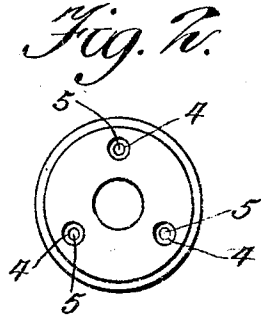
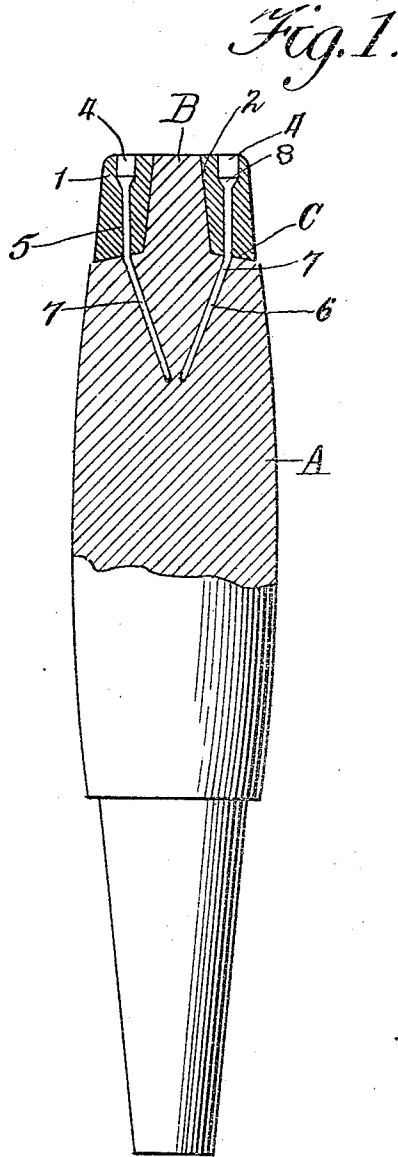


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 FERRULE OR PROTECTOR FOR TOOL HANDLES.
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Patented Jan. 4, 1910.



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ROBINSON BRAMLEY, OF LAWRENCE, MASSACHUSETTS.

FERRULE OR PROTECTOR FOR TOOL-HANDLES.

945,689.

Specification of Letters Patent.

Patented Jan. 4, 1910.

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To all whom it may concern:

Be it known that I, ROBINSON BRAMLEY, a citizen of the United States, residing at Lawrence, in the county of Essex and State
5 of Massachusetts, have invented new and useful Improvements in Ferrules or Protectors for Tool-Handles, of which the following is a specification.

This invention relates to ferrules or protectors for tool handles, and has for an object to provide a device of this character constructed from paper fiber to render the said ferrule indestructible, and to provide novel means for fastening the said ferrule
15 to the handle.

Other objects and advantages will be apparent as the nature of the invention is better disclosed, and it will be understood that changes within the scope of the claim may be resorted to without departing from the spirit of the invention.

In the drawings, forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side view of a tool handle with parts in section showing the application of the ferrule thereto, Fig. 2 is a top plan view, Fig. 3 is a section through the ferrule.

Referring now more particularly to the drawings and with particular reference to Fig. 1, there is shown a handle A of a chisel or other tool provided at its upper end with a substantially cone shaped stem or tang
35 B. The formation of the tang at the upper end of the handle is such that an annular shoulder C is provided, and as shown, the shoulder is flared from the lower end of the tang or stem in a downward angle. The
40 ferrule is indicated at 1, is formed from paper fiber, is provided with a centrally located passage 2 adapted to receive the tang or stem B, and upon the under side the said ferrule is provided with a concaved portion
45 3 to bear against the shoulder C surrounding the stem or tang as clearly shown in Fig. 1 of the drawings. The ferrule is provided with a plurality of recesses 4 preferably arranged in an annular series, and these recesses communicate with vertical passages
50

5 which open at their lower ends on the bottom face of the ferrule, and which are adapted to communicate or aline with diagonally disposed passages 6 formed in the handle.

Ferrule retaining devices are indicated at 7 and are preferably formed from wire pins, are provided with headed upper portions 8 adapted to be countersunk in the recesses 4, as shown. The retaining devices are formed from flexible material preferably, and in driving the same into the passages formed in the ferrule and into the passages formed in the handle it will be seen that each of the fastening devices are directed inwardly below the bottom face of the ferrule, and the lower ends of each of the said devices are directed toward the vertical axis of the handle as clearly illustrated in Fig. 1 of the drawings.

From the construction herein set forth and described, it will be seen that a simple, strong and durable ferrule is provided, which may be manufactured at a relatively low figure, and which may be conveniently anchored or held in place at the outer end of the handle of a tool.

While retaining devices in the form of pins are preferably provided, it is obvious that the ferrule may be secured to the handle by cement or any other suitable means as will be readily understood.

It will be seen that the device effectively prevents splitting of the handle or curling of the same at the outer end when the same is struck by a hammer or other tool.

Having thus fully described the invention, what is claimed as new, is:—

A tool handle having a tapered tang at one end, an outwardly and downwardly beveled shoulder surrounding the tang, and an annular series of passages opening at their upper ends through said shoulder and inclining therefrom in converging relation toward the center of the handle, a ferrule having a tapered opening receiving the tang, a beveled lower edge engaging said beveled shoulder, and an annular series of passages surrounding said opening and enlarged at their outer ends and com-

communicating at their inner ends with said
passages in the handle, and malleable
metal fastening pins having outer por-
tions extending through the passages in
5 the handle and provided with terminal en-
largements countersunk in the enlarged
outer ends of said passages, and having
their inner ends deflected inwardly at an

angle in converging relation and driven into
said inclined passages in the handle. 10

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

ROBINSON BRAMLEY.

Witnesses:

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SAMUEL C. LEEDHAM.