June 28, 1938. H. W. CAMPBELL ET AL 2,122,023

JAVELIN

Filed Dec. 27, 1937

Fig. 1

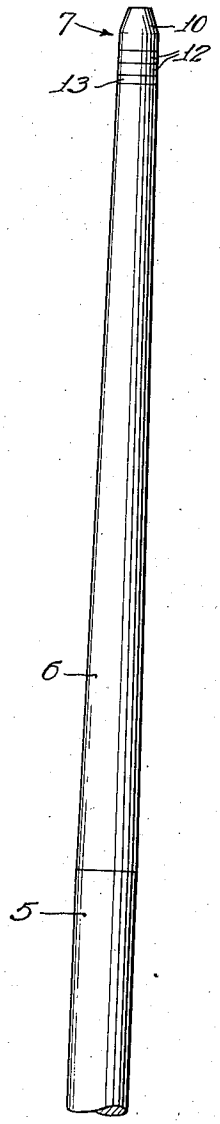


Fig. 2

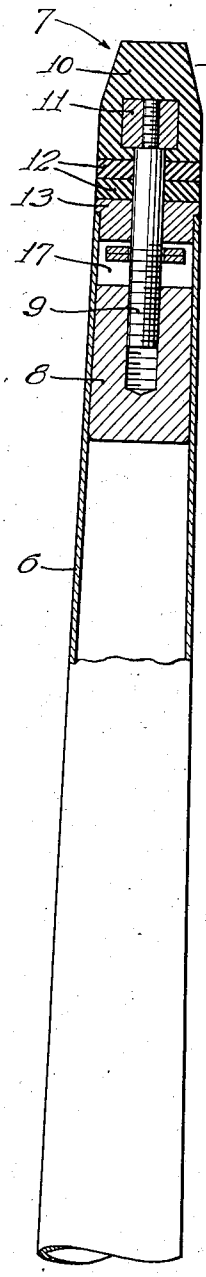


Fig. 3

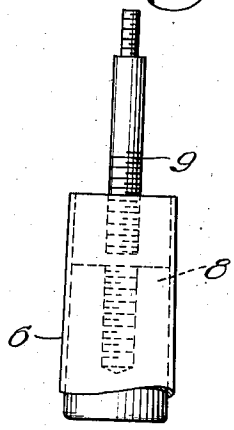
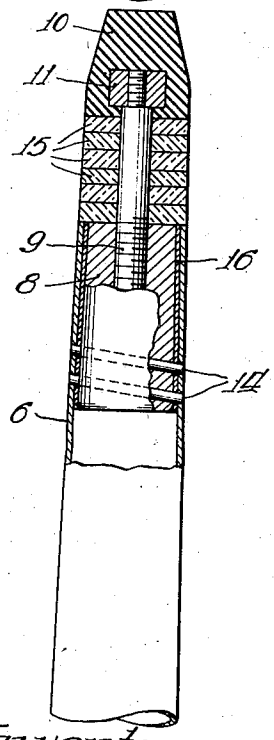


Fig. 4



Inventors:
Harry W. Campbell and
Tom S. Graham.
By:
Isabel Carlson Craighead & Wells
Attys.

Patented June 28, 1938 2,122,023

UNITED STATES PATENT OFFICE

2,122,023

JAVELIN

Harry W. Campbell, Los Angeles, and Tom S. Graham, Inglewood, Calif.

Application December 27, 1937, Serial No. 181,808

9 Claims. (Cl. 272—59)

The present invention relates to improvements in javelins. The purpose of this invention is to so construct the point of the javelin as to make the practice of and participation in the sport of javelin throwing less dangerous to participants and spectators and make it possible to adjust the weight and balance of the javelin. The invention contemplates the provision of a safety point for javelins wherein the entire construction and mounting of the point upon the javelin shaft is such as to absorb the shock when the javelin strikes an object, at the end of the throw. To carry out the purpose of the invention various modifications may be made in the construction and arrangement of the parts. Two such forms of the invention are shown in the drawing, although it is obvious that other forms may embody the novel features of the invention.

The features and advantages of the invention will appear more fully from the following description when taken in connection with the accompanying drawing which illustrates the two preferred forms of the invention.

In the drawing, Fig. 1 is a plan view of the point portion of the javelin;

Fig. 2 is an enlargement of the structure shown in Fig. 1, with the point of the javelin shown in section to illustrate the construction thereof;

Fig. 3 is a fragmentary plan view, showing the javelin shaft and the mounting means for the point, and

Fig. 4 is a sectional view similar to Fig. 2, showing a slightly modified form of the invention.

Referring now to the drawing, in Fig. 1 there is shown a portion of a javelin including the usual wooden handle 5, a tapered steel ferrule 6, and our improved shaft point 7. The ferrule 6 has a plunger 8 therein, which is tapered to fit smoothly inside the ferrule and which is large enough to prevent its passing out the small end of the ferrule. This plunger is not secured in the ferrule and may be forced toward the large end of the ferrule by pressure applied at the small end thereof.

The plunger 8 carries a screw threaded member 9 that threads into the plunger so that it can be removed. The member 9 also supports a rubber tip 10 which has molded therein a metal sleeve 11 that is internally threaded to receive the member 9. Interposed between the tip 10 and the plunger 8 are a plurality of resilient washers 12 which may be constructed of any suitable material, such as rubber, and a protective member 13 that is hard enough to protect the resilient washers from the adjacent edge of the ferrule 6. The member 13 is a plug or sleeve which allows the bolt 9 to plunge up or down. It may be constructed either of a hard fibrous material or metal. The plug 13 acts as a guide for the bolt 9, keeping the units 10, 12, 9 and 8 in true alignment, and centered with respect to the ferrule 6.

In operation, when the javelin is thrown and the point 10 strikes the ground or some other object at the end of its flight, the force of the impact of the point 10 against the object acts to compress the point 10 and the washers 12, and since the plunger 8 is free to move, it may be backed up in the ferrule 6. The result is a cushioning of the shock and a resultant reduction in danger from injury if the javelin should happen to strike any person. Also, due to the resilient nature of the point construction, there is little danger of the point being broken or bent so as to destroy its utility. Between the plug 13 and the plunger 8 there is a space 17 of sufficient width to enable the plunger action to take place evenly and in perfect alignment. By inserting weights such as lead washers or shot in the space 17, the weight and balance of the javelin may be adjusted, should necessity arise. The point 10 may be made of any suitable material. It is not necessary that it be rubber or even resilient to the extent that rubber is. The washers 12 provide resiliency. The point 10 for example may be made of fiber or standard football cleat rubber.

In the form of the invention shown in Fig. 4, the point of the javelin is of a more permanent construction, in that the ferrule 6 has the plunger 8 permanently fixed therein by a plurality of rivets 14, and instead of using a series of rubber washers around the member 9, we may use a multiplicity of fiber washers 15. The rubber tip 10 has the screw threaded metal sleeve 11, the same as in the first form. This form of the invention does not have the same degree of yield under shock that the plunger type has, since the primary yield in this case must come from the rubber tip 10. In order to take up any unevenness, a brass bushing 16 may be inserted between the plunger body 8 and the ferrule.

The present invention is capable of being applied directly to an existing javelin by merely cutting off the present dangerous sharp weighted tip and applying this safety tip in its place. The material of the plunger 8 in both forms preferably should be light, such as for example, aluminum alloys now on the market, in order to avoid concentration of weight in the plunger itself.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A javelin having a hollow ferrule, a point for the javelin comprising a resilient tip portion and a light weight body mounted in the end of the ferrule and having means for fixing the tip to the ferrule.

2. A javelin having a resilient point moveably mounted with respect to the javelin shaft, said point comprising a plunger moveable in the forward end of the javelin, a threaded member projecting from the plunger and a resilient tip mounted on the free end of said member.

3. A javelin having a resilient point moveably mounted with respect to the javelin shaft, said point comprising a plunger moveable in the forward end of the javelin, a threaded member projecting from the plunger and a resilient tip mounted on the free end of said member, said resilient tip being separated from the plunger by a plurality of resilient washers.

4. A javelin having a shaft and a resilient point fixed to the shaft, said point comprising a rubber body having a sleeve therein of metal, and said javelin shaft having a screw threaded member projecting therefrom to receive said sleeve.

5. A javelin having a shaft and a resilient point fixed to the shaft, said point comprising a rubber body having a sleeve therein of metal and said javelin shaft having a screw threaded member projecting therefrom to receive said sleeve and a plurality of fiber washers interposed between the end of the javelin shaft and the resilient tip.

6. A javelin having a hollow ferrule and a point comprising a tip portion, spaced from the ferrule, a plunger movably mounted in the ferrule and fixed to said tip portion, and resilient means interposed between the tip portion and the ferrule.

7. A javelin having a hollow ferrule and a point comprising a tip portion, spaced from the ferrule, a plunger movably mounted in the ferrule and fixed to said tip portion, and resilient means interposed between the tip portion and the ferrule, said resilient means including a rubber washer, and means protecting the washer from the adjacent edge of the ferrule.

8. A javelin having a hollow ferrule and a point comprising a tip portion spaced from the ferrule, a plunger movably mounted in the ferrule and fixed to said tip portion, and resilient means interposed between the tip portion and the ferrule, said resilient means being separated from the ferrule by a plug at the end of the ferrule and said plunger being spaced inwardly from said plug to provide a chamber in which weights for balancing the javelin may be placed.

9. A javelin point comprising a tip portion, a mounting member projecting from said tip portion for mounting it in spaced relation to the forward end of a javelin shaft, means movably mounting said member in the end of the javelin shaft, and resilient means around said member between the tip portion and the adjacent end of the javelin shaft.

HARRY W. CAMPBELL.
TOM S. GRAHAM.