

J. A. DORAN.
TUBULAR RIVET.
APPLICATION FILED SEPT. 22, 1909.

964,407.

Patented July 12, 1910.

Fig. 1.

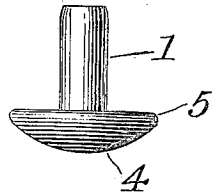


Fig. 2.

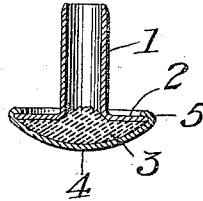
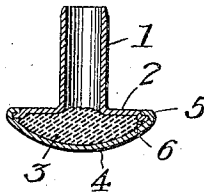


Fig. 3.



Witnesses.
N. W. Edelin
Ed. Finckel

Inventor.
James A. Doran
by W. H. Finckel
Att'y.

UNITED STATES PATENT OFFICE.

JAMES A. DORAN, OF PROVIDENCE, RHODE ISLAND.

TUBULAR RIVET.

964,407.

Specification of Letters Patent. Patented July 12, 1910.

Application filed September 22, 1909. Serial No. 519,033.

To all whom it may concern:

Be it known that I, JAMES A. DORAN, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a certain new and useful Improvement in Tubular Rivets, of which the following is a full, clear, and exact description.

The object of this invention is to provide a tubular rivet, for use in the manufacture of jewelry and other articles, and which is capable of receiving a head-finish of any suitable metal, fine or base, of any contour or configuration, and with or without a suitable design, and which head will not be deformed or in any way defaced in the operation of setting the rivet.

The invention consists of a tubular rivet, whose tubular portion or shank is in the form of an eyelet, and whose head is composed of some relatively soft and comparatively inexpensive or other material, readily capable of flowing when being pressed to shape, and serving as a head-filling, and a finish of any suitable metal or other material, with or without a design thereon, closed down over the filling and flange of the eyelet, all as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation, illustrating one embodiment of the invention. Fig. 2 is a longitudinal section. Fig. 3 is a longitudinal section, illustrating a modification.

The tubular rivet comprises an eyelet 1, whose barrel or shank or tubular portion may be of any desired length, and having a flange 2 at one end. This eyelet may be made of any suitable metal, fine or base, as may be desired, and by any of the ordinary processes or machinery. In order to form the head and give it a body of sufficient density to permit the eyelet to be set without deforming or defacing the head, I provide a filling 3 of lead, or other soft metal or other suitable compressible and flowing material placed upon the flange 2 of the eyelet and overlying the opening in the barrel or shank, and then apply to this filling a head-finish 4 of fine metal or other suitable material, with or without any desired ornamentation, design, or configuration, and of a diameter sufficient to provide for closing its rim 5 over upon the flange 2 of the eyelet, by

rolling or other means, thereby to unite the three parts of the rivet, namely, the eyelet, the filling, and the finish.

As shown in Fig. 3, when it is desired to finish the rivet with the back of the head flush with the eyelet flange, the rim of said flange may be depressed to form a step 6, and in this step the rim of the head-finish is closed, substantially as shown.

The filling preferably is of some soft compressible and flowing metal, like lead, so that when the head-finish is closed on this filling, the filling will be forced to flow into and fill the spaces perfectly and solidly, and conforming to the shape of and supporting the head-finish without distorting it.

It will be observed that the open end of the eyelet at its flanged end serves to take up any slight quantity of filling metal in excess of the quantity required to solidly fill the head-finish when under compression, the filling metal being forced slightly into the open end of the eyelet, as shown in Figs. 2 and 3.

By means of this invention, it is possible to use various materials for the head, while any sort of material may be used for the shank or tubular portion. The filling supports the head so that when pressure is brought against the head in setting the riveting device, it will not be injured. Such filling thus permits of the use of any form of head that may be required for ornamental or useful purposes, such as dome-shaped, half round, and pointed, and either plain or with figures, or designs struck thereon or applied thereto. When a figure or design is raised or sunk in the head-finish, it is evident that the compressible filling will flow into and fill all of the recesses in the design, so that the figuration will not be injured by the riveting.

Another advantage is that the construction described gives a low manufacturing cost, even where the head-finish and shank or tubular portion are of the same material; and, furthermore, for all practical purposes, the tubular shank and composite head are quite equal to the standard rivet with a solid head and a tubular shank.

As already stated, the invention is useful in the manufacture of jewelry, and it is also useful in printing, bookbinding, leather working, and harness manufacture, and in the manufacture of leather novelties, pocket-books, and a variety of other goods.

As already indicated, the rivet may be made up in a variety of ways, as for example, with a silver or other precious metal head-finish, a lead filling and a brass eyelet.

5 What I claim is:—

1. A tubular rivet, having a shank comprising an open ended eyelet having a flange at one of its ends surrounding the opening therein, a head-finish closed down over the
10 flange of the eyelet, and a filling of compressible and flowing material interposed between said flange and head-finish and overlying the opening in the end of the eyelet and conforming to the shape of the head-
15 finish.

2. A tubular rivet, comprising a tubular shank formed of an open ended eyelet having a flange at one end surrounding the opening therein, a filling of compressible
20 and flowing metal arranged next to the flange and overlying the opening in the eyelet, and a head-finish applied over the filling and closed down over the rim of the flange,

the opening in the end of the eyelet permitting the compression and flowing of the filling to perfectly and completely fill and conform to the head-finish. 25

3. A tubular rivet, having a flanged open ended eyelet which forms the shank, the rim of the flange being stepped, a compressible
30 and flowing filling arranged next to the flange and overlying the opening in the eyelet adjacent to said flange and adapted to flow into the open end of the eyelet under compression, and a head-finish inclosing the
35 filling and having its rim closed down over the flange and in its step and thereby presenting a flush surface on the back of the head.

In testimony whereof I have hereunto set
40 my hand this 18th day of September A. D. 1909.

JAMES A. DORAN.

Witnesses:

FRANCES A. DORAN,
MAY H. GIBLIN.