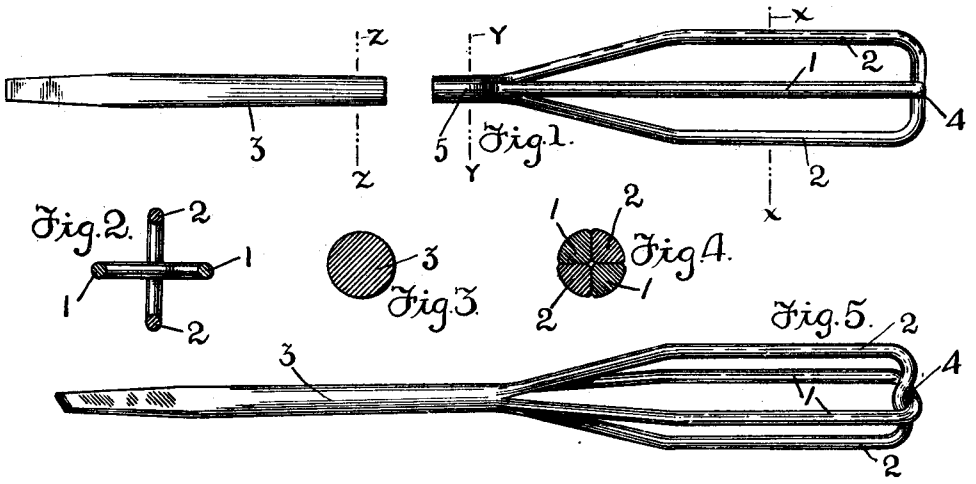
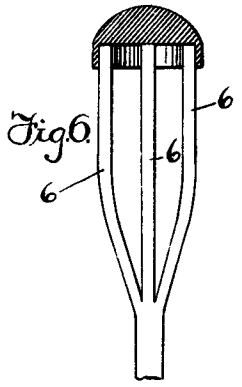
L. S. LACHMAN.

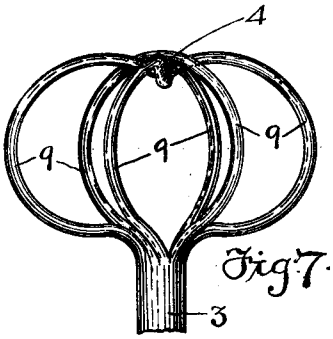
METAL ARTICLE.

APPLICATION FILED NOV. 20, 1909.

1,119,290. Patented Dec. 1, 1914.







Witnesses:
Irene Lefkowitz
Edward M. Jellinek

Inventor
Laurence S. Lachman
By his Attorneys
Townsend & Decker

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LAURENCE S. LACHMAN, OF NEW YORK, N. Y., ASSIGNOR TO UNIVERSAL ELECTRIC WELDING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

METAL ARTICLE.

1,119,290. Specification of Letters Patent. Patented Dec. 1, 1914.

Application filed November 20, 1909. Serial No. 529,035.

To all whom it may concern:

Be it known that I, LAURENCE S. LACHMAN, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Metal Articles, of which the following is a specification.

My invention relates to articles of manufacture such as comprise a shank and a handle or other part of larger overall diameter or width than the shank from which it extends and more particularly relates to the construction and arrangement of handles for tools or other articles, the construction of pitch-forks and various other articles.

One of the objects of my invention is to provide a simple and efficient structure which can be readily and cheaply manufactured.

A further object is to provide a structure which can, if desired, be readily constructed or assembled in an electric welding machine, which in itself greatly reduces the cost of manufacture.

According to my invention one of the parts of the article comprises two or more wires spread apart and which are bundled together at the one end and at this end integrally united with a shank. The spreading wires might be the handle of a tool, a door-knob, or any other article to which the invention might be adapted, it being understood that my invention is not limited to handles or to any other particular device, as it is capable of application to a countless variety of articles of different styles and forms without departing from the spirit thereof.

To these ends my invention consists in the improved metal article hereinafter more particularly described and then specified in the claims.

In the accompanying drawings a few articles constructed in accordance with my invention are illustrated.

Figure 1 is a side elevation of the handle and shank of a screw-driver before being joined together. Fig. 2 is a transverse section taken on the line X X Fig. 1. Fig. 3 is an enlarged transverse section taken on the line Z Z Fig. 1. Fig. 4 is a similar enlarged section taken on the line Y Y Fig. 1. Fig. 5 illustrates a perspective view of the finished screw-driver. Fig. 6 is a side elevation of a modified form of screw-driver handle. Fig. 7 is a side elevation of a door-knob, valve handle or the like, constructed in accordance with my invention.

In the preferred manner of carrying my invention into effect as illustrated in Figs. 1 to 5, two wires or rods 1, 2, are bent into the form of loops as shown, the said loops being arranged longitudinally with a shank 3 and so disposed that the plane of one loop is located perpendicular or at right angles to that of the other loop, the wires of the loops intersecting at the head as at 4 and where they so intersect are secured together preferably by welding them to each other by means of an electric welding process in any convenient and now well known manner. If desired, the wires might be welded together at this end before bending them into loops, this part being immaterial to the carrying out of the invention, or the body portion of the handle might consist of a number of individual wires as indicated in Fig. 6. The loops are provided with free ends which are bundled together, as at 5, preferably with considerable pressure so that the wires, if round ones are used, will flatten against each other as shown in Fig. 4. The size of the wires 1, 2, in each case is such that when they are bundled together, their cross-sectional area will approximate the cross-sectional area of the end of the shank 3 to which the wires 1, 2, are to be secured. The part 5 and the shank 3 are gripped in the jaws of an electric welding machine and butted against each other and a heating current passed from one part to the other while pressure is applied and the two parts become integrally united together in a manner well known in electric welding. When joining the two parts by means of an electric welding process it is desirable that the cross-sectional areas of the two parts at the place of joining should be approximately equal in order to equalize the heating of both pieces and secure a uniformly strong weld.

In the modification illustrated in Fig. 6, the handle comprises a number of individual wires 6, bundled together at one end and butt-welded to the shank 3, as previously

described regarding the form shown in Figs. 1 to 5. The wires 6 beyond the bundled end are spread apart and their free ends provided with a cap 7 secured to the end of the wires in any desired way.

In the modification shown in Fig. 7, the general construction and principle is substantially the same as that of the handle shown in Figs. 1 to 5, except that more wires 9, the planes of which are not located at right angles to each other are employed and the loops are more sharply bent to form a handle of larger diameter, which might be used for a door-knob or a valve handle, in which case the shank 3 would form the valve stem. The wires at the point of intersection 4 of the several loops are secured together in any desired way and preferably by welding.

It will be noted that in each case the structure lends itself to use for articles which are inclined to become heated owing to the use to which they are put, as the handle itself would tend to radiate the heat and remain cool to a greater or less degree. Also, if desired, the space between the spreading wires of the handles might be filled with wood or other substance if it is desired to make a solid handle.

It will be understood that my invention is not limited to any particular form or contour of the handle or any particular style of wire employed, as the same might be of round, square or any other suitable cross-section, the term wire being used in its broadest and most comprehensive sense.

What I claim as my invention is:

1. A metal article comprising a shank and more than two separated wires annularly disposed and bundled together at one end, said end being butt-welded to said shank and means connecting the other ends together.

2. A metal article comprising a shank and a handle consisting of a plurality of wire loops longitudinally arranged, the plane of one loop being at an angle to the plane of the others, the ends of said loops being bundled together at one end and butt-welded to the end of said shank.

3. A handle for tools and other articles comprising a shank and a plurality of wire loops having free ends bundled together and butt-welded to the end of said shank, the opposite ends of said loops intersecting each other and secured together at their intersections.

4. In a screw-driver, the combination of a shank and a handle comprising two wire loops arranged in planes perpendicular to each other, the wires of said loops intersecting each other at one end and bundled together at the other end and integrally united with said shank.

Signed at New York in the county of New York and State of New York this 19th day of November A. D. 1909.

LAURENCE S. LACHMAN.

Witnesses:
IRENE LEFKOWITZ,
EDWARD M. JELLINEK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."