(No Model.)

F. S. CHASE.

UMBRELLA FERRULE.

No. 510,159. Patented Dec. 5, 1893.

Fig. 1

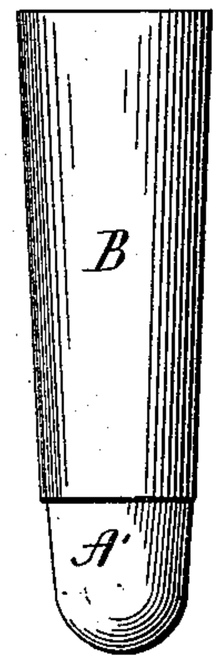


Fig. 3

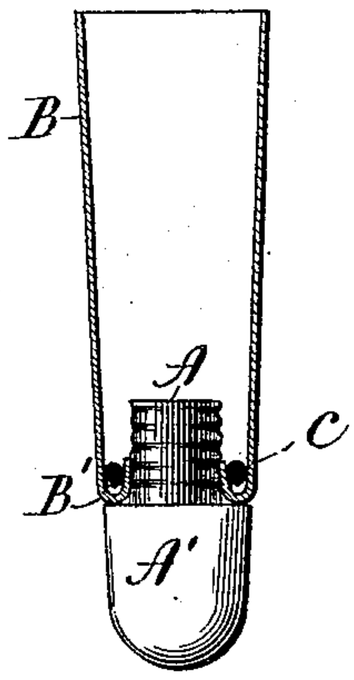


Fig. 2

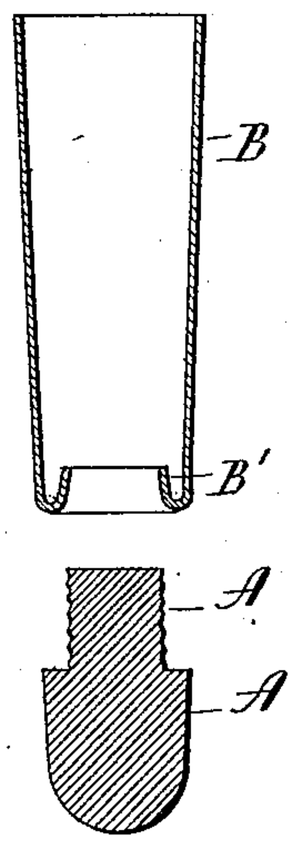
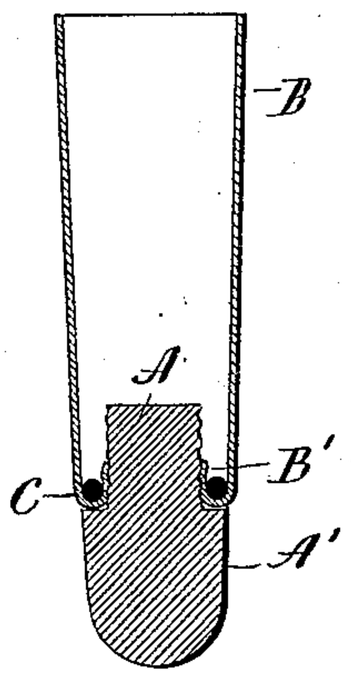


Fig. 5

Fig. 4



Witnesses
J. H. Seymour
Lillian D. Kelsey

Frederick S. Chase
Inventor
By Atty's
Earle & Seymour

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK S. CHASE, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE WATERBURY MANUFACTURING COMPANY, OF SAME PLACE.

UMBRELLA-FERRULE.

SPECIFICATION forming part of Letters Patent No. 510,159, dated December 5, 1893.

Application filed May 29, 1893. Serial No. 475,916. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK S. CHASE, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Ferrules; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in said elevation of one form which a ferrule constructed in accordance with my invention may assume; Fig. 2, a view partly in section and partly in elevation of the shell and point thereof in position for being assembled; Fig. 3, a view in central longitudinal section, showing the said parts assembled, and a ring located within the flange of the shell preparatory to upsetting the same; Fig. 4, a similar view of the complete ferrule, showing the upsetting of the flange into the roughened surface of the shank of the point; Fig. 5, a detached broken perspective view of the ring.

My invention relates to an improvement in solid-point ferrules, the object being to produce, at a comparatively low cost for manufacture, and without upsetting or marking the exposed surface of its shell, a simple and durable article.

With these ends in view, my invention consists in certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention, as shown in Figs. 1 to 5 inclusive of the drawings, I roughen the shank A, of the solid point A′. This may be done in any convenient manner, as for instance, by knurling it. The smaller end of the tapering shell B, I turn inward to form a concentric flange B′, which I upset against the roughened surface of the shank of the point, so as to firmly secure the shell and point together. It will be observed that there is an annular space between the said flange and the body of the shell, this space being necessary for upsetting the flange inwardly as will be specified later on. By preference, I upset the said flange, and give permanence to the coupling between the shell and point, by means of a small ring C, of soft wire, adapted to fit within the flange, as shown in Fig. 2 of the drawings. Then after the point is in place, I subject the said ring to heavy pressure, by a tool inserted from the larger open end of the shell, whereby the flange is displaced, or upset inward, taking it into the roughened surface of the shank A, of the point, as shown by Fig. 3 of the drawings. In this manner the shell and point are very firmly coupled together, and without upsetting, or in any way marking the exposed exterior surface of the main body of the shell. While the ring affords convenient and effective means for upsetting the flange into the shank of the point, besides giving stability and permanence to the joint, it may, if desired, be dispensed with, and either left out altogether, or replaced by short pieces of metal, or by balls, or other equivalent means for upsetting the flange into the roughened surface of the shank. The advantage of upsetting the shell is that being comparatively light it is done easily or without the use of much force and is very effective in result. Obviously the shell and point may be secured together by upsetting the former without disfiguring the body of the shell, in still other ways, and I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

I am aware that a solid point ferrule composed of a shell and a point secured together by upsetting one of them is old and I do not, therefore, claim that construction broadly.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A solid-point ferrule composed of a shell having its smaller end constructed with an inwardly and upwardly turned concentric integral flange, between which and the body of the shell there is an annular space, and a point having a shoulder which abuts against the said end of the shell, and a shank which passes through the said flange, which is upset inward against and into the sides of the said shank,

the same being thereto adapted, substantially as set forth, and whereby the point is held in place by upsetting a portion of the sheet metal shell rather than by upsetting its own shank.

2. A solid-point ferrule having the sides of the shank of its point roughened, and the smaller end of its shell provided with an inwardly and upwardly turned concentric flange which is upset against the roughened surface of the shank to firmly connect the shell and point together, substantially as described.

3. A solid point ferrule having the shank of its point roughened, a shell having its smaller end turned inward and upward to form a flange, and a ring located within the said flange and adapted to upset the same and force it to take hold of the roughened sides of the shank, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FREDERICK S. CHASE.

Witnesses:
JOHN S. NEAGLE,
HOWARD T. PARKER.