(No Model.)

G. W. McGILL.

METAL CAPPING HEAD.

No. 512,622. Patented Jan. 9, 1894.

Fig. 1.

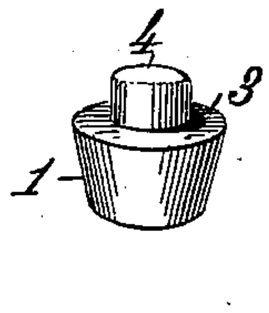


Fig. 2.

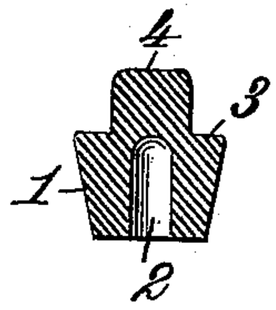


Fig. 3.

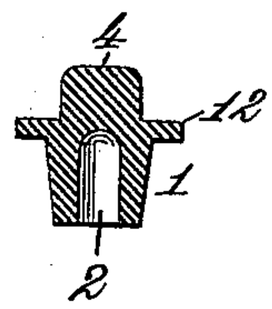


Fig. 4.

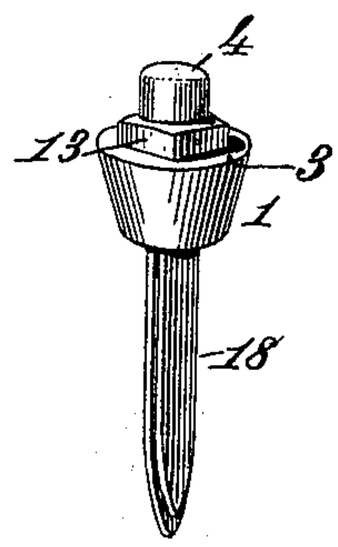


Fig. 5.

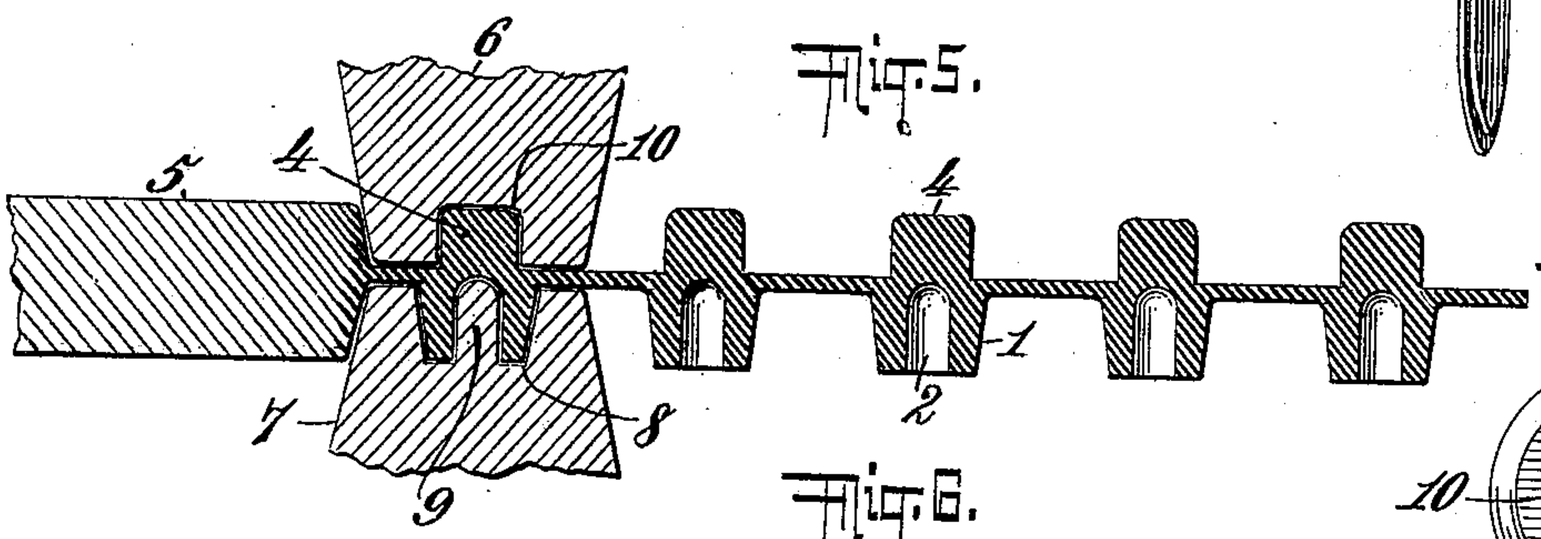


Fig. 10.

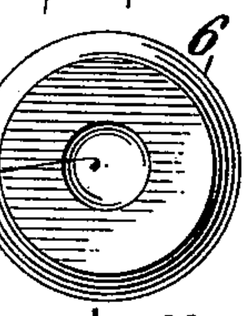


Fig. 6.

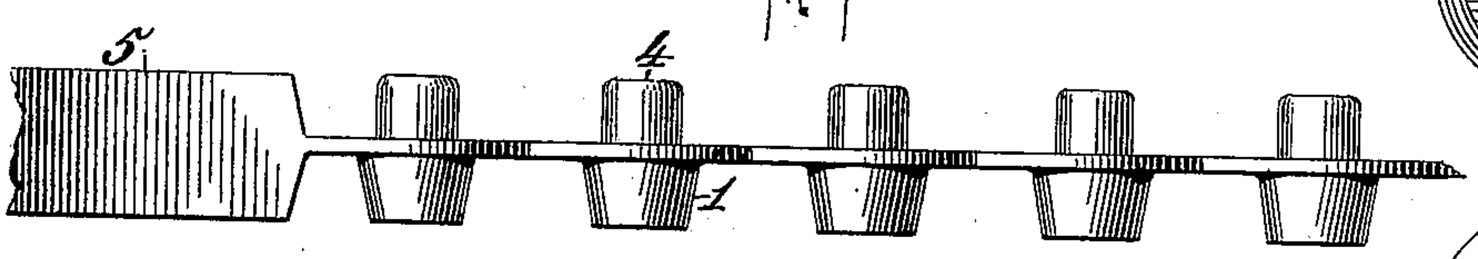


Fig. 11.

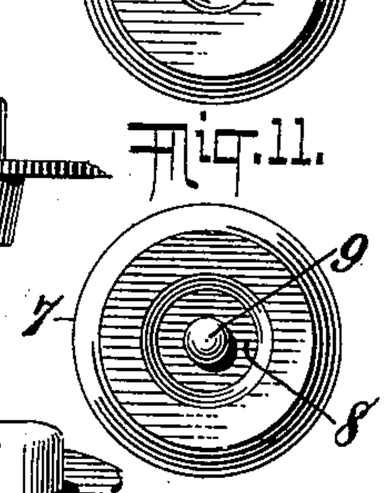


Fig. 7.

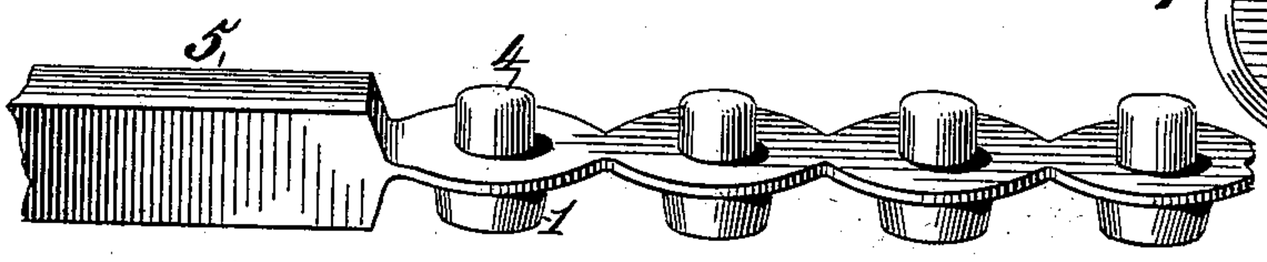


Fig. 8.

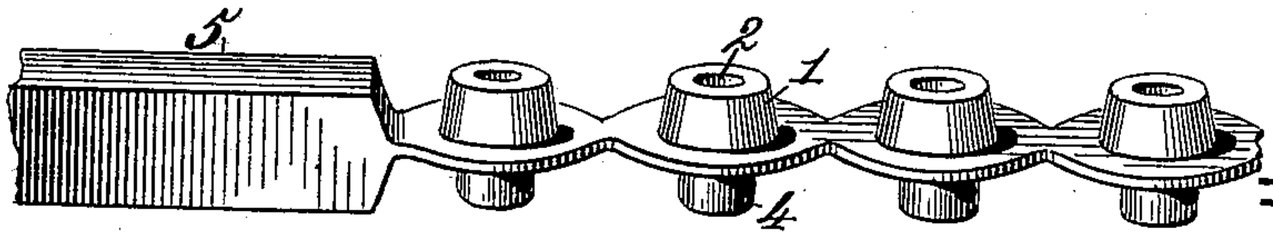


Fig. 12.

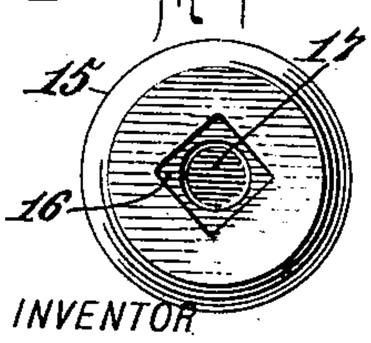
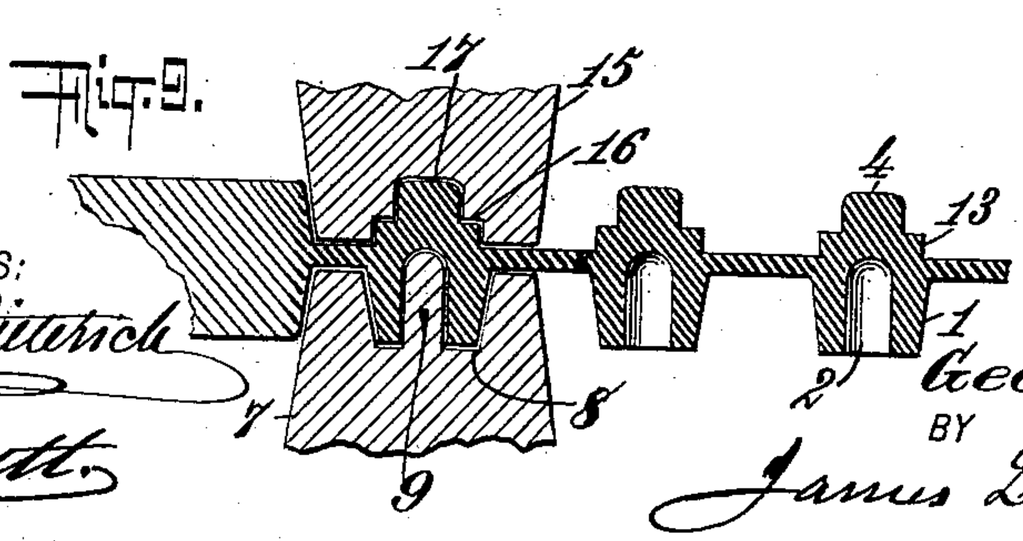


Fig. 9.



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UNITED STATES PATENT OFFICE.

GEORGE W. McGILL, OF NEW YORK, N. Y.

METAL-CAPPING HEAD.

SPECIFICATION forming part of Letters Patent No. 512,622, dated January 9, 1894.

Application filed July 29, 1893. Serial No. 481,883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. McGILL, a citizen of the United States, residing at Riverdale, New York, in the county of New York and State of New York, have invented new and useful Improvements in Metal-Capping Heads, of which the following is a specification.

This invention has for its object to provide a novel, simple, desirable, efficient, and economical capping head, or head for attaching ornamental caps to metallic fastener shanks, pins, nails, screws, and other articles of a similar nature.

The object of my invention is accomplished in the manner and by the means hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a detail perspective view of a capping head constructed according to my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a similar view showing a modified construction. Fig. 4 is a perspective view showing a modified construction of capping head applied to a duplex fastener shank. Fig. 5 is a longitudinal sectional view, showing a series of capping heads connected together and in process of manufacture from a strip of metal, parts of forming dies being also shown. Fig. 6 is a detail side elevation of the same, omitting the forming dies. Fig. 7 is a perspective view looking at the upper sides of the connected capping heads. Fig. 8 is a similar view looking at the lower sides of the connected capping heads. Fig. 9 is a view similar to Fig. 5, showing the manner of producing the capping head exhibited in Fig. 4. Fig. 10 is a plan view looking at the face of the upper forming die. Fig. 11 is a similar view looking at the face of the lower forming die; and Fig. 12 is a similar view looking at the face of the upper forming die shown in Fig. 9, for producing the construction of capping head shown in Fig. 4.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the body or collar portion of the capping head, which is exteriorly tapering, and formed in its lower side with a chamber or cavity 2, and on its upper side with a surrounding flattened shoulder or cap seat 3, from which rises a rivet head 4. The capping heads are produced by swaging, striking, or squeezing a plate, disk, or strip of ductile metal between dies fashioned to leave on one surface of the metal the integral projecting body portion or collar 1 surrounding the shank-receiving socket or cavity 2, and on the opposite surface, the shoulder or cap seat 3 and riveting pin 4. The plate, disk, or strip 5, of ductile metal, and of suitable thickness, is struck between gaged forming dies 6 and 7, the faces of which are mortised, recessed, or fashioned, as shown—that is to say, the face of the lower forming die 7 is formed with a recess 8 surrounding a central stud or pillar 9, and the face of the upper forming die 6 is recessed to form a circular cavity 10. The metal strip on being struck or compressed between the two forming dies is reduced in thickness, except at those parts covered by recesses 8 and 10 which receive the solid unstruck parts of the metal strip, the recess or cavity 10 in the upper forming die receiving the portion of metal which constitutes the riveting pin 4 of the capping head, and the circular recess 8 in the lower forming die receiving the portion of the metal which constitutes the body or collar portion 1 of the capping head, all as will be obvious by reference to Fig. 5. Where the capping heads are formed in a series from a strip of metal, as represented in Figs. 5, 6, 7, 8, and 9, they may be separated in such manner as to provide them with lateral flanges, as at 12, Fig. 3, the thickness of which may be regulated by gaging the stroke of the forming dies relatively to each other. The capping heads formed as above described are now in condition to be annealed, after which they are ready to be used for the purposes intended.

In Fig. 4 the construction of the capping head is the same as described with reference to the other figures, except that an angular neck 13 is formed between the riveting pin 4 and the shoulder or cap seat 3. This form is imparted to the capping head through the medium of a forming die 15, Figs. 9 and 12, which is constructed in its face with a countersunk recess 16 in addition to the recess 17 which

forms the riveting pin 4. The angular portion which forms the neck 13 is shown square; but obviously any angular or other form may be imparted to it by properly constructing the forming die 15 to accomplish the purpose.

The shank-receiving socket or cavity 2, and the riveting pin 4 may be of any shape other than that illustrated, such as oval, octagon, or angular, to prevent turning of the shanks to which the capping heads are applied.

It is preferable to construct the outer surface of the body or collar portion 1 conoidal, tapering, or beveled, to facilitate its lateral compression upon the shank, pin, nail, screw, or other article inserted into the shank receiving socket or cavity 2.

The capping head, constructed as described, is permanently secured to one end of a shank, such for instance as the duplex fastener shank 18, Fig. 4, by inserting the top or head portion of the shank into the socket or cavity 2, and then laterally compressing the metal of the body or collar portion 1 upon the shank.

An ornamental, or any other desired sheet metal cap of any configuration is designed to be applied to the capping head, and to be secured permanently thereto by upsetting or flattening down the riveting pin 4.

In the practical application of the sheet metal cap it is provided with an opening at its center corresponding in size with the diameter of the riveting pin, or with the shape and diameter of the neck portion 13, and this cap is placed in position so as to rest upon the cap seat 3, after which the riveting pin is upset or flattened down, thereby rigidly and permanently connecting the parts.

By the means described I am enabled to apply caps or heads of any size and configuration and ornamentation to fastener shanks, nails, pins, screws, or other articles of a like nature, while producing a very strong and durable article of its kind, and materially economizing in the cost of manufacture of this class of goods.

Having thus described my invention, what I claim is—

1. A metal capping-head adapted to permanently connect fastener-shanks, nails, pins, and such like articles with metal caps, consisting of a piece of metal formed on one surface or face with an upwardly projecting solid riveting-pin and a cap-supporting annular houlder, and on the other side with a dependent collar containing a cavity or chamber, said solid riveting-pin being adapted to be passed through an opening in a metal cap and be upset or flanged thereon, and the dependent chambered collar adapted to receive the top of a fastener-shank, nail, pin, or such like article and be closed laterally upon the same, substantially as described.

2. A metal capping-head adapted to permanently connect fastener-shanks, nails, pins, and such like articles with metal caps, consisting of a piece of metal formed on one surface or face with an upwardly projecting riveting-pin and an angular neck, and on the other side with a dependent collar containing a cavity or chamber, said riveting-pin adapted to be passed through an opening in a metal cap and upset or flanged thereon, and the dependent chambered collar adapted to receive the top of a fastener-shank, nail, pin, or such like article and be closed laterally upon the same, substantially as described.

3. A metal capping-head adapted to permanently connect fastener-shanks, nails, screws, pins, and such like articles with metal caps, consisting of a piece of metal provided on its upper surface with a cap seat 3 and a projecting riveting-pin 4 and on its under surface with a shank-receiving chambered collar 1 having its outer surface slanting in toward its chambered end, all the parts being integral with each other, substantially as herein shown and described.

4. A metal capping-head adapted to permanently connect fastener shanks, nails, pins, and such like articles with metal caps, consisting of a piece of metal provided on its upper surface with a cap-seat 3, projecting riveting-pin 4, and intermediate neck 13, and on its under surface with a shank-receiving chambered collar 1 having its outer surface slanting inwardly toward its chambered end, all the parts being integral with each other, substantially as herein shown and described.

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

GEORGE W. McGILL.

Witnesses:
W. HARRY McGILL,
GUSTAVE DIETERICH.