

(No Model.)

C. G. ROOT.
LOOM SHUTTLE.

No. 372,239.

Patented Oct. 25, 1887.

Fig. 1.

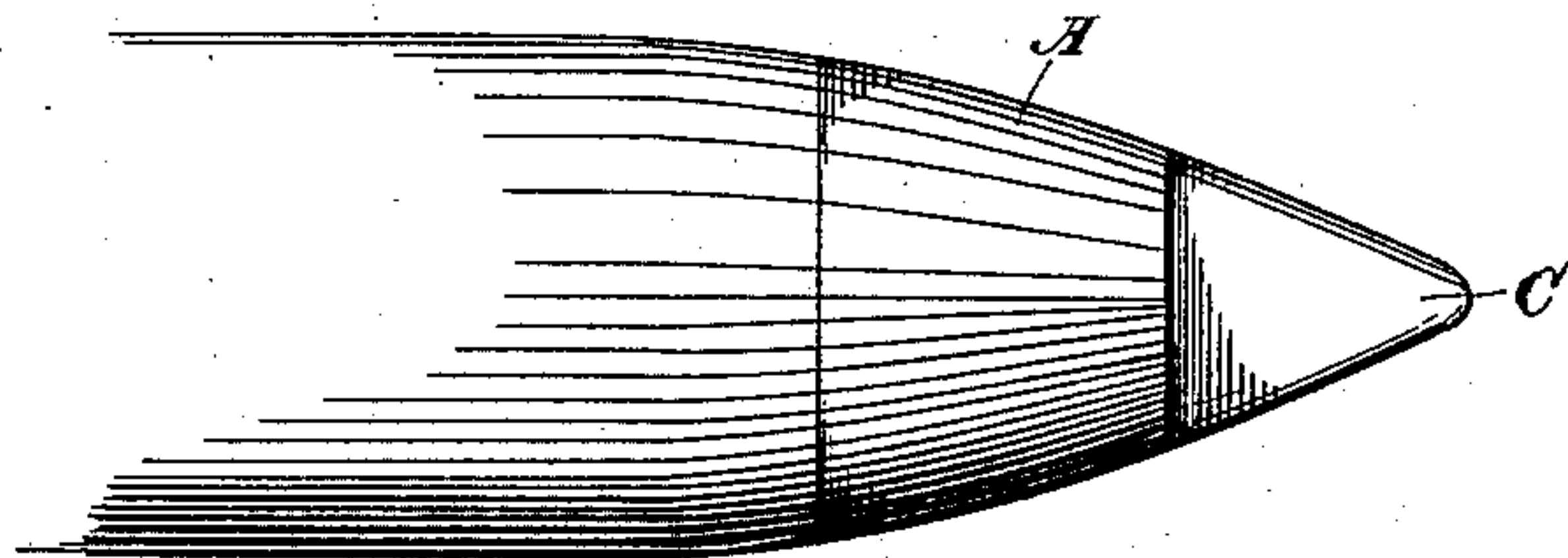


Fig. 2.

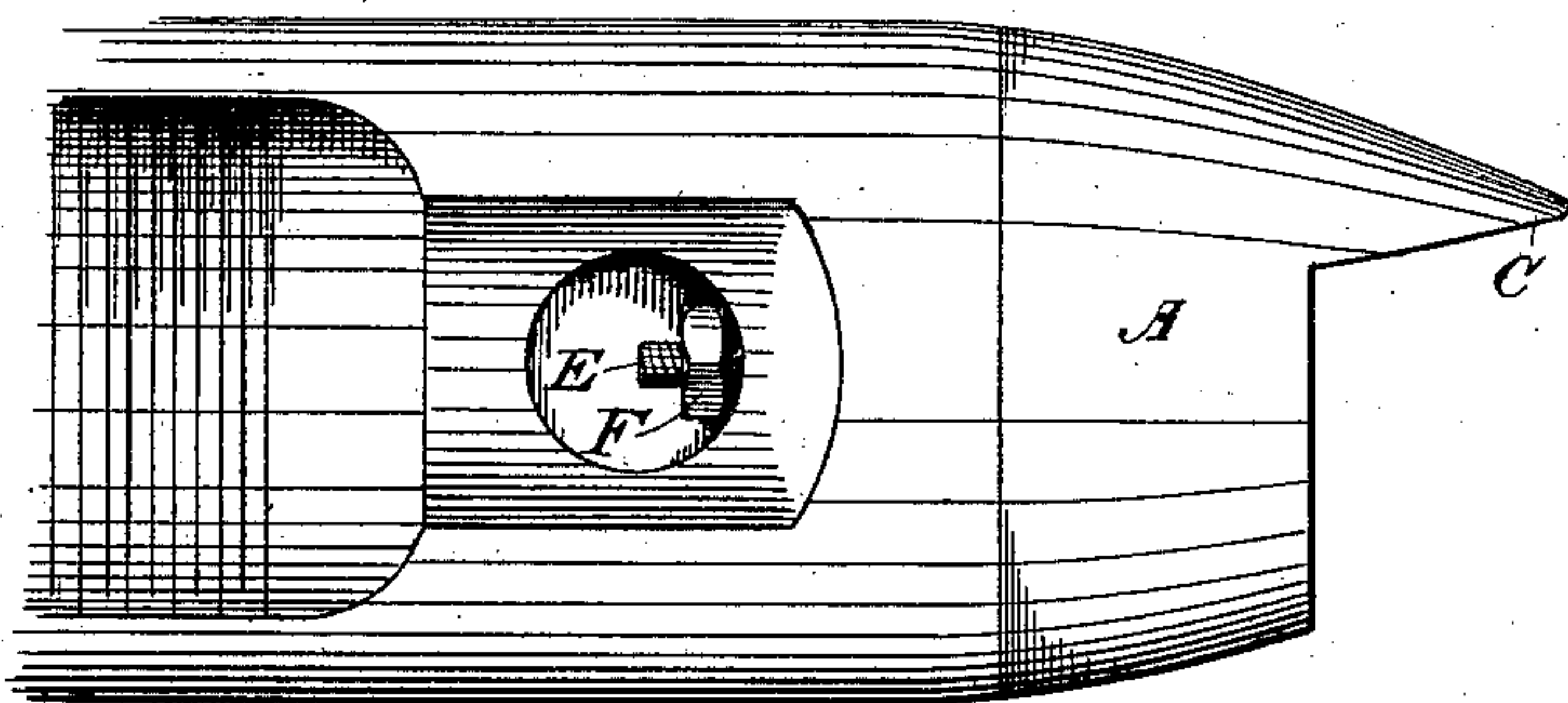
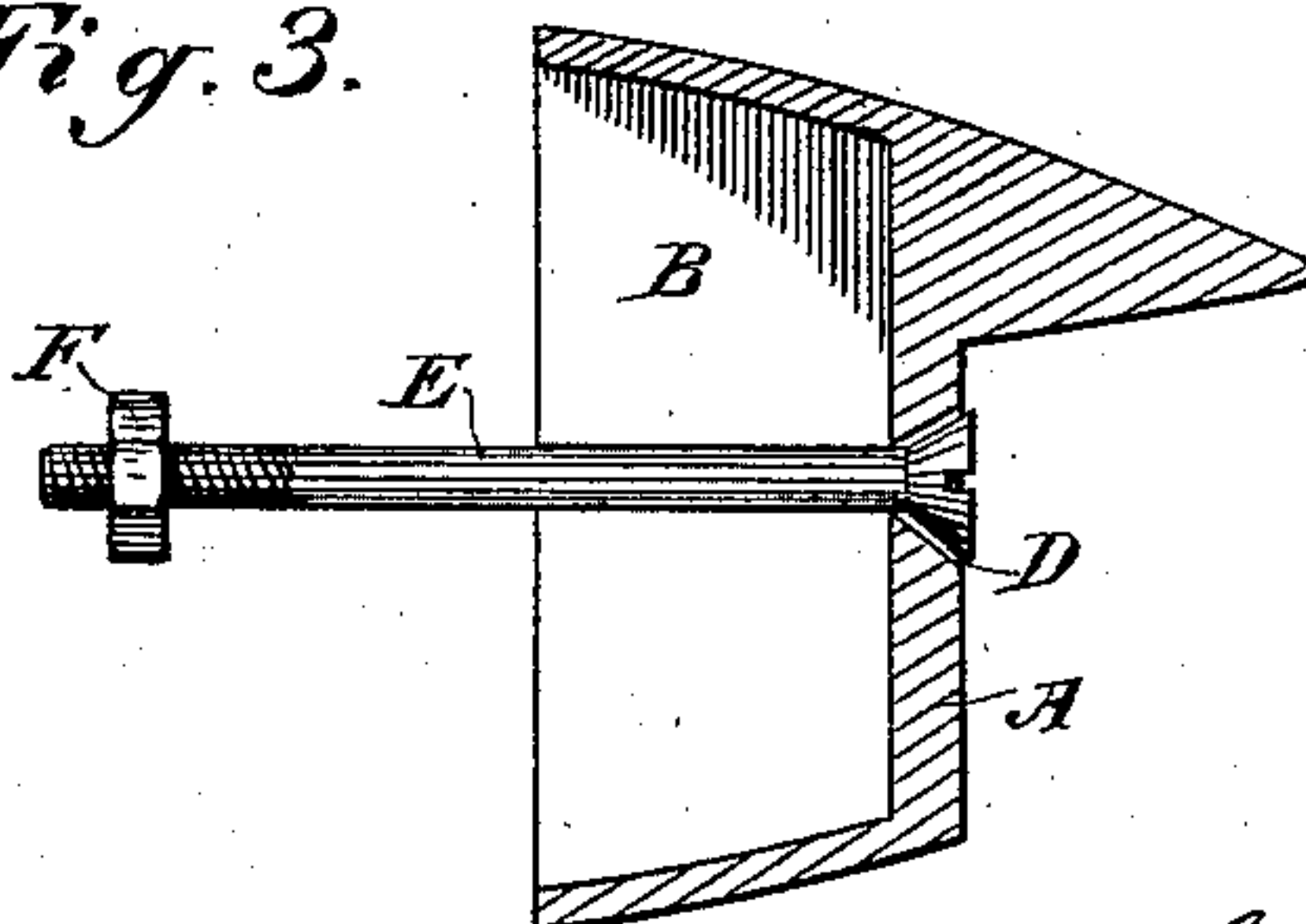


Fig. 3.



Witnesses,
Geo. L. Strong
J. H. Morse

Inventor,
C. G. Root,
By D. W. H. Co.
attys

UNITED STATES PATENT OFFICE.

CHARLES GUSTAV ROOT, OF SAN QUENTIN, CALIFORNIA.

LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 372,239, dated October 25, 1887.

Application filed April 27, 1887. Serial No. 236,360. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GUSTAV ROOT, of San Quentin, Marin county, State of California, have invented an Improvement in Loom-Shuttles; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to shuttles such as are employed to carry the bobbins in weaving fabric; and it consists in the combination, with a shuttle-body, of the improved tip and fastening-bolt hereinafter described.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a side view of one end of the shuttle, showing the tip in place. Fig. 2 is a plan view thereof; and Fig. 3 is a sectional view of the cap removed, showing the bolt by which it is secured.

In the manufacture of loom-shuttles it is customary to protect the end of the shuttle-body by means of a flat plate which is variously secured to the shuttle-body and has a spar or point projecting from one side thereof, which serves to insure the passage of the shuttle properly between the threads of the warp, while a portion of the flat plate serves to receive the impulse of the picker which throws the shuttle from end to end of its travel. These plates are sometimes secured to the end of the shuttle by means of two pins which project from the plate and are driven into the end of the shuttle, or they may be secured by means of screws, one of which has its head countersunk to fit flush with the surface of the plate, while the other is provided with a pointed extension, as before described. In either case the rapid movement of the shuttle and the violent blows to which it is subjected cause the wood to become split in a short time, or the plates to be loosened, and, furthermore, the shuttle-bodies are very often split and broken in the act of putting the plates on.

In my invention, A is a metallic cap, made of sufficient length to have a chamber, B, formed

within its larger end of the same shape as the end of the shuttle to which it is to be fitted.

C is the pointed tip which insures the proper passage of the shuttle between the threads, as before described. A countersunk hole, D, is made through the central portion of the metallic tip, and a bolt, E, passes through this hole and a corresponding one in the end of the shuttle, so that it enters the central open space within the body of the shuttle. A nut, F, is screwed upon the threaded end of this bolt, thus holding the tip firmly to the shuttle and preventing its ever being loosened or displaced, the single bolt being sufficient for this purpose.

By reason of the above construction I am enabled to attach the metallic tip to the shuttle-body without injury to the latter, and at the same time provide a simple and secure means for holding the same thereon.

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

1. The combination, with the shuttle-body, of a metallic tip having a conically-shaped chamber adapted to receive the end of the shuttle-body, a bolt passing through said chamber and the end of the shuttle-body, having a head countersunk in the outer end or wall of the tip, and a securing-nut on the inner end of said bolt, substantially as herein described.

2. The combination, with a shuttle-body, of a metallic cap having a pointed tip, C, and a chamber by which said cap is fitted to the end of the shuttle-body, and a bolt passing through said cap and the end of the shuttle-body, having at one end a head countersunk in said cap and at the opposite end a securing-nut, substantially as described.

In witness whereof I have hereunto set my hand.

CHARLES GUSTAV ROOT.

Witnesses:

CHAS. J. WALDEN,
GUS YOUNG.