2 Sheets, Sheet 1.

W. H. Johnson,

Tool-Handle Socket.

No. 80,744. Patented Aug. 4, 1868.

Fig 1

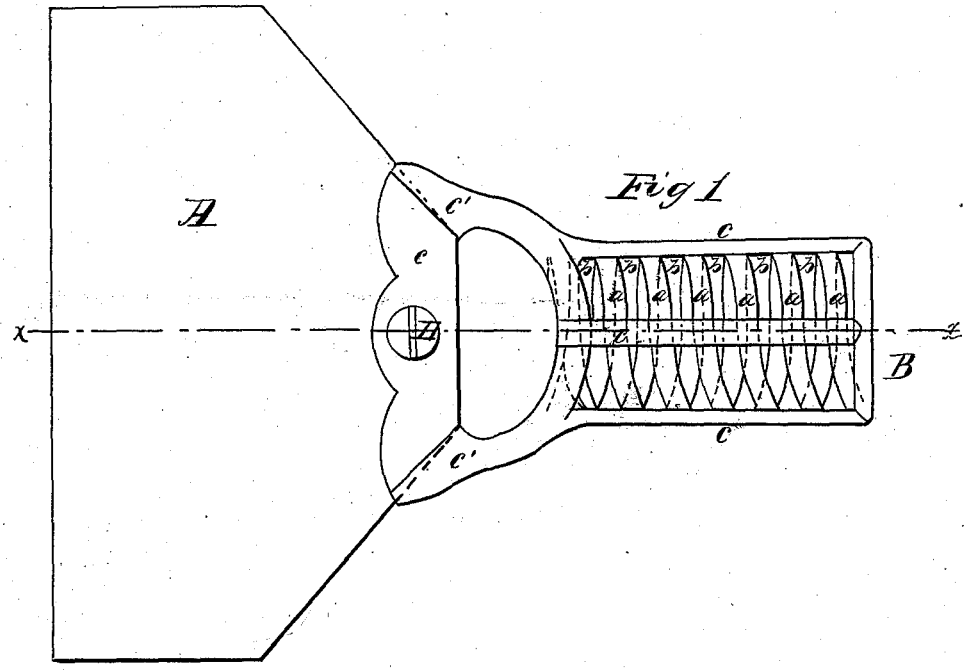
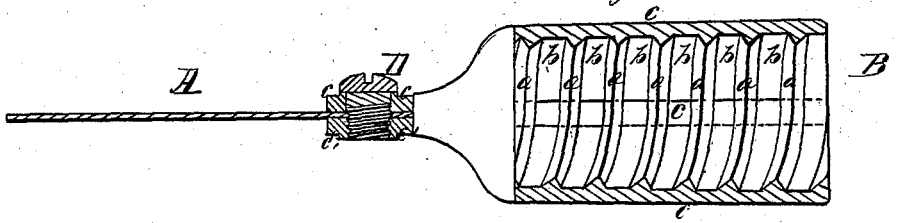


Fig 2.



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2 Sheets, Sheet 2.

W. H. Johnson,

Tool-Handle Socket.

No. 80,744. Patented Aug. 4, 1868.

Fig 3

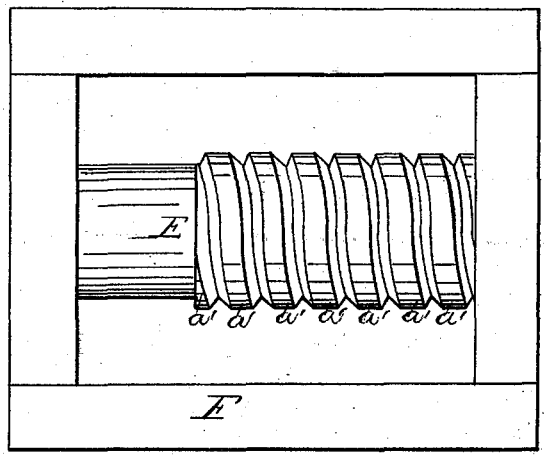


Fig 4

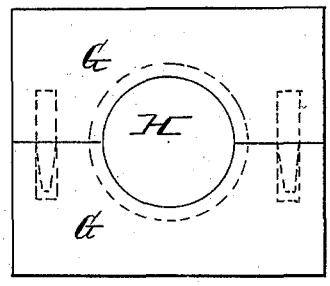
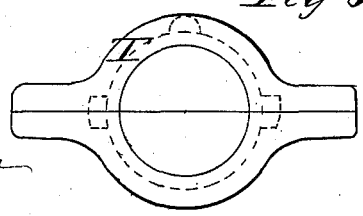


Fig 5



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WILLIAM H. JOHNSON, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 80,744, *dated August* 4, 1868.

IMPROVEMENT IN SOCKET FOR TOOL-HANDLES.

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, WILLIAM H. JOHNSON, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Paper-Hangers' Scrapers, and other Tools; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists of a cast screw-socket for the reception of the handles of paper-hangers' scrapers, and other tools, the said socket having wide-open spaces between the bases of the threads, except at the connection of tie-ribs with the latter, which are at suitable distances apart to give the requisite stiffness and stability to the threads.

In the accompanying drawings—

Figure 1 is a side view of the improved socket, with a paper-hanger's scraper in connection therewith.

Figure 2 is a longitudinal section at the line *x x* of fig. 1.

Figure 3 is a top view of a half pattern and flask for making a plaster-of-Paris pattern to use in moulding a cast-iron core-box, for forming the core for the screw-socket B.

Figure 4 is an end view of a cast-iron socket containing the core.

Figure 5 is an end view of a cast-iron pattern for moulding the socket.

Like letters in all the figures indicate the same parts.

A is a paper-hanger's scraper. B is a screw-socket for confining the handle thereto, it having a knife-edge or V-shaped screw, *a*, in its interior, into which a wooden handle is screwed, the knife-edge thread cutting the screw on the periphery of the handle, as the latter is turned around and pushed into the socket. I construct the socket B with wide-open spaces, *b*, between the threads *a*, except at the connection of the longitudinal ribs *c* with the bases of the threads, and at the annular rings *d*, which constitute the ends of the socket. The said ribs are placed at suitable distances apart to give the requisite stiffness to the threads of the screw.

The object of forming an open screw-socket is to decrease its weight, so as to reduce the cost of the article, as well as making it more convenient for the workmen.

I make the jaw C separate from the jaw C′, and confine the blade A between the two, by means of the screw D. The socket I form on a sand or composition-core, which forms the threads *a* of the screw and the open spaces *b* between the threads.

My plan is as follows:

I turn a pattern the full diameter of the socket, and cut a thread in the periphery of the same, in a screw-cutting lathe. I then obtain plaster-of-Paris impressions therefrom, one for each half of a core-box, to produce a cast-iron core-box for forming a core on which the screw-socket is cast.

Fig. 3 represents one-half of a core-pattern, E, made as above described, in a flask, F, for taking one-half plaster-of-Paris pattern for making a cast-iron core-box, G, as seen in fig. 4, the other half being made in the same manner. The core H in the box G being on the periphery, and, at the bases of the threads *a′*, of the same diameter as the cylindrical part of the pattern T, seen in fig. 5, the threads of the core, cut through the mould formed by means of the said pattern, making open spaces *b* between the threads *a* of the screw-socket B, as represented in figs. 1 and 2.

I have represented in the drawings the screw-socket B as one mode of attaching handles to paper-hanger's scraper, yet I contemplate using it in tools of other description, which have round removable handles.

What I claim as my invention, and desire to secure by Letters Patent, is—

A cast screw-socket, B, for tool-handles, when the screw-threads *a* have open spaces *b* between them, formed by means of a sand or composition-core, H, substantially as and for the purposes herein set forth.

In testimony that the above is my invention, I have hereunto set my hand and affixed my seal, this seventh day of March, 1868.

WM. H. JOHNSON. [L. S.]

Witnesses:

STEPHEN USTICK,

JOHN WHITE.