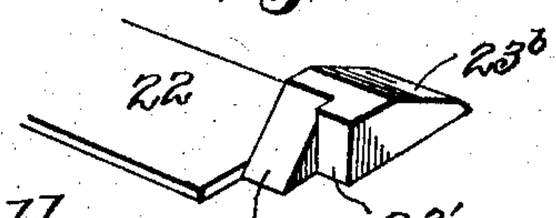


Fig. 3.

Fig. 6.

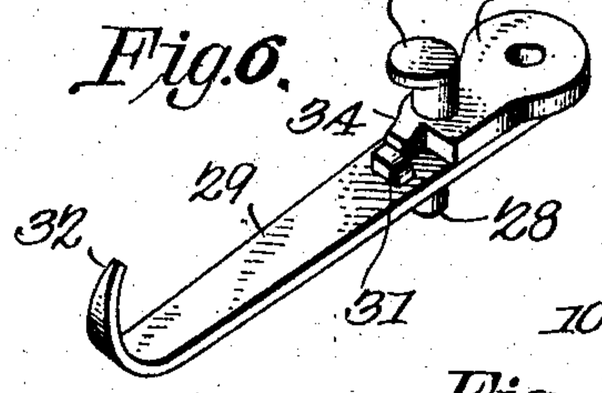


Fig. 4.

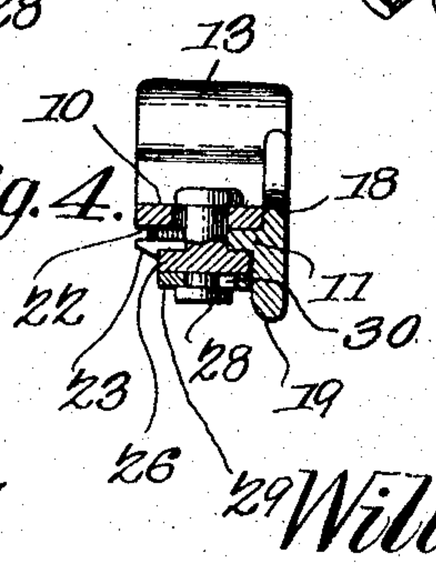


Fig. 5.

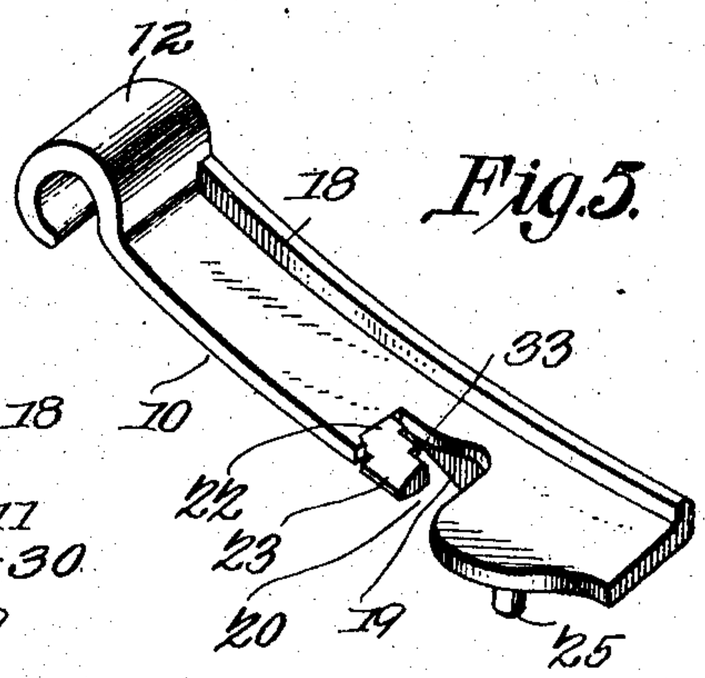
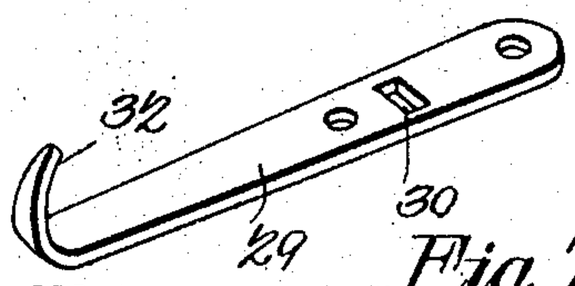


Fig. 7.



Witnesses

E. F. Stewart

E. N. Woodward

William G. Youngs.

Inventor

by Church & Church

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM G. YOUNGS, OF MONTESANO, WASHINGTON.

HAME-FASTENER.

No. 796,028. Specification of Letters Patent. Patented Aug. 1, 1905.

Application filed May 23, 1904. Serial No. 209,346.

To all whom it may concern:

Be it known that I, WILLIAM G. YOUNGS, a citizen of the United States, residing at Montesano, in the county of Chehalis and State of Washington, have invented a new and useful Hame-Fastener, of which the following is a specification.

This invention relates to devices for quickly attaching and detaching the hames of harness, and has for its object to improve the construction and produce a device of this character of few parts, effective in its action, and which will firmly unite the free ends of the hames and which may be quickly adjusted to different-sized hames and different-sized horse-collars.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claims made therefor.

In the drawings thus employed, Figure 1 is a front elevation of the improved device. Fig. 2 is a bottom plan view of the improved device. Fig. 3 is a bottom plan view with the parts unlocked. Fig. 4 is a transverse section on the line 4 4 of Fig. 1. Fig. 5 is a perspective view of one of the main hame-engaging members detached. Fig. 6 is a perspective view of the resilient trip-arm and locking-plate detached. Fig. 7 is a perspective view of the resilient trip-arm detached. Fig. 8 is a detail perspective view of the spring-pressed locking-catch detached.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The device includes, primarily, a pair of plates 10 and 11, that are respectively provided with end hooks 12 and 13 for attachment to the loops or rings 14 and 15 of the hames, portions of which are shown at 16 and 17. The plate 11 is provided with a plurality of spaced openings 24, elongated in a direction oblique to the longitudinal plane of the plate, and in one of said openings may be received a suitable locking member carried by the opposite plate 10 for the purpose of adjusting the device in accordance with the size of the collar and hames. The plate 10 is provided with a longitudinal stop-flange 18, extending along one edge of its concave side to limit lateral movement of the plate 11 in one direction when the two plates are united, and thus maintain them in horizontal alinement. The plate 10 is further provided with a stop-lug 19, extending over its convex side at a point opposite the flange 18, and near one end of the plate is a recess 20.

The under side of the plate 10 is recessed to receive a plate-spring 22, the free end of which extends over the edge of the recess 20 and is provided with a catch 23 of the construction best shown in Fig. 8. The catch 23 has a shoulder 23′, serving as a locking member for holding the parts in place, and it is further provided with two inclined cam-faces 23^a and 23^b for a purpose hereinafter described.

Near one end of the plate 10 is a pin 25, on which is pivoted an arm 26, that is provided with a headed pin 27, which may be engaged in any one of the openings 24 of the plate 11, and said arm is further provided with a shouldered lug 34, which when engaged with the shoulder 23′ of the locking-catch will firmly hold the parts in operative position. From that face of the arm 26 opposite the pin 27 extends a pin 28, that is riveted or otherwise secured to a small plate 28′. The pin 25 forms a pivotal support for a resilient locking-arm 29, that is provided with a transversely-elongated opening 30, through which extends the pin 28, said arm being further provided with a cam-shaped lug 31 for engaging the two cam-faces 23^a and 23^b of the locking-catch, so that when the arm 29 is moved around to a position parallel with the plate 10 the lug 31 in riding over the cam-face 23^b will depress the catch against the stress of the spring 22, and the shoulder 23′ of said catch will engage the shoulder of the lug 34 and lock the parts in place. On movement of the arm 29 in the reverse direction the cam-face 23^a will be engaged by the cam-lug 31, and the catch 23

will be forced downward and disengaged from the locking-lug 34 and permit release of the parts. The free end 32 of the resilient arm 29 is bent to form a pointed end 32, which as the arm 29 is turned in parallel relation with the plate 10 will ride up an inclined cam-face 40 in the plate 10, and will be received within a socket 41, formed in said plate, thus to lock the arm in place. The arm may be readily disengaged from the socket by a slight outward pull when it is desired to disengage the plates 10 and 11.

To connect the parts they are first adjusted to the position shown in Fig. 3, and the headed pin or stud 27 is moved into one of the elongated openings 24 of the plate 10. The resilient arm 29 is then moved down into parallel relation with the plate 10. During this movement the cam-lug 31 will ride up the cam-face 23^b of the catch 23 and will depress said catch until the locking-lug 34 of the arm 26 has passed beyond the shoulder 23′, when on continuing the movement the cam-lug 31 will ride down the cam-face 23^a, and the spring 22 will thereupon act to move the locking-shoulder 23′ into engagement with the locking-lug 34. Further movement in the same direction will cause the pointed end 32 of the arm 29 to ride up the cam 40 and thence into engagement with the recess 41, the parts being thus firmly locked in place. To disengage the parts, the arm 29 is pulled out of the socket 41 and moved in the reverse direction, or toward the position shown in Fig. 3. During the first part of this movement the arm 26 will remain stationary and the shoulder 23′ will remain in engagement with the lug 34, and it is during this portion of the movement that the slot 30 and pin 28 come into play, the slot permitting a slight angular movement of the arm 29 independent of the arm 26. This movement is sufficient to permit the cam 31 to ride up the inclined cam-face 23^a of the locking-catch 23, and thus force the latter outward and downward until the shoulder 23′ is disengaged from the lug 34. When this has been accomplished, the end of the slot 30 is in engagement with the pin 28, and on further movement of the arm 29 the arm 26 will move with it and the parts will swing clear to the position shown in Fig. 3, at which point the headed pin 27 may be disengaged from the opening 24 in the plate 11.

Having thus described the invention, what is claimed is—

1. In a hame-fastener, a pair of plates having means at one end for detachable connection to the hames, a locking-arm carried by one of the plates, interengaging means between said locking-arm and opposite plate, and spring-pressed locking devices for engaging and holding said arm and plates in parallel relation.

2. The combination in a hame-fastener, of a pair of plates having means for connection to the hames, one of said members having an opening, a locking-arm pivoted to the opposite member and having a headed pin or stud for engaging the opening, and interengaging locking devices carried by the arm and the plate to which it is pivoted.

3. In a hame-fastener, the combination with a pair of plates having means for connection to the hames, one of said plates having an opening, an arm pivotally mounted on the second plate and having a headed pin or stud adapted to said opening, interengaging locking devices carried by the arm and the plate to which it is pivoted, and a second arm controlling the engagement and disengagement of said locking devices.

4. The combination in a hame-fastener, of a pair of plates having means for connection to the hames, one of said plates having an opening, an arm pivotally connected to the second plate and provided with a headed pin or stud for engagement with the opening, a spring-pressed catch carried by the second plate and adapted to engage said arm, and a cam-carrying lever also pivoted to the second plate and controlling engagement and disengagement of the catch.

5. The combination in a hame-fastener, of a pair of plates having means for connection to the hames, one of said plates having an opening, an arm pivoted to the second plate and provided with a headed pin or stud for entering said opening, a spring-pressed catch carried by the second plate, said catch having a locking-shoulder and a cam-face, and a lever pivoted to the second plate and having a cam-lug for engaging the cam-faces of the catch.

6. The combination in a hame-fastener, of a pair of plates having means for connection to the hames, one of said plates having an opening, and the second a recess, an arm pivoted to the second plate and having a headed pin or stud for entering said opening, a spring-pressed locking-catch carried by said second plate and having a locking-shoulder, and a pair of oppositely-facing cam-faces, a resilient lever also pivoted to the second plate and having a cam-lug for engaging said cam-faces, the free end of the lever being adapted to the recess of said second plate.

7. The combination in a hame-fastener, of a pair of plates having means for connection to the hames, one of said plates having openings elongated in a direction oblique to the longitudinal plane of the plate, an arm pivoted to the second plate and having a headed stud adapted to engage in any one of said openings, said arm being provided with a projecting locking-lug, a spring-pressed catch carried by the second plate and provided with a shoulder for engaging the lug, and with oppositely-inclined cam-faces, said second plate being provided with a notch or recess near one end, a headed pin projecting from the arm, a resilient lever pivoted to the second plate and

having a transversely-elongated slot through which said pin extends, the free end of the lever being adapted to the recess in said second plate, and a cam-lug carried by the lever and adapted to engage the cam-faces of the catch.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM G. YOUNGS.

Witnesses:
JOHN W. PETTIJOHN,
E. D. KILLERMAN.