

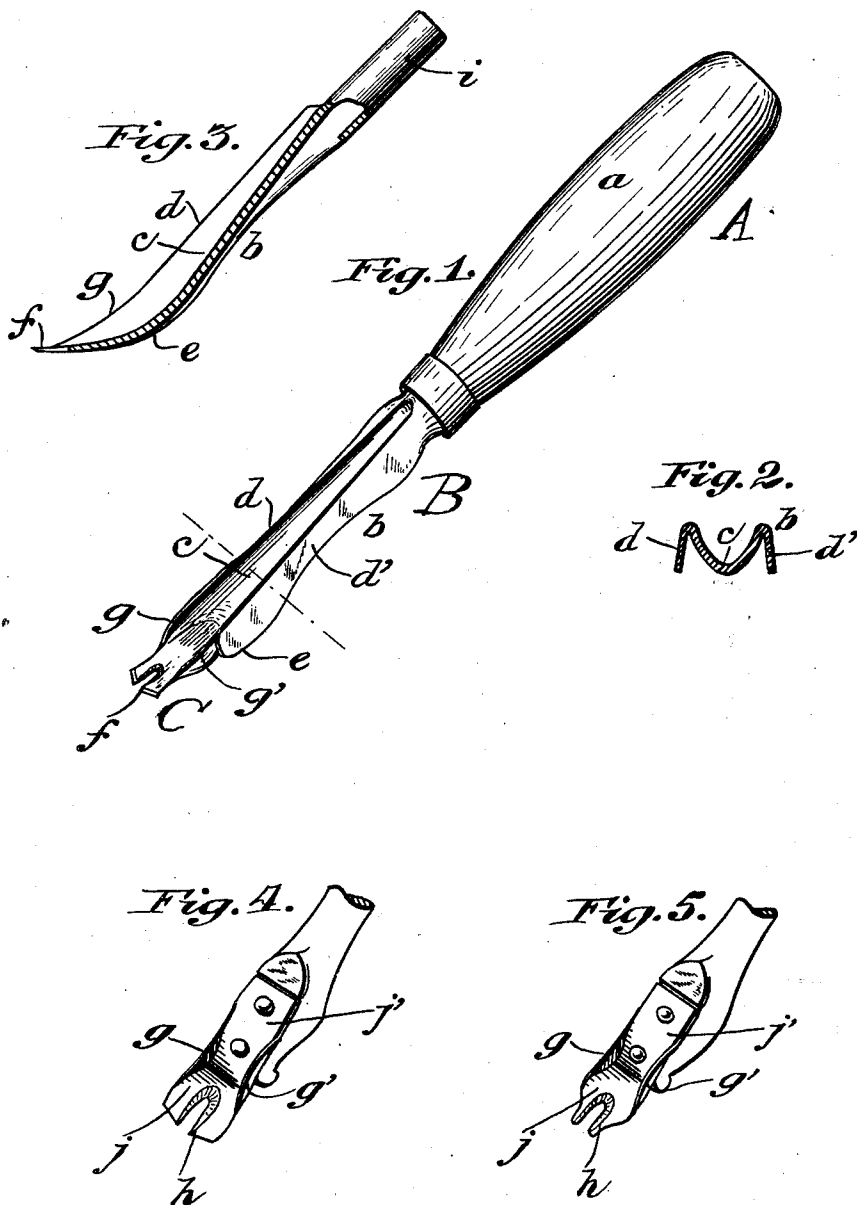
No. 758,017.

PATENTED APR. 19, 1904.

G. C. PARISH.
TACK CLAW.

APPLICATION FILED FEB. 3, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

GRAHAM C. PARISH, OF KINGSTON, NEW YORK, ASSIGNOR TO THE W. G. BROWNE MANUFACTURING COMPANY, OF KINGSTON, NEW YORK, A CORPORATION OF NEW YORK.

TACK-CLAW.

SPECIFICATION forming part of Letters Patent No. 758,017, dated April 19, 1904.

Application filed February 3, 1904. Serial No. 191,823. (No model.)

To all whom it may concern:

Be it known that I, GRAHAM C. PARISH, 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 Tack-Claws, of which the following is a specification, reference being had therein to the accompanying drawings, which form a part thereof.

My invention relates to tack-claws, and has for its object the production of an article of this description which will be constructed as to resist the strain upon the claw proper adjacent to the fulcrum in a manner to overcome the inherent weakness of the metal at that point, and thus increase the strength and durability of the article.

A further object is to provide a tack-claw which may be manufactured at comparatively small cost.

In articles of this description as heretofore manufactured, whether the claw be made separate from or integrally with the shank, it has been the practice to form the claw proper by bending and shaping it in a press or stamp, so as to have the forward end thereof project at the proper angle from the shank and after finishing to temper the said claw. In practice such claws have been found to be materially weakened at the bend through the crystallization of the metal, which point being adjacent to the fulcrum resulted in the greatest strains occurring at the weakest point of the claw. This has resulted in the frequent breaking off of the claw at this point. To obviate this difficulty and defect, it has been found essential to employ much heavier metal for the claw, and this has led to increased cost and difficulties of manufacture without eliminating the defect in the product. I by employing the structure herein set forth aim to produce a tack-claw which is so reinforced at this point as to permit the use of comparatively light sheet metal, which may be tempered or not, according to the quality of the stock, and which may thus be more readily stamped or pressed to the desired shape with-

out so affecting the metal as to produce that weakness above referred to.

The invention consists in a tack-claw reinforced as stated and in such other novel features of construction 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 cross-section of the shank. Fig. 3 is a longitudinal section of the shank and claw. Fig. 4 is a perspective view of a modified form of the invention, showing its application to a tack-claw having a cast-iron shank; and Fig. 5 is a perspective view of a still further modification of the invention, showing its application to the form of tack-claw patented to William G. Browne in and by Letters Patent of the United States No. 742,284, of October 27, 1903.

Like letters refer to like parts throughout the several views.

The invention broadly comprises a lever-handle A and a shank B, secured to said handle and carrying the claw proper, C, a general arrangement well known to this art. In the preferred form of this invention (shown in Figs. 1, 2, 3,) the said shank and claw proper are made integrally of sheet metal and comprise, in addition to the grip *a*, a shank *b*, formed of a channeled central portion *c*, having a downwardly-projected flange *d d'* on each side thereof to form not only a reinforcement along the entire shank, but the rolling fulcrum *e* adjacent to and just above the claw proper. The side of the channeled portion *c* brings into play to a certain extent the tensile strength of the material, and the resulting increase of strength is further augmented by the arrangement of the side flanges *d d'*, wherein the compression strength of the material is brought into action. Forward of the fulcrum *e* the material forming the channeled portion *c* of the shank is partially flattened and bent outwardly at an obtuse angle to form the claw proper, *f*, the side of said channel still extending at such an angle to the flattened portion

adjacent to and across the bend as to form on each side an upwardly-projected rib, as $g\ g'$, and in addition to reinforcing this point against vertical breaking strains brings into play the tensile strength of the material in these ribs. The end of the claw proper beyond these ribs is substantially flat and is slotted and milled, as at h , in the usual manner, and this end is preferably tempered to give the required durability to the claw proper. To secure the shank B to the handle, the upper end of the shank thereof is extended beyond the side flanges $d\ d'$ and formed into a cylindrical tang i , adapted to be forced into the handle a . If desired, this tang may be wedged when in place; but this is not essential, as the material itself ordinarily will possess sufficient rigidity to insure a permanent joinder of these parts.

In the form of the invention shown in Figs. 4 and 5 the claw proper only is made of sheet metal, being in the form of a separate claw-plate d , attached to a cast-iron shank. The general construction and arrangement of these parts will not be entered into, as this invention relates more particularly to the structure of this plate. These two forms differ from each other merely in the form of the claws at h , and a description of one will suffice to explain the applicability of the invention to claws of this general type. The sheet-metal claw-plate C comprises two sides $j\ j'$, extending at an obtuse angle to each other, one of which serves as a means of attachment to the shank B and the other as the claw proper. As ordinarily the plate is riveted to the shank both sides are flattened. In adapting my invention to this type of claw, therefore, the upwardly-projected ribs $g\ g'$ instead of running into or from the sides of a central channeled portion of the shank are formed adjacent to the bend of the plate only, gradually tapering, as shown, into the side of each flattened portion of the plate. This admits of the proper angle of these sides relative to each other and at the same time act to reinforce the claw at this point in the same manner as heretofore described, the channeled portion of the plate being limited to a point adjacent to the angle of the claw proper. The ribs $g\ g'$ follow the edge of the claw and either taper outwardly or inwardly, according to whether the claw proper is wide, as shown in Fig. 4, or narrow, as shown in Fig 5.

The operation of the claw proper is identical in all forms of this invention. When subjected to the strains of drawing a tack, there is a substantially vertical strain at the bend of the claw proper which tends to straighten out the claw or break it at that point, the metal toward the end of the claw not appearing to be materially affected by these strains. The side ribs $g\ g'$ serve not only to relieve the bent portion from such strains, but presents the metal therein sub-

stantially edgewise to the line of force, so as in addition to taking up upward strains to bring into play the tensile strength of said metal and effectually prevent any disintegration of the metal at the bend which would cause the claw either to lose form or break. Owing to this action the material used, if sheet-steel, need not be tempered except at the extreme point where it contacts with other metal, which might bend the edge of the milled portion or chip it out. It will be observed that the upward compression strains and the tensile strains on these ribs $g\ g'$ are thus substantially balanced, and the central portion of the plate is subjected to very few strains. In the preferred form of the invention the same results are obtained by the sides of the channeled portion c and the downwardly-projected side flanges $d\ d'$, the tensile strength of the former and the compression strength of the latter so balancing the whole as to give it great rigidity. The side flanges $d\ d'$ are necessary to the structure, owing to the dissimilarity of the strains on the shank and on the claw proper; due to the location of the fulcrum relative to each, and, further, to provide the fulcrum, offset from the claw proper, formed of a continuation of the shank.

It is not my intention to limit the invention to the precise details of construction herein shown and described, as it is apparent that it is capable of use in connection with various forms of the general type of claw referred to.

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

1. In a tack-claw, the combination of a shank, a handle therefor, and a downwardly-projected fulcrum thereon, and of a claw proper comprised of sheet metal bent so as to project at an angle to said shank and forwardly of said fulcrum, having its outer end slotted to engage a tack and provided with upwardly-projected side ribs adjacent to the bend therein, whereby the bent portion is relieved of the bending and breaking strains thereon.

2. In a tack-claw, the combination of a channeled sheet-metal shank, a handle therefor, and a downwardly-projected fulcrum thereon and a claw proper formed integrally with said shank and bent so as to project at an angle to said shank and forwardly of said fulcrum, the sides of said channeled shank extending across the bend therein to form upwardly-extended side ribs, adjacent thereto whereby the said bent portion is relieved of the bending and breaking strains thereon.

3. In a tack-claw the combination of a channeled sheet-metal shank, a handle therefor, and integral downwardly-projected side flanges thereon whereby said shank is reinforced throughout its entire length and a downwardly-projected fulcrum is provided therefor, and a claw proper formed integrally

with said shank and bent so as to project at an angle to said shank and forwardly of said fulcrum the sides of said channeled shank extending across the bend therein to form upwardly-extended side ribs adjacent thereto whereby the said bent portion is relieved of the bending and breaking strains thereon.

4. In a tack-claw the combination of a channeled sheet-metal shank, a cylindrical tang integral therewith, a handle therefor and integral downwardly-projected side flanges thereon whereby said shank is reinforced throughout its entire length and a downwardly-projected fulcrum is provided therefor and a claw proper formed integrally with said shank and

bent so as to project at an angle with said shank and forwardly of said fulcrum, the sides of said channeled shank extending across the bend therein to form upwardly-extended side ribs adjacent thereto whereby the said bent portion is relieved of the bending and breaking strains thereon.

In witness whereof I have hereunto affixed my signature, this 22d day of January, 1904, in the presence of two witnesses.

GRAHAM C. PARISH.

Witnesses:

HENRY S. SANFORD,

F. T. WEIDWORTH.