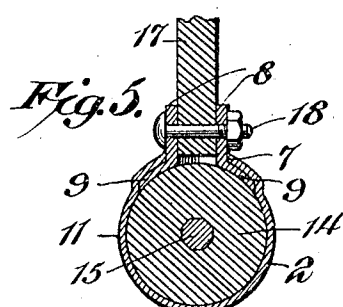
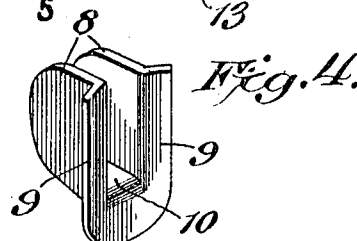
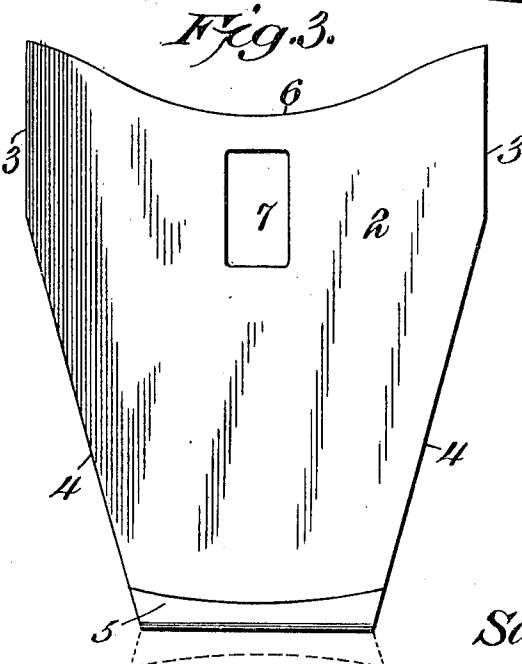
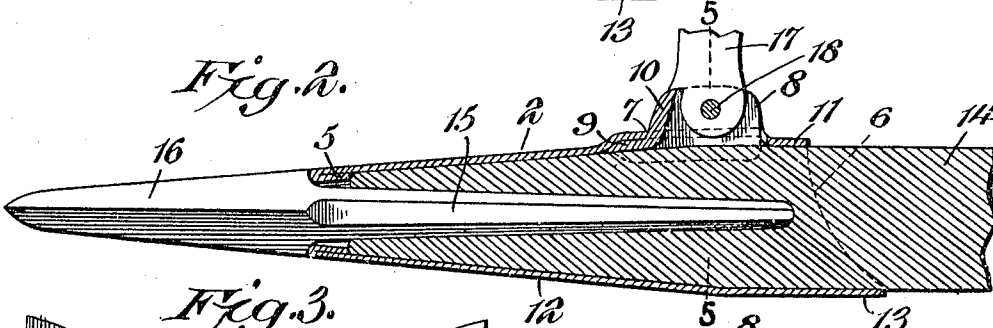
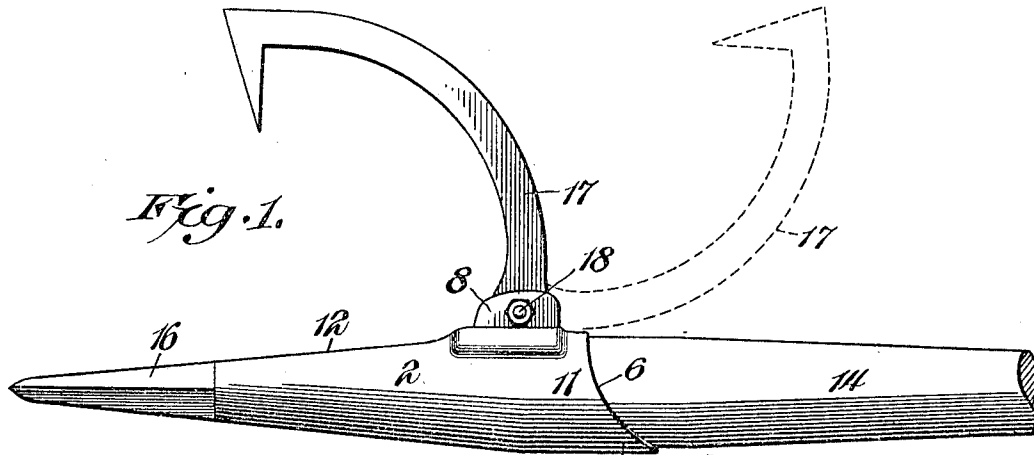


S. ENTERLINE.
METHOD OF MAKING GANT HOOK FERRULES.
APPLICATION FILED JAN. 23, 1909.

949,319.

Patented Feb. 15, 1910.



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SAMUEL ENTERLINE, OF RIDGWAY, PENNSYLVANIA.

METHOD OF MAKING CANT-HOOK FERRULES.

949,319.

Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed January 23, 1909. Serial No. 473,935.

To all whom it may concern:

Be it known that I, SAMUEL ENTERLINE, a citizen of the United States, residing at Ridgway, in the county of Elk and State of Pennsylvania, have invented a new and useful Method of Making Cant-Hook Ferrules, of which the following is a specification.

My invention relates to cant-hooks, such as are used by lumbermen, and particularly to a method of forming the ferrule of said hook and to the blank from which the ferrule is made.

One object of my invention is to so form the ferrule that those parts of it which are under the greatest strain shall be reinforced.

Another object is to provide a method of attaching the "staple" or hook socket to the ferrule, which shall provide for an exceptionally rigid connection between the two and prevent the staple or socket from tearing out.

Another object is to provide a ferrule blank having one portion of its side edges parallel to each other, and the other portion thereof convergently disposed so that when the blank is bent around to form the complete ferrule, said ferrule shall have a cylindrical portion and a conical portion, the blank being further formed with the edge of its largest end convexly curved so that the socket shall have one side thereof longer than the other and adapted to extend along the stock of the implement.

In the drawings, Figure 1 is a side elevation of a cant-hook ferrule and attached parts constructed in accordance with my method; Fig. 2 is a longitudinal section thereof, the terminal spike being shown in elevation; Fig. 3 is a face view of the ferrule blank before it is bent up; Fig. 4 is a perspective view of the hook socket or staple before being applied to the ferrule; Fig. 5 is a transverse section on the line 5—5 of Fig. 2.

Referring now to Fig. 3, 2 denotes a blank of relatively thick sheet metal, preferably steel. The side edges of this blank at one end are straight and parallel as at 3, and below this are convergent as at 4. The small end 4 of the blank is so formed that the metal at that end is folded back upon itself to form a reinforced portion 5. The edge of the larger end of the blank is substantially concavely curved as at 6, and the broad portion of the blank at the middle thereof

is formed with a rectangular opening 7 for the reception of the hook socket.

In Fig. 4 is illustrated a socket or staple forged or otherwise formed from an integral piece of metal, preferably steel, and consisting of the lateral wings, 8, the web 10, connecting the wings at one end, and the base flanges 9, these flanges projecting out from the wings and from the end of the socket, the flanges extending outwardly at rather more than a right-angle with the wings 8 so as to provide for the eventual curvature of the ferrule. The socket so formed is inserted into the opening 7 from the rear of the blank and the blank and socket flanges are welded together, the socket being forced into place and the blank being forced down around the flanges thereof so that the inner faces of the flange are in line with the inner face of the blank 2. A double thickness of metal is thus formed around the three sides of the opening 7 as shown clearly in Figs. 2 and 5. It will be seen that the provision of these flanges 9 give a large contacting welding surface between the flanges and the metal of the ferrule and renders the socket extremely rigid. It will be seen that the depression of the blank around the marginal edges of the flanges 9 acts to lock the socket in place and additionally prevent any likelihood of the socket moving or turning or tending to turn within the socket opening.

After the socket has been welded in place, the ferrule blank is bent around into the shape shown in Fig. 1, and the opposed margins 3 and 4 are welded together on a suitable mandrel in a manner well known in the art so as to form the complete ferrule having the cylindrical portion 11 and the tapered portion 12 shown in Fig. 1. It will be seen that when the blank 2 is bent around as above described, the concavity of the edge, 6, of the blank makes a prolongation, 13, which extends along the stock, 14, opposite to the hook socket, this prolongation assisting in supporting the stock in rigid engagement with the ferrule and strengthening or reinforcing the stock and ferrule at the point where the greatest strain comes in the operation of the implement. The stock 14 is of the usual description, that is, tapered to fit the ferrule and receive the many-sided shank 15 of the usual spike 16. The reinforced edge 5 of the ferrule receives the pressure of the butt end of the spike 15 and

strengthens materially the lower end of the ferrule at its thinnest portion. This small end of the ferrule is a part which is quite likely to give under the sidewise pressure brought to bear by the spike on the ferrule and the leverage exerted upon the device when in use. It is here that the ferrule is likely to bulge or split, and, hence, the necessity of the doubled thickness or reinforce against which the spike abuts and which prevents the end of the spike and the end of the ferrule from splitting. The hook 17 is of the usual construction, and pivoted in the ears 8 by a bolt 18. The opening in the ears for the passage of this bolt is preferably made after the socket is welded into place in the ferrule.

A cant-hook ferrule made as above described has the following points of advantage. The peculiar form of blank shown in Fig. 3 provides a ferrule having a tapered portion 11, which fits the tapered end of the stock, and a cylindrical portion which surrounds and engages with the cylindrical portion of the stock. This construction of ferrule increases the rigidity of its attachment and materially strengthens the implement as a whole. The concavity, 6, at the end of the blank provides the extension 13 beneath that portion of the stock upon which the greatest strain comes. The reinforce 5 prevents the splitting of the small end of the ferrule, and the flanges 9 on the hook or socket provide for a double thickness of metal around the margins of the openings 7, form large welding surfaces, and prevent the tearing out of the socket under the strain applied to the hook.

The method described is simple, does not

tend to split the blank 2 when the socket is inserted and provides for a very rigid attachment of the socket to the stock.

While I have shown the blank 4 as made with the reinforced turned over portion 5, I do not wish to be limited to this, as it is obvious that the blank might be made of heavier material and of sufficient strength to withstand the sidewise pressure of the spike 16 without giving way. By using the reinforce, however, it permits me to use a thinner metal for my blank than otherwise.

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

1. The method of making cant-hook ferrules which consists in forming a ferrule blank with an opening for the passage of a hook socket, forming a socket with outwardly extending base flanges, inserting the socket into said opening, and welding the ferrule blank to the socket flanges.

2. The method of making cant-hook ferrules which consists in forming a hook socket with outwardly extending base flanges, forcing the socket through a ferrule blank, raising the metal of the blank around and over the socket flanges to conform thereto and place the bottom of the socket flush with the under surface of the blank, and welding the ferrule blank to the socket flanges.

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

SAMUEL ENTERLINE.

Witnesses:

W. W. BARBOUR,
M. H. WENZ.