No. 641,956. Patented Jan. 23, 1900.

H. C. HART.

BOLT.

(Application filed Nov. 21, 1899.)

(No Model.)

Fig. 1.

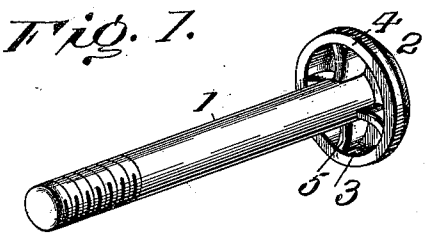


Fig. 2.

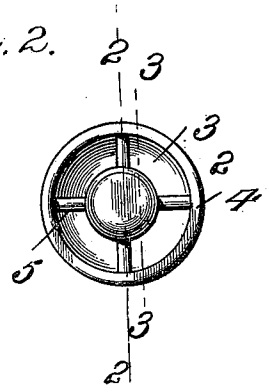


Fig. 3.

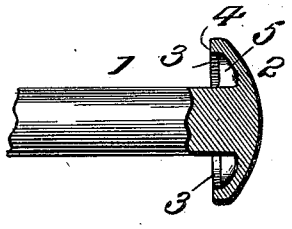


Fig. 4.

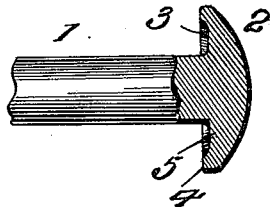


Fig. 5.

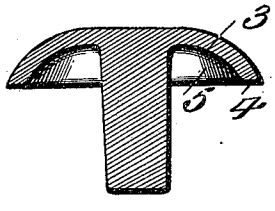
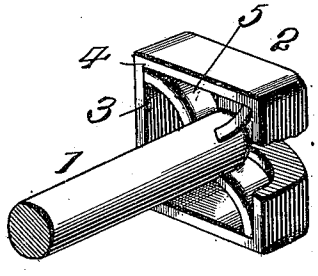


Fig. 6.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HUBERT C. HART, OF UNIONVILLE, CONNECTICUT.

BOLT.

SPECIFICATION forming part of Letters Patent No. 641,956, dated January 23, 1900.

Application filed November 21, 1899. Serial No. 737,834. (No model.)

To all whom it may concern:

Be it known that I, HUBERT C. HART, a citizen of the United States, residing at Unionville, in the county of Hartford and State of Connecticut, have invented new and useful Improvements in Bolts, of which the following is a specification.

My invention relates to improvements in heads for bolts, rivets, screws, and the like.

The object of the invention is to reduce the amount of material in the head without depreciating the strength.

A further object is to concave the inner side of the bolt-head and at the same time provide a suitable bearing-surface for the engagement of the head with the surface against which the bolt bears.

A further object is to provide a bolt-head structure, which dispenses with considerable material, and ribs are so arranged within the space where the metal is cut out as to compensate in strength for the metal removed.

The objects of the invention as above outlined are all for the purpose of preventing "cold-shuts" in heading up the bolt and to reduce the cost of manufacture.

Many other objects and advantages will be hereinafter referred to, and particularly pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view of a bolt provided with my improved head. Fig. 2 is an end view of the same. Fig. 3 is a section on the line 3 3, Fig. 2. Fig. 4 is a similar view on the line 2 2, Fig. 2. Figs. 5 and 6 are views showing the invention as applied to a rivet and a square-head bolt, respectively.

The same numerals refer to like parts in all the figures, wherein—

1 indicates a bolt provided with a head 2. The inner side of the head is recessed, as at 3, preferably concaved in cross-section. The recess is started a short distance from the circumference of the head, so as to form a bearing-surface 4. Ribs 5 connect the bolt proper and the surface 4 to form a strengthening means for preventing the breaking of the head.

It is a well-known fact that in heading up bolts provided with a solid head cold-shuts are made. By constructing a head as hereinbefore described this difficulty is entirely overcome, the concavity formed, as shown in the drawings, being the means for preventing this trouble. While the amount of metal in the head has been reduced in quantity, it is evident that the ribs freely compensate in strength for the loss of metal. While the saving of metal may seem infinitesimal to the uninitiated in the manufacture of bolts, rivets, and screws, I have, however, found from experience that the saving in expense is very great where the devices are manufactured in lots of thousands a day.

By reference to Figs. 5 and 6 it will be seen that my invention is not only adapted to a round-head bolt and screw, but can be as well applied to rivets and bolts with any-shaped head.

My invention is extremely simple in construction, durable in character, and one that can be manufactured at a decided saving over the present method of making bolt-heads.

From the foregoing it is thought that the invention will be readily understood by those skilled in the art to which it appertains.

Having thus described my invention, what I claim is—

1. A bolt, rivet, screw or the like, formed with an integral forged head, the latter being concave on its inner side a short distance from the outer edge, forming a bearing-surface, between said concavity and the outer edge, and a series of intersecting ribs in the concavity, and diametrically connecting the outer surface, as set forth.

2. A bolt, rivet, screw or the like, formed with an integral forged head, the latter being concaved on its inner side, a bearing-surface surrounding said concavity, and a series of ribs radiating from the bolt across the concavity and diametrically connecting the bearing-surface, as set forth.

3. A bolt, rivet, screw, or the like, formed with an integral forged head, the latter having a cavity on its inner side a short distance from the outer edge, forming a bearing-surface, between said cavity and the outer edge, and a series of intersecting ribs in the cavity, and diametrically connecting the outer surface, as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HUBERT C. HART.

Witnesses:
GEORGE E. TAFT,
WALTER A. WILLIAMS.