

F. S. Miles,

Bolt-Head,

N^o 82,973.

Patented Oct 13, 1868.

Fig: 1

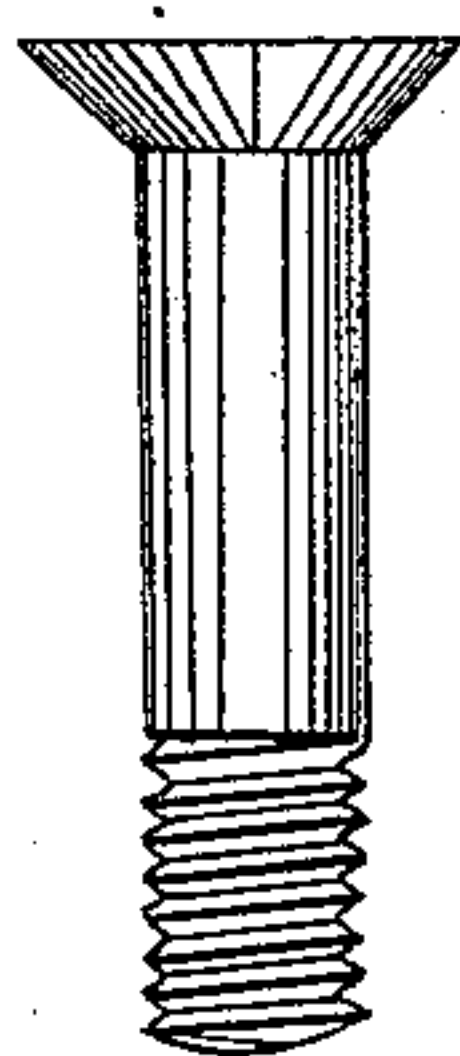


Fig: 2

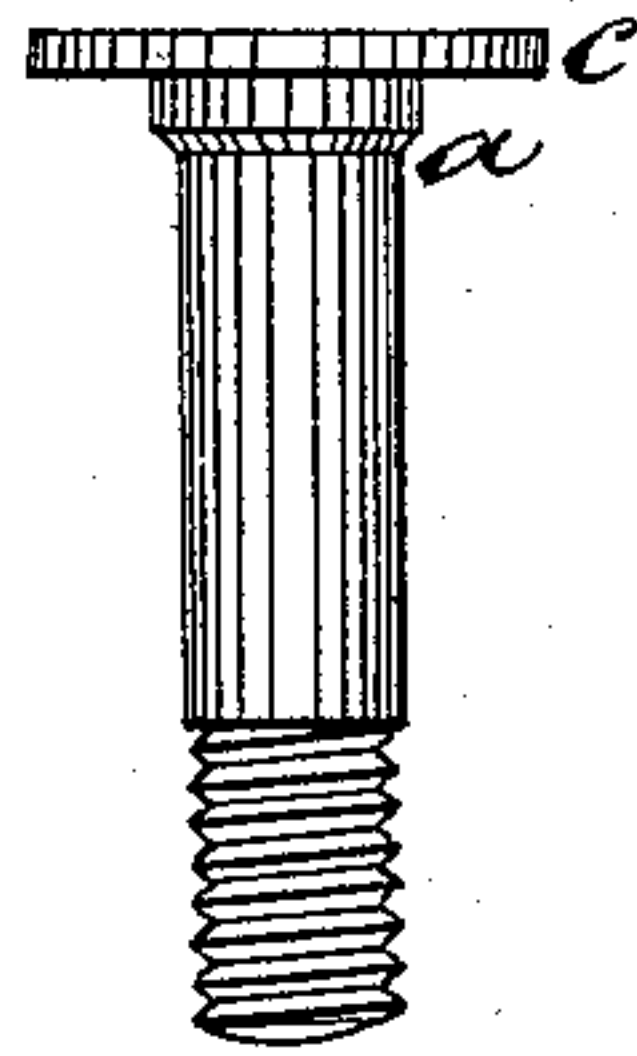


Fig: 3

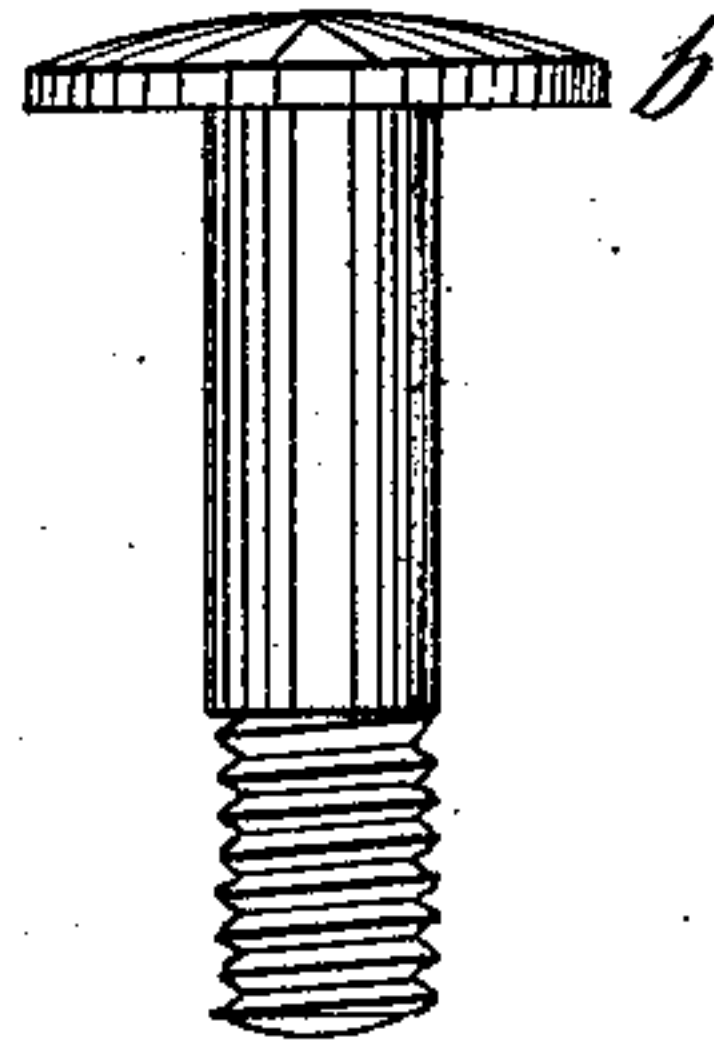
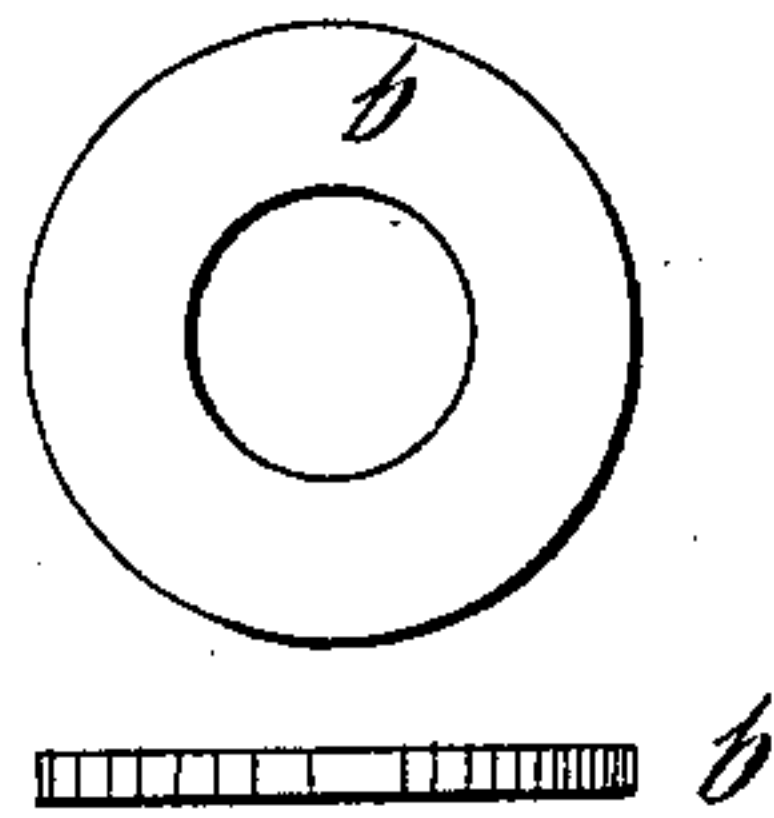
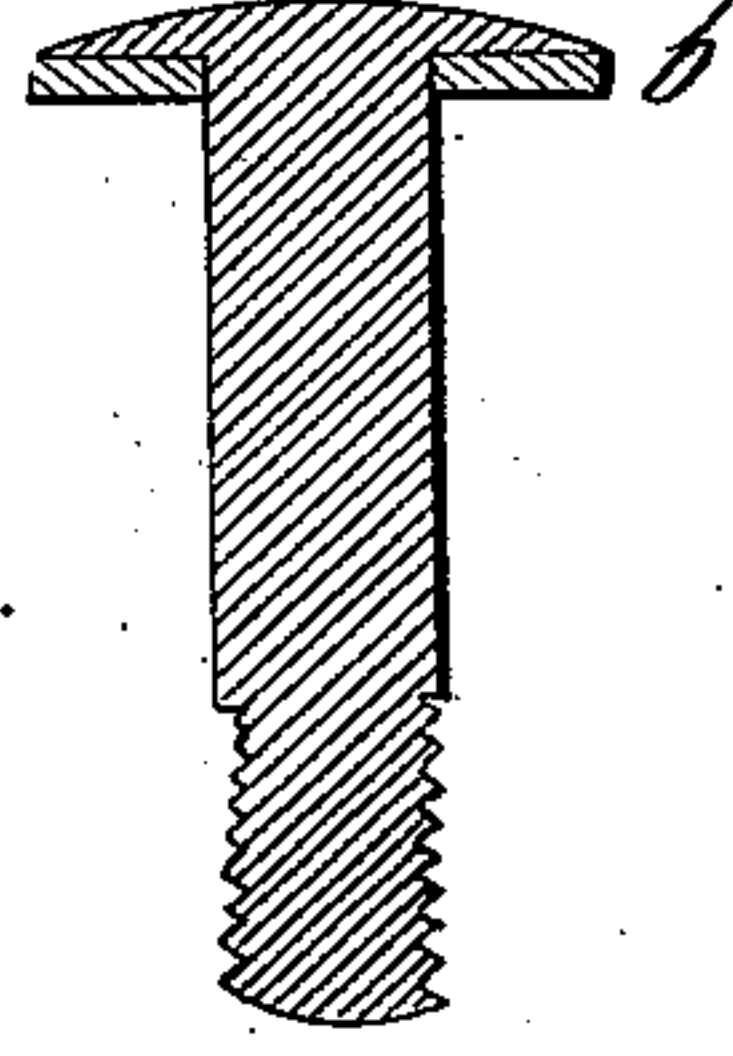


Fig: 4



Witnesses

John Shinn
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FRANKLIN S. MILES, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 82,973, dated October 13, 1868.

IMPROVEMENT IN BOLT-HEADS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRANKLIN S. MILES, of Philadelphia city, and State of Pennsylvania, have invented a new and useful Improvement in the Manufacture of Bolt-Heads; and I do hereby declare that the following is a full, clear, and exact description of the construction of the same, reference being had to the accompanying drawings, and to the letters marked thereon.

No. 1 represents an ordinary bolt with a conical head.

No. 2 represents the first operation for the improved head.

No. 3 represents a bolt with the improved head finished.

No. 4 represents a section of a bolt with improvement.

Similar letters refer to like parts.

The nature of my invention or improvement consists in a method of enlarging the heads on bolts that are required to be large in diameter, yet thin, and having the strength of solid heads.

That others may make my improved bolt-head, I will describe its construction; it may be made of any soft metal.

Referring to the drawings, No. 1 represents a bolt with a conical head, which is usually made by machinery, and may be obtained of most all hardware-dealers at nearly the same price of wood screws of the same size.

The first operation is, the screw or bolt (as shown

in No. 1) is put in a die under a screw or drop-press, and by giving it a blow with the press, it is forced into the die, and when taken out has the appearance of No. 2. The shoulder *a* is of the diameter of the hole in the washer *b*, and is a little longer than the thickness of the washer. After the washer *b* is put on the shoulder *a*, the bolt is put in another die under the press, and with a blow of the drop or screw, the head *c* (No. 2) is forced into the washer *b*, and the under part of shoulder *a* is riveted into the under part of the washer, making a flat, smooth finish, as shown in Nos. 2 and 3. After being taken out of the die, the top of the bolt-head may be turned or milled and finished, having the appearance of a solid bolt-head.

With my improvement, I am enabled to make a strong head, of large diameter, yet thin, at a very low cost.

A great number of such bolts being used in various branches of manufactures, with my improvement they can be furnished at less cost than bolts of solid heads, therefore making my improvement a useful article of manufacture, which I verily believe to be new.

Claim.

I claim, as a new article of manufacture, a bolt-head constructed as above described.

FRANKLIN S. MILES.

Witnesses:

JOHN SHINN,
LEVI C. HART.