

(No Model.)

W. C. HUNTER.
FASTENING FOR METAL PLATES.

No. 481,566.

Patented Aug. 30, 1892.

FIG. 1.

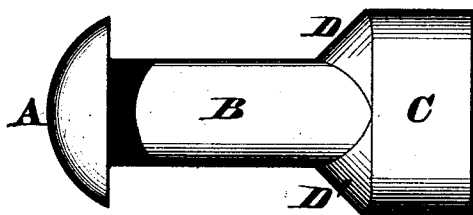


FIG. 2.

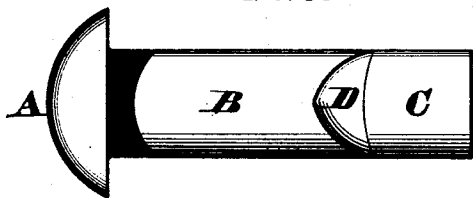


FIG. 4.

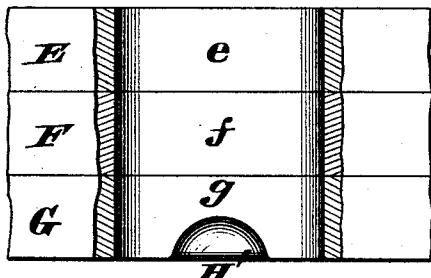


FIG. 9.

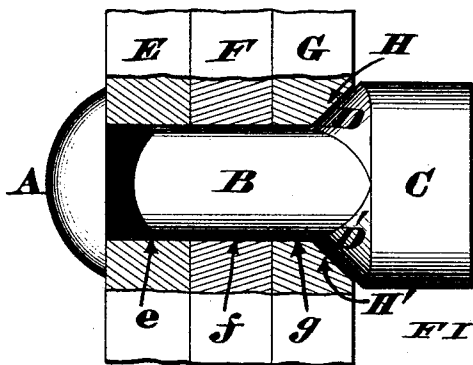


FIG. 3.

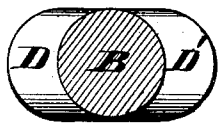


FIG. 5.

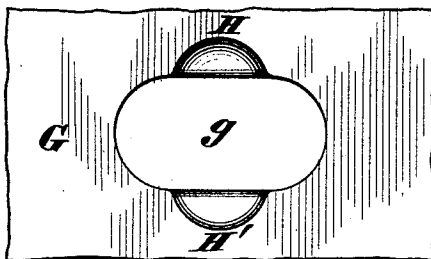


FIG. 6.

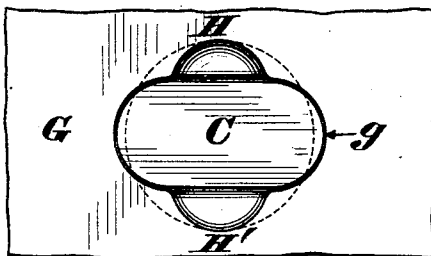


FIG. 7.

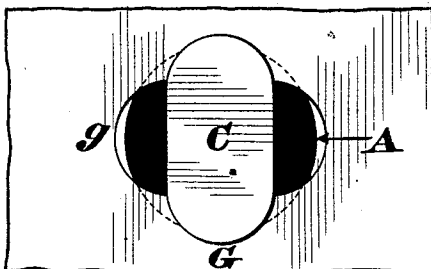
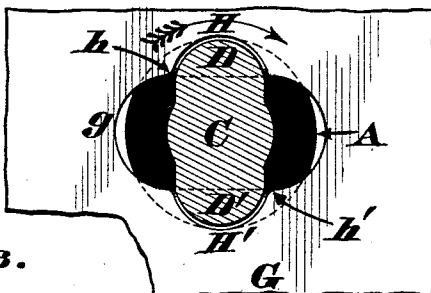


FIG. 8.



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FASTENING FOR METAL PLATES.

SPECIFICATION forming part of Letters Patent No. 481,566, dated August 30, 1892.

Application filed February 15, 1892. Serial No. 421,619. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. HUNTER, a citizen of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Fastenings for Metal Plates, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

The object of my invention is to provide a fastening that will securely unite plates, bars, frames, and all other metallic structures capable of being held together by bolts, rivets, and similar ties.

The improvement is designed to prevent the annoyance and danger of nuts working loose from bolts, the entire fastening being a single unitary device complete in itself, free from any detachable part, and so arranged as to be locked in place by simply giving it a quarter-turn with a powerful lever or other implement, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a side elevation of my fastening. Fig. 2 is a plan of the same. Fig. 3 is a transverse section through the fastening, the butt-end of the same being horizontal. Fig. 4 is a sectionized plan showing three plates or bars assembled together preparatory to being united by the fastening. Fig. 5 is an elevation of the outer plate or bar with which the butt of the fastening is to be engaged. Fig. 6 is a similar elevation of said plate, the slot of the same having the butt of the fastening passed through it. Fig. 7 is a similar elevation showing the butt of the fastening turned around at a right angle with reference to the slot. Fig. 8 is a similar view, the butt of the fastening being sectionized to show how its shoulders engage with the sockets of the slot. Fig. 9 is a vertical section of the three plates united by the fastening.

A represents a suitable head, B the cylindrical shank, and C the butt-end, of my fastening, a pair of shoulders D D' being formed where said shank and butt meet. The head, shank, butt, and shoulders are one integral piece of metal, and said shoulders slope at an

angle of forty-five degrees, as more clearly seen in Figs. 1 and 9.

E, F, and G are three plates, bars, or frames, or other pieces of metal to be fastened together, which pieces are slotted at *e f g* to permit free passage of the butt C.

H H' are sockets on the opposite sides of slot *g* of plate G, which sockets are of the proper size and shape to admit the shoulders D D'.

To illustrate the method of applying this fastening, let it be supposed the coincident slots *e f g* of the plates are horizontal, although they may be vertical or disposed at any angle, as the fastening will be equally effective no matter how the slots are arranged, provided they are in line with each other. The plates being thus assembled the butt C is passed through the slots as far as the head A will permit, the butt being of course horizontal, as seen in Fig. 6, and projecting beyond the outer surface of plate G, as represented in Fig. 9. This projecting butt is then grasped by a lever or other powerful implement and the fastening is given a quarter-turn either to the right or left. I will suppose, however, that this turn is made to the right, as indicated by the arrow in Fig. 8, the first result of which turning is to cause the shoulders D D' to bind very tightly at the points *h h'*. (Seen in said illustration.) Some considerable power is necessary to force the shoulders beyond said points; but as soon as they are passed it is then an easy matter to continue the turning of the fastening until its butt C is vertical, as seen in Fig. 7. When this position is reached, the shoulders D D' are fairly seated within the respective sockets H H', as represented in Figs. 8 and 9. It is evident the three plates E F G are now securely fastened together, but are free to expand and contract without in the least affecting the strength of the device that unites them. Not only is this true but said fastening device cannot be loosened by any possible vibrations or jarrings of the plates, the detachment of said fastening requiring the exertion of as much power as its original application. Therefore when the plates are to be separated the lever must again be brought into service and the fastening turned either

to the right or left until its butt reaches a horizontal position, which act will require considerable power to force the shoulders beyond the points where the sides of the sockets join the edge of the slot. As soon, however, as the butt reaches a horizontal position, the fastening can be drawn out of the slots, thereby liberating the plates or bars.

I claim as my invention—

- 10 1. As a new article of manufacture, a fastening device consisting of a shank B, having a head A at one end, an oblong butt C at its other end, and a pair of diametrically-opposite beveled shoulders D D', which shoulders
15 slope downward and inward from the extremities of said butt and connect it with said shank B, said parts A B C D D' being

formed of a single integral piece of metal, as herein described.

2. A fastening device consisting of the head 20 A, shank B, butt C, and beveled shoulders D D', all formed of a single integral piece of metal, in combination with the bar or plate G, to which said fastener is directly applied, said plate being slotted at g and having a 25 socket, as H, on each side of said slot to admit said shoulders D D', in the manner described, and for the purpose stated.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. HUNTER.

Witnesses:

JAMES H. LAYMAN,
ALFRED M. DAVIS.