

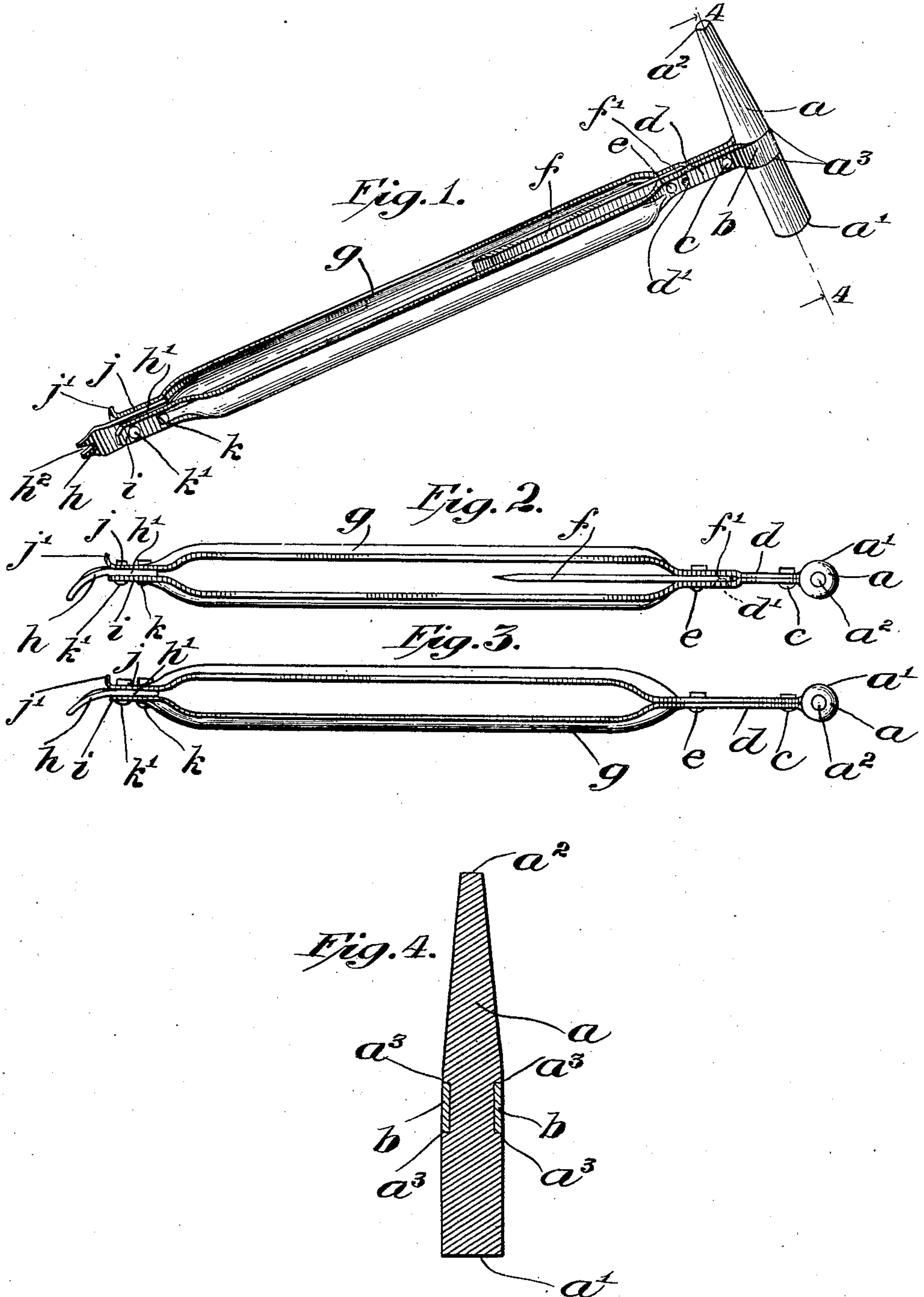
B. F. BIRD.

HAMMER.

APPLICATION FILED JUNE 30, 1906.

917,840.

Patented Apr. 13, 1909.



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# UNITED STATES PATENT OFFICE.

BENJAMIN F. BIRD, OF KINGSTON, NEW YORK.

## HAMMER.

No. 917,840.

Specification of Letters Patent.

Patented April 13, 1909.

Application filed June 30, 1906. Serial No. 324,138.

*To all whom it may concern:*

Be it known that I, BENJAMIN F. BIRD, a citizen of the United States, residing at Kingston, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Hammers, of which the following is a specification, reference being had therein to the accompanying drawings, which form a part thereof.

10 My invention relates to hammers.

The main object of the invention is to provide a hammer embodying a hammer head which may be made of good stock, and a strip metal handle so secured thereto as to avoid a loosening or accidental detachment of the head.

20 A further object is to provide a hammer employing a strip metal handle wherein the sides of the handle will be so separated or spaced apart as to form a good grip.

30 A still further object is to provide a hammer having a strip metal handle so constructed and arranged as to be sufficiently rigid to permit a hard blow to be struck with the hammer and to resist any tendency to collapse in the grasp of the user.

40 A still further object is to provide a hammer wherein the handle may be attached to the head without materially weakening the latter, and without necessitating an increase in the bulk of metal, or a construction wherein any part of the head or the handle projects materially beyond the side of the face of the hammer head, thus permitting the hammer to be used close to a surbase without likelihood of marring same.

50 A still further object is to provide a hammer wherein the manner of attaching the handle will be such as to permit the opposite ends of the head to be so shaped as to form respectively an ordinary tack hammer, and an upholsterer's hammer.

60 A still further object is to provide a hammer employing a strong, light handle, thus centering the weight in the head so as to facilitate the use of the hammer.

70 A still further object is to provide a hammer employing a handle composed of a continuous strip of metal having a loop formed at one end thereof adapted to receive and retain a hammer head. And a still further object is to provide a hammer which will be so constructed and arranged as to be strong and durable, yet capable of being produced of cheap materials and with few operations.

The invention consists primarily in a household tool comprising a hammer head and a handle therefor consisting of a continuous strip of metal having a loop formed substantially centrally thereof encircling said head and means adjacent to said head drawing said loop upon said head; and in such other novel features of construction and combination of parts as are hereinafter set forth and described and more particularly pointed out in the claims hereto appended.

Referring to the drawings: Figure 1 is a perspective view of the preferred form of the invention; Fig. 2 is a plan view thereof; Fig. 3 is a plan view of a modified form of the invention, and Fig. 4 is a cross section of the hammer head.

Like letters refer to like parts throughout the several views.

75 In the embodiment of my invention shown in the drawings, *a* indicates a hammer head preferably made of rolled steel, one end of which is substantially cylindrical to form an ordinary tack hammer *a'* and the other end of which is tapered down to form an upholsterer's hammer *a''*. Toward the inner end of the cylindrical part of the head I reduce the diameter to form a channel having oppositely disposed circular shoulders *a<sup>3</sup>* between which the handle is adapted to set. This channel extends entirely around the head and preferably is of the same depth throughout. The uniformity in the shape of the head, it will be observed, avoids any necessity for positioning it with any degree of nicety in assembling the tool.

85 The handle consists of strip metal, preferably a continuous strip being used, having a substantially circular loop *b* formed substantially centrally thereof, said loop being of an inner diameter approximating that of the reduced portion between the shoulders *a<sup>3</sup>*. The thickness of the stock of said strip is such as to bring the outer surface of the loop *b* when in position, substantially flush with the hammer head *a*, thus avoiding any part projecting beyond the hammer head. The metal in this portion of the handle is preferably flat, the strains being on lines substantially paralleling the head, and the depth of the strip being sufficient to withstand such strains without bending thereunder. The metal of the handle at this point is also of double thickness, thus adding to the strength of the handle at this point.



A rivet or other means, *c* is used to unite the parts of the strip on opposite sides of the loop *b*, said rivet being positioned close to the head so as, when upset, to draw the loop together tightly closing it upon the head, thus not only firmly holding the head and preventing its escape from the handle, but by reason of the strip being forced and fitted snugly between the shoulders *a*<sup>3</sup>, transmitting the full force of a blow directly to the head, and avoiding any longitudinal movement of the head within said looped portion *b*. If desired the opposite ends of the strip may be continued on parallel lines abutting against each other for a short distance as at *d*, as shown in Fig. 3, before being bent outwardly to form the handle grip, a rivet as *e*, being used to hold the parallel parts in this position. I prefer, however, to terminate the parallel part at a point between the rivets *c* and *e*, forming a fork adjoining the last named rivet adapted to accommodate the shank of an auxiliary tool, as the screw driver *f*'. This construction permits the use of the rivet *e* as a pivot about which the tool *f* may turn so as to be capable of being closed and out of the way when not in use, and opened so as to project at substantially right angles to the handle, when it is desired to use same. By drawing the strip metal fairly tight upon the shank of the tool *f* in upsetting the rivet *e*, the friction in opening and closing the tool *f* will be sufficient ordinarily to prevent the accidental opening of the tool. To limit the pivotal movement to one direction, however, I provide the shank of the tool *f* with a side projection *f*' adapted to engage a stop as *d*' stamped or pressed up from the metal strip on one or both sides of the loop *b*.

Beyond the rivet *e*, the ends of the strip are formed with a lateral arch, or is arched in cross section, and are separated for a considerable distance to form an extended grip *g*. The cross section of this grip portion is arched to resist the crushing strains thereon in the hands of the user and also to give the strength of material required to permit the use of the auxiliary tools *h* secured between or to the ends of the strip forming the entire handle, and *f*, pivoted near the hammer head. This arched portion I preferably extend through and slightly beyond the bends necessary to so separate the opposite sides of the handle grip. The concave side of the strip is disposed outwardly of the handle *g*, thus providing a handle grip conforming more to the hand and avoiding sharp edges on the sides of the grip. A handle so shaped will resist both the tensile and compression strains placed upon it in using the auxiliary tools, and will not be so materially weakened as to bend from blows struck with the hammer. The ends *i* and *j*

of the strip forming the handle, are drawn together beyond the handle grip *g* by the rivets *k k'*.

To embody in a single tool as many suitable implements as possible, I use the rivets *k k'* to secure the tack claw *h* firmly between the ends *i j*. This claw itself is made of sheet steel tempered and pressed to form, and being now in extensive use forms no part of this invention. It comprises a substantially straight stem as *h'* and a forwardly and outwardly projected slotted end as *h*<sup>2</sup>, the said end being reduced laterally adjacent to the slot therein to form a claw capable of drawing both the ordinary tack and matting or double pointed tacks as well. The sides of this claw across the bend therein, are turned upwardly to present side flanges for strengthening the claw at this point. This particular construction of claw need not be used however, any claw of this general type being all that is required. If desired any other type of tool may be substituted for this tack claw without departing from the invention. It being necessary, in order to secure a good purchase with a tack claw, to provide a fulcrum adjacent to the bend in the claw, I extend one end as *j* of the strip forming the handle beyond the other and turn it at substantially right angles thereto, thus forming a suitable fulcrum as *j'* in the proper relation to the claw. The body of the claw proper between the ends *i j* will serve to stiffen the tool at this point sufficiently to permit the use of the claw, and the arch of the material in the handle will extend to, or to a point beyond, the rivet *k* in a manner to avoid any weakness adjoining said rivet.

It will be observed that in a tool made as hereinbefore described, the greater part of the weight is centered in the head thus increasing the ease with which the tool may be wielded as a hammer; that the channel about the head does not weaken the head to the same extent that an opening therethrough would, thus avoiding the necessity for extra reinforcing metal at this point; that the metal loop *b* fits tightly between the shoulders *a*<sup>3</sup> on the opposite sides of this channel, replacing the metal cut away, and relieving the reduced portion of the head to a great extent from danger of breakage by taking up and transmitting the force of the blow struck; that no part of the hammer head or handle projects materially beyond the edge of the hammer face; that the head cannot under any circumstances fly off when in use; that the arrangement of the handle is such as to resist all bending strains; that the handle is common to all of the auxiliary tools and that such auxiliary tools may be associated with the hammer without increasing the number of parts, or the number of operations in producing the completed tool, except by the auxil-



ary tools themselves and the production of same.

The manner of using the tool is apparent from the foregoing description and a detailed description of its operation is unnecessary. The tack claw being at one end of the handle beyond the handle grip, does not interfere with the use of the tool as a hammer and when an auxiliary tool is pivotally mounted in the handle, it will be capable of being so contained between the separated sides thereof, as to be within the closed hand grasping the handle grip. The shape and arrangement of the different parts of the handle are such as to stand up well under these various uses and conditions of use.

The modification shown in Fig. 3 differs from the preferred form of the invention in that no pivotal tool adapted to fold within the handle is used, the rivet *e* drawing the parallel sides *d* of the handle closely together.

It is not my intention to claim the combination of the several tools herein mentioned, as my invention, but the construction of the hammer and its handle.

Having described the invention, what I claim as new and desire to have protected by Letters Patent is:

1. A household tool comprising a hammer head, and a handle therefor consisting of a continuous strip of metal having a loop formed substantially centrally thereof encircling said head, and a rivet adjacent to said head drawing said loop upon said head, portions of said strip beyond said rivet being separated and extended in substantially parallel lines to form a handle grip.

2. A household tool comprising a hammer head having a reduced portion forming a substantially circular channel and oppositely disposed shoulders thereabout, and a handle therefor consisting of a continuous strip of metal having a loop formed substantially centrally thereof adapted to enter said channel and engage said shoulders, and a rivet adjacent to said head drawing said loop within said channel and upon said reduced portion, the ends of said strip beyond

said rivet being separated and extended in substantially parallel lines to form a handle grip.

3. A household tool comprising a hammer head having a cylindrical end and a tapered end, and a reduced portion forming a substantially circular channel and oppositely disposed shoulders thereabout, between said cylindrical and said tapered ends, and a handle therefor consisting of a continuous strip of metal having a loop formed substantially centrally thereof adapted to enter said channel and engage said shoulders and a rivet adjacent to said head drawing said loop within said channel and upon said reduced portion, the ends of said strip beyond said rivet being separated and extended in substantially parallel lines to form a handle grip.

4. A hammer comprising a hammer head, having a reduced portion intermediate its ends forming a channel and oppositely disposed parallel surfaces, and a handle therefor consisting of a continuous strip of metal having a loop centrally thereof adapted to enter said channel and engage said parallel surfaces, parallel abutting portions, separate, substantially parallel, portions forming a handle grip, rivets drawing said loop within said channel and upon said reduced portion and tying said abutting surfaces together, and means drawing the ends of said strip together.

5. A household tool comprising a hammer-head and a handle therefor, consisting of a continuous strip of metal having a loop formed intermediate the ends thereof encircling said head and a rivet adjacent to said head drawing said loop upon said head, portions of said strip beyond said rivet being separated and extended in substantially parallel lines to form a handle grip.

In witness whereof, I have hereunto affixed my signature this 28 day of June, 1906, in the presence of two witnesses.

BENJAMIN F. BIRD.

Witnesses:

JOHN T. SWEENEY,  
ANNA D. JOHNSTON.