

W. H. Rodden,

Ferrule.

No. 111,573.

Patented Feb. 7. 1871.

Fig. 1.

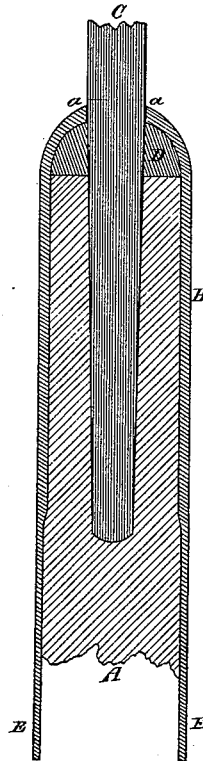


Fig. 2.

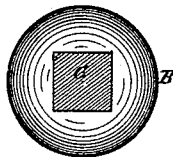


Fig. 3.



Witnesses.  
Wm. S. Thornton  
Wm. West

Inventor.  
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# United States Patent Office.

WILLIAM HENRY RODDEN, OF TORONTO, CANADA.

Letters Patent No. 111,573, dated February 7, 1871.

## IMPROVEMENT IN FERRULES.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern :*

Be it known that I, WILLIAM HENRY RODDEN, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented an Improved Capped Ferrule or Socket; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing forming a part of this specification, and to the letters of reference marked thereon.

The object of this invention is to provide a capped ferrule or socket, for use upon the handles of forks, rakes, chisels, or other tools or implements that may be finished with a shank, of novel and improved form and construction, for the purpose of giving a firm and unyielding gripe on the shank inserted in it, and preventing its working loose by exposure to the weather or other causes.

The nature of this invention consists in forming a wrought metallic ferrule with a solid cap at one of its ends, which said cap is formed by the metal being drawn in or compressed and rounded when at a suitable heat, an opening being left therein to admit the shank of the tool, and using in connection therewith a metallic pad, rounded at its top, so as to fit closely to the cavity of the cap, and to fill the space between the end of the handle and the cap of the ferrule.

To enable others skilled in the art to make and use my invention, I will proceed to describe it more particularly.

Figure 1 represents a longitudinal section of my improved ferrule, showing the position of the metallic pad and shank of a tool.

Figure 2 is a plan view of the cap of the ferrule, with the shank of a tool shown in section.

Figure 3 is a longitudinal section of the metallic pad.

Letters of like name and kind indicate like parts in each of the figures.

A may represent the handle of a tool, upon the end of which the ferrule is affixed. It is shown as broken off in the drawing.

The ferrule B may be made of sheet-iron or other suitable metal, welded, and finished by swaging and rounding it on a mandrel, in a hollow bed or die, by the application of a top swage or die with a hammer, or in any other convenient manner.

This ferrule is provided, at its outer end, with a rounded cap, which is formed by the metal being drawn

in or compressed and rounded at the end when at a suitable heat, by which means the thickness of the metal forming the cap is increased at the part which comes in contact with the shank C of the tool, as seen at *a*, thus securing the greatest strength at the points where there is the greatest strain.

It will be understood that a hole or opening is left or made in the cap of the ferrule to admit the shank of the tool.

D is a metallic pad, which is rounded on one side so as to fit closely to the inner surface of the cap, and is inserted and fitted in between the cap of the ferrule and the end of the handle, for the purpose of imparting greater strength and firmness to the ferrule when required.

This pad is also provided with an opening or hole, *b*, through its center, corresponding with that in the cap of the ferrule, for the purpose of relieving the shank C of the tool, which passes through the same, and is made to fit closely therein.

A portion of that end of the ferrule which slides over the handle may be drawn out or extended, so as to form one or more straps E, for the purpose of strengthening the handle A.

It will be seen that the ferrule B, together with its cap, and the straps E, are all in one solid piece of metal; also, that the metallic pad D, which receives the shank C, gives an increased gripe on the same, preserving the form of the ferrule, and rendering the shank less liable to become loose by reason of the wear or shrinkage of the handle.

Having thus described my invention, I may state that I do not claim the closing the end by means of a separate piece or pieces inserted; nor the capped ferrule of cast-iron; nor a stamped or cast rim or tip beyond and outside of the ferrule; nor a wrought socket welded to the shank of the tool; but

What I claim as new, and desire to secure by Letters Patent of the United States, is—

A wrought capped ferrule B, with or without the straps E, in combination with the metallic pad D, when said ferrule is made solid in one piece, substantially as herein shown and described, and for the purposes set forth.

WILLIAM HENRY RODDEN.

Witnesses:

THOS. H. CHURCHILL,

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