

E. J. FITZGERALD.
 TOGGLE.
 APPLICATION FILED SEPT. 17, 1913.

1,082,075.

Patented Dec. 23, 1913.

Fig. 1.

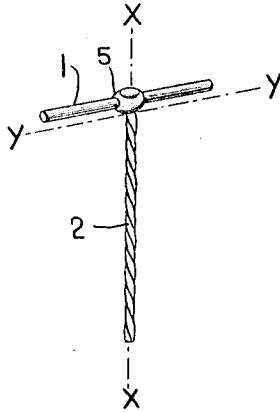


Fig. 2.

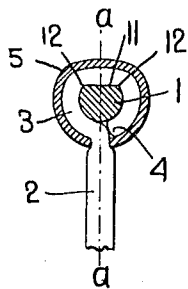


Fig. 3.

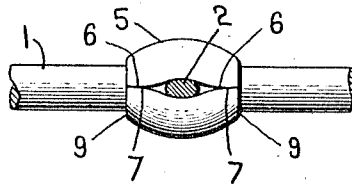


Fig. 4.

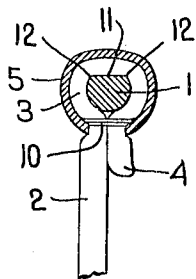
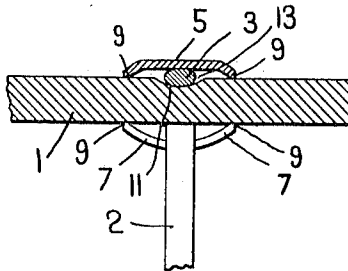


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

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TOGGLE.

1,082,075.

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To all whom it may concern:

Be it known that I, EDWARD J. FITZGERALD, a citizen of the United States, residing at Roxbury, county of Suffolk, State of Massachusetts, have invented an Improvement in Toggles, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to so-called toggles such as are used in the manufacture of patent or enameled leather for holding the leather in a flat, stretched condition upon suitable frames. Toggles of this type are commonly made with a head portion formed either of metal or wood to which is secured a cord that is tied to the frame, and in use the cords of the toggles are inserted through apertures formed in the skin near the edge thereof and are tied to the frame, the heads of the toggles preventing the head of the cord from pulling through the leather.

It is the object of the present invention to provide a simple toggle having an improved means for attaching the cord to the head which means presents no appreciable projections or surfaces that will injure the leather and by which the cord is securely fastened to the head.

In order to describe my invention I have illustrated herein some selected embodiments thereof but I desire to state that the invention is not confined to the constructional features shown.

In the drawings Figure 1 is a perspective view of a toggle embodying my invention; Fig. 2 is an enlarged section on the line $x-x$, Fig. 1; Fig. 3 is an enlarged section on the line $y-y$, Fig. 1; Fig. 4 is a view similar to Fig. 2 showing a different embodiment of my invention. Fig. 5 is a section on the line $a-a$, Fig. 2.

The toggle herein shown comprises the usual head 1 to which the cord 2 is attached. The head may be made of any suitable material but will preferably be made of a length of wire of the proper diameter. For securing the cord to the head, I preferably fold one end of the cord around the central portion of the head and then clamp the cord to the head by means of a clamping member which embraces the head at the

point where the cord is folded thereabout and incloses the cord and securely binds it to the head. This clamping member may be made of any suitable material.

Referring to the drawings it will be seen that one end 3 of the cord 2 is folded about the head 1. The extremity 4 of the cord may be brought substantially into contact with the body of the cord as shown in Fig. 2, or may be extended down to overlap the cord for a short distance as shown in Fig. 4. The portion 3 of the cord that is folded about the head 1 is firmly secured to the head by means of a clamping member 5 which encircles the head 1 and the portion 3 of the cord has a width somewhat greater than the diameter of the cord 2. This clamping member 5 may be made of a piece of sheet metal of the proper size and it is secured in place by folding it about the head 1 and about the portion 3 of the cord. Said clamping member 5 has such a shape that when it is thus folded about the head and is in its operative position the edges 6, 7 thereof either abut or overlap each other at the sides of the clamping member on either side of the cord 2. These edges 6, 7 are separated slightly centrally of the clamping member, and the cord 2 extends between said edges where they are thus separated. These edges serve to grip the cord between them and furthermore the clamping member is applied to the head 1 and the portion 3 of the cord with considerable pressure so that it constitutes a means for firmly connecting the cord to the head. I propose to fold the clamping member about the head 1 by means of a suitable die and this die will preferably be so shaped as to give the exterior of the clamping member a rounded shape longitudinally of the head and to bring the edges 9 of the clamping member down into contact with the head 1. By means of this construction a portion of the cord which encircles the head 1 is entirely covered by the clamping member and the latter has a smooth exterior surface which gives the toggle a neat appearance and which is free from any shoulders or projections that would be liable to injure the leather. Another advantage of this construction is that no extra length of cord is necessary to secure it to the head as is the case where the cord is

tied to the head. By means of my invention, therefore, an economy in the amount of cord or string which is used can be effected.

In Fig. 4 I have shown an embodiment of the invention where the extremity 4 of the cord is brought down below the head 1 and overlies the body 2 thereof. Where this construction is employed, I may if desired, wrap a binding wire or string 10 around the extremity 4 of the cord which overlies the body thereof, this binding wire or string being wrapped as closely as possible to the head 1 so as to cause the portion 3 of the cord to grip the head firmly. In order to augment the clamping and binding action of the clamping member 5 I may provide the head 1 with a flattened surface 11 at the point where the portion 3 of the cord is folded thereabout, such flattened surface presenting two corners or edges 12 about which the portion 3 of the cord is bent sharply by the clamping action of the clamping member 5. By thus making the portion of the head 1 about which the cord 3 is folded non-circular, a firmer grip is afforded between the cord and the head as will be obvious. In this connection I would say that the die or tool which is used to fold the clamping member 5 about the head will operate to force the portion 3 of the cord firmly against the flat surface 11 and thus cause said cord to be folded sharply over the corners 12. I may also provide the head 1 with a recess 13 in which the portion 3 of the cord is received, this recess operating to hold the cord from sliding longitudinally of the head. Such recess can conveniently be made during the operation of forming the flat surface 11 as this surface can be made by means of a die. I may also, if desired, apply solder to the ends 9 of the clamping member for the purpose of fastening the latter still more securely to the head 1, thereby to prevent any longitudinal displacement of the clamping member. The use of the solder is not, however, essential. My improved toggle can be cheaply and inexpensively manufactured and it provides means whereby the cord 2 is firmly secured to the head 1.

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

1. In a toggle, the combination with a head formed of a length of wire, of a cord having its end folded about said head, and a clamping member encircling the head and the portion of the cord which is folded thereabout. 55

2. In a toggle, the combination with a head formed of a length of wire, of a cord having its end folded about said head, and a metal clamping member encircling the head and the portion of the cord which is folded thereabout, the edges of said clamping member embracing the body of the cord. 60 65

3. A toggle comprising a head formed of a piece of wire, a cord having one end folded about said head and a metal clamping member embracing the head and the portion of the cord which is folded thereabout, said clamping member having a greater width than the diameter of the cord and the meeting edges thereof embracing and gripping the body of the cord. 70 75

4. A toggle comprising a head made of wire, a cord having one end folded about said wire with the extremity of the cord overlapping the body thereof and a binding wire wound about the extremity of the cord and the body thereof closely adjacent the head and operating to clamp the folded portion of the cord to the head, and a clamping member embracing the head and the portion of the cord folded thereabout. 80 85

5. A toggle comprising a head made of wire provided centrally thereof with a flat face, a cord having one end folded about the flat faced portion of the wire and a clamping member encircling the head and the portion of the cord which is folded thereabout and clamping the cord securely to the head. 90

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses. 95

EDWARD J. FITZGERALD.

Witnesses:

LOUIS C. SMITH,
THOMAS J. DRUMMOND.