(No Model.)

R. G. ARMSTRONG.

HAME FASTENER.

No. 481,725. Patented Aug. 30, 1892.

Fig. 1.

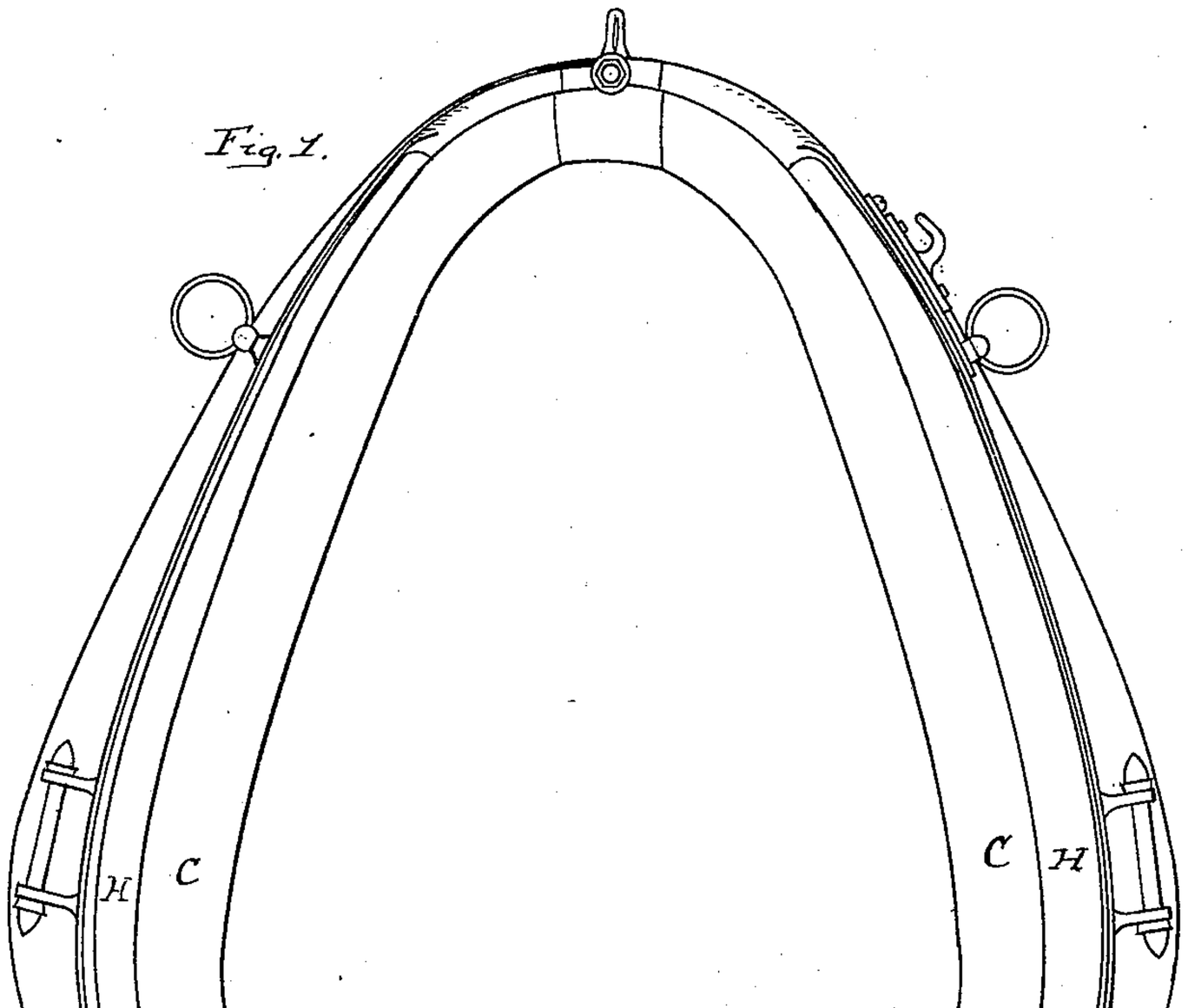


Fig. 4.

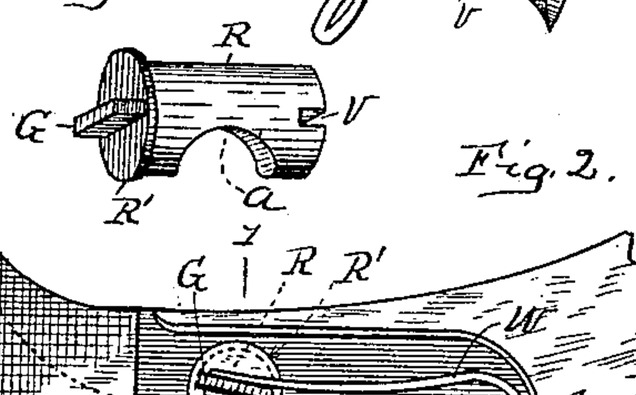


Fig. 7.

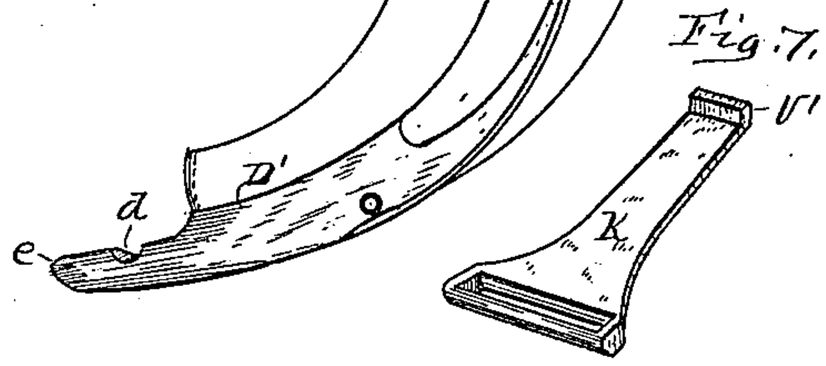


Fig. 2.

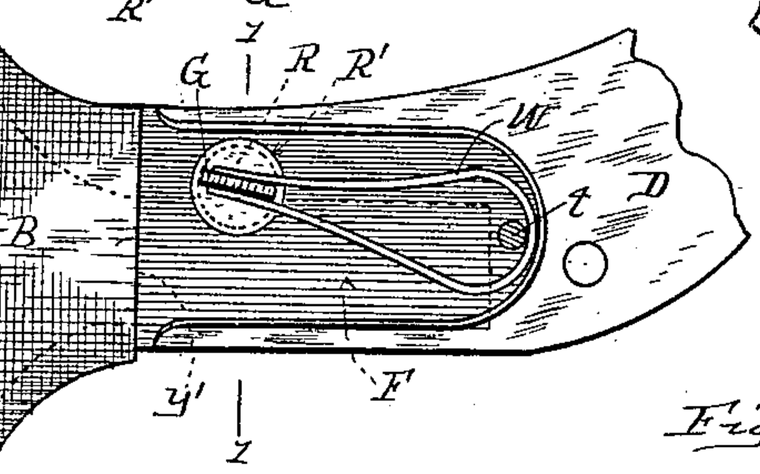


Fig. 3.

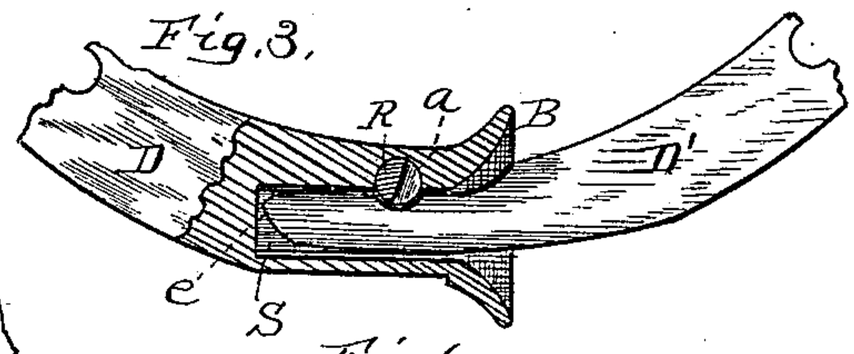


Fig. 6.

Fig. 5.

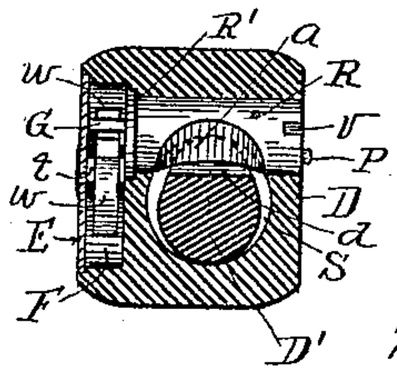
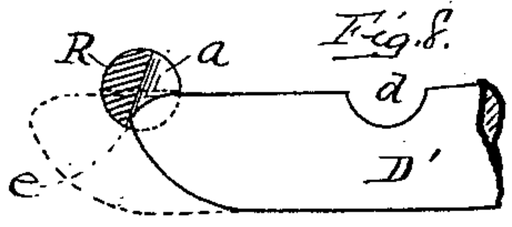


Fig. 8.



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UNITED STATES PATENT OFFICE.

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HAME-FASTENER.

SPECIFICATION forming part of Letters Patent No. 481,725, dated August 30, 1892.

Application filed August 20, 1891. Serial No. 403,153. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. ARMSTRONG, a citizen of the United States of America, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Hame-Locks for Swinging Harness, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a front view of a combined collar and hame made with my improved hame-lock, representing the collar slightly spread. Fig. 2 is a rear plan view of the socketed portion of the hame-lock, having the plate thereof removed to show the operative mechanism. Fig. 3 is a detailed sectional view of said socketed-lock portion and a side plan of the hame-shank of the opposite hame portion, represented as locked in the socket. Fig. 4 is a detailed perspective of the rotatable latch-bar or tumbler of the hame-lock. Fig. 5 is a cross-sectional view of the lock on line 1 of Fig. 2, representing the lock-shank in position in the socket; Fig. 6, a perspective view of the rear inclosing plate of the lock; Fig. 7, a perspective view of the key for manipulating the lock; and Fig. 8 is a detailed plan of the lock-tumbler and the shank, showing the manner of engagement of said parts.

This invention relates to certain improvements in hame-locks of combined hames and collars of the class designed for use in swinging harnesses for fire-department service, which improvements are fully set forth in the following specification, and pointed out in the claims.

The object of this invention is to avoid the use of parts in the lock construction which are in anywise liable to be accidentally moved by striking or in anywise coming in contact with an object or obstruction while in service, to throw the harness from a horse or horses.

Referring to the drawings, C represents the collar, and is made flexibly connected at its top center and divided at its lower center, thereby adapting it to be spread and held aloft, so a horse may place his neck under it.

H represents the two-part hame, made jointed or hinged together at the top center and secured to the collar C in such manner as to be manipulated with the collar. One hame portion terminates at its lower end with a socketed portion D, which is provided with the bell-shaped socket entrance B, with the socket S, and with the rotatable tumbler R arranged in a corresponding bearing crossing the upper portion of the socket-chamber and provided with a hollow *a* in one side of a form adapting it to register with and form a portion of the socket-wall when the said tumbler is turned into a given position.

The rear side of socket portion D is chambered, as shown at F, and is provided with a covering-plate E, beveled at its square end, as shown at *y*, which when placed into position enters under a corresponding shoulder *y'* of the socket portion, and is also provided with a screw-hole *t'*, through which a screw *t* (see Fig. 2) is turned for securing the plate into position.

One end of tumbler R is provided with an annular flange R', seated in a corresponding recess in the side of portion D in chamber F, which prevents the tumbler from moving forward out of position. Said tumbler is also provided at its front end with a cross-key slot *v* and at its rear end with a flat extending shank G within chamber F, which is made to engage against plate E, and thereby prevent the tumbler from rear sliding movement.

Within chamber F is a bow-spring made with its free ends brought close together and with said end portions about parallel with each other and placed one against either side of the flat shank G of the tumbler R, and serves to yieldingly hold the tumbler R into the position shown in Figs. 2, 3, 5, and 8, so that a solid portion of the tumbler will extend down into the socket-chamber and present the hollowed surface thereof at an incline facing toward the lower side of the socket entrance. The screw *t* for holding the covering-plate E into position also serves to hold the spring W back in its chamber F, as represented in Fig. 2.

The shank portion D' of the fellow hame part is made to enter into the socket S and is beveled at the lower side at its terminal, as shown at *e*, to make it easy to enter the socket,

and is similarly beveled a less degree at its upper part at the terminal, as shown, above bevel *e*, to cause it to present more surface against the incline surface of the tumbler-hollow *a* when entering the said socket. At a little distance back from said shank-terminal it is provided in its upper side with a hollow *d*, corresponding with the rounded form of the socket-tumbler R, and as the said shank is entered into the socket it first engages at its upper terminal against the lower portion of the inclined surface of the tumbler-hollow *a*, as shown in Fig. 8, when by a little force the said incline surface is moved, causing the tumbler to rotate sufficiently to bring said hollow *a* to a position so its surface will conform to the outlines of the socket-wall and form a part of the socket-wall, thus permitting the shank to enter fully into the socket, which brings the shank-hollow *d* to a position to register with the tumbler-bearing, which releases the shank from the tumbler and permits the tumbler to turn to its former position and present a solid portion thereof extending into and across the shank-hollow *d*, as shown in Figs. 3 and 5. When the tumbler is rotated by the engagement therewith of the shank D′, its extending flat shank G likewise rotates, which forces apart the arms of spring W, the tension of which spring-arms cause the tumbler to reverse to its former position and assume the position as shown in said last-mentioned figures, which locks the shank D′ into socket S. The sides of shank D′ where it enters the socket are made more contracted than the socket sides, as shown in Fig. 5, so as to leave a space within the socket at each side the shank, in order that the engagement of the shank may be with the central portion of the tumbler-hollow *a* and at that portion only.

In Fig. 7, K represents a key for rotating the lock-tumbler R to release the shank D′ from the socket, and is designed to be attached to a strap or the like attached to a convenient part of the collar or hame or to the harness, and thereby be convenient at all times for use, and is made with its end portion bent at right angles to its body, as shown at *v*′, which portion is adapted to be entered into the face-slot *v* of the tumbler R, when by a movement of the body or handle portion of the key the tumbler R is properly rotated, and to prevent too great movement of the key a pin P is set in the front of socket portion D a little to one side of the tumbler, against which the key engages when the tumbler is properly turned. By this construction of lock the parts are made strong, simple, and durable, and in locking the hames it is only necessary to force the parts together, when the locking becomes automatic, and when locked no outward pressure or pull can unlock it, as the tumbler cannot be rotated otherwise than by an instrument like or similar to the key K.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. In a hame for swinging harness, the lock thereof consisting of the extending shank of one hame part provided with a hollow in one side, the socket of the fellow hame part arranged to have the said shank entered therein, and provided in said socket part with the tumbler arranged crossing the socket-chamber and hollowed in one side, and the spring for yieldingly holding the tumbler, substantially as and for the purpose set forth.

2. A hame-lock for swinging harness, comprising a socket formed in one hame part provided with a bell-shaped entrance, a tumbler arranged crossing one side portion of the socket-chamber and provided with a hollow in one side presentable within said chamber, and with a cross-slot in one end for the admission of a key for turning it, a spring for yieldingly holding the tumbler from turning, and an extending shank, of the fellow hame part provided with a hollow in one side and adapted to enter into said socket-chamber, substantially as and adapted to operate in the manner specified.

3. In the hame-lock described, the combination, with the part B, provided with the socket, with the cross-bearing, and with the rear chamber and covering-plate thereof, of the tumbler arranged in said cross-bearing and provided with a hollow in one side arranged to register with the socket, with a flattened shank arranged extending into said rear chamber, and with a cross-slot in its opposite end and accessible at the lock-front, and the spring arranged in said chamber and bearing at its ends oppositely against the tumbler-shank, substantially as and for the purpose set forth.

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