J. B. Davids,

Handle.

105919

Fig. 1.

PATENTED AUG 2 1870

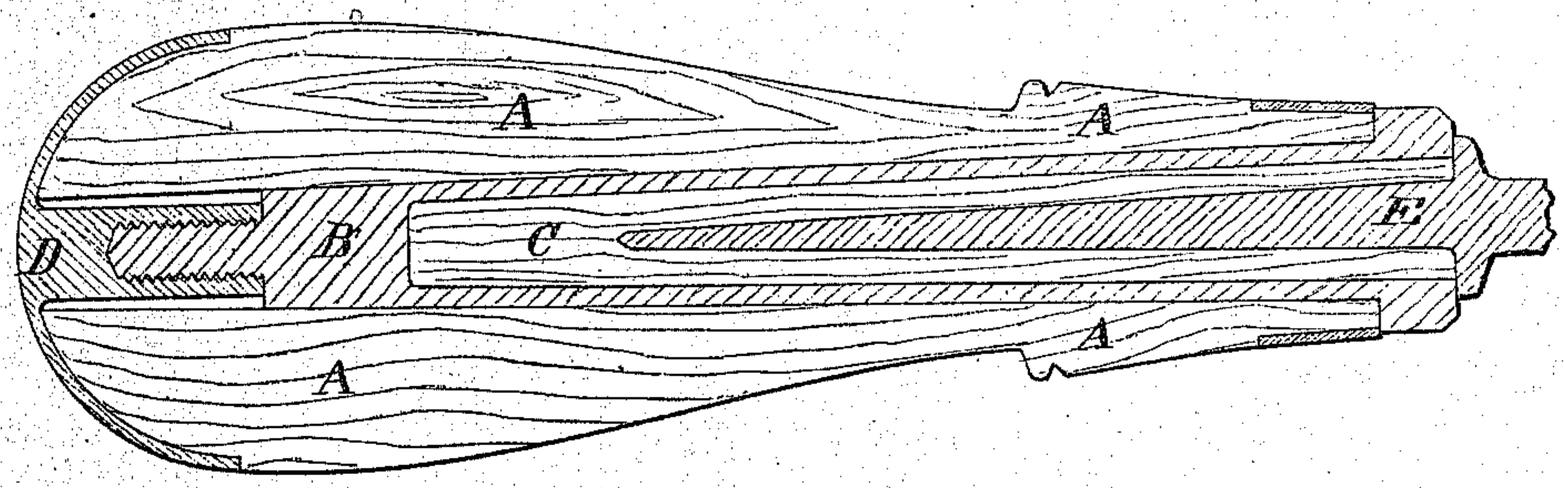


Fig. 2.

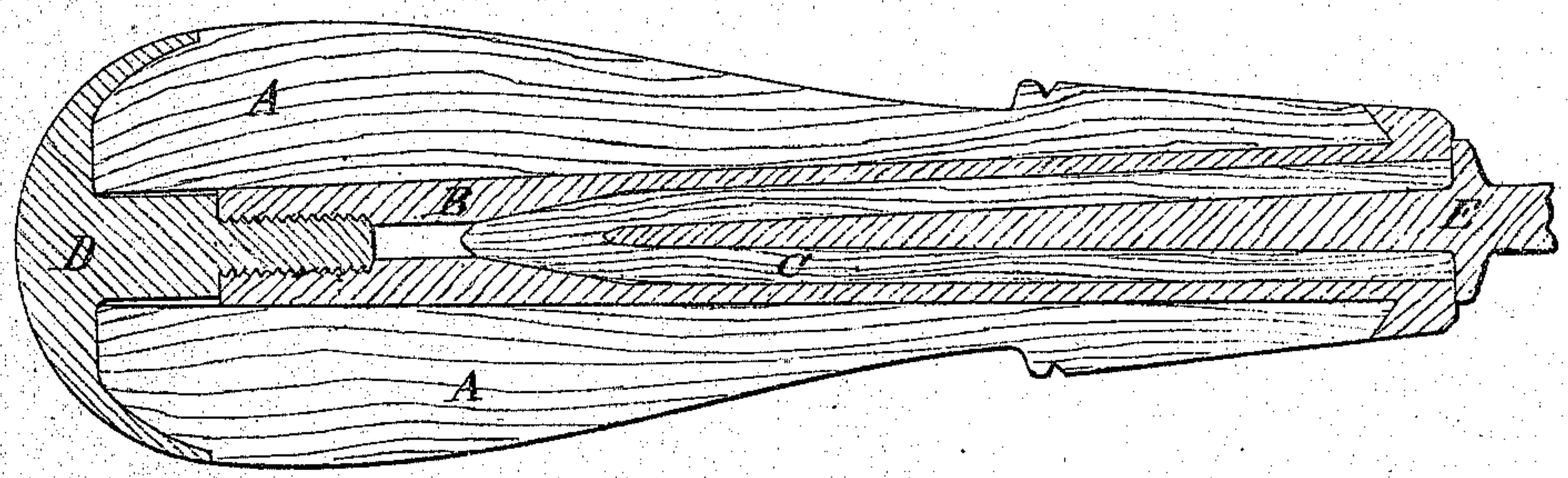


Fig. 3.

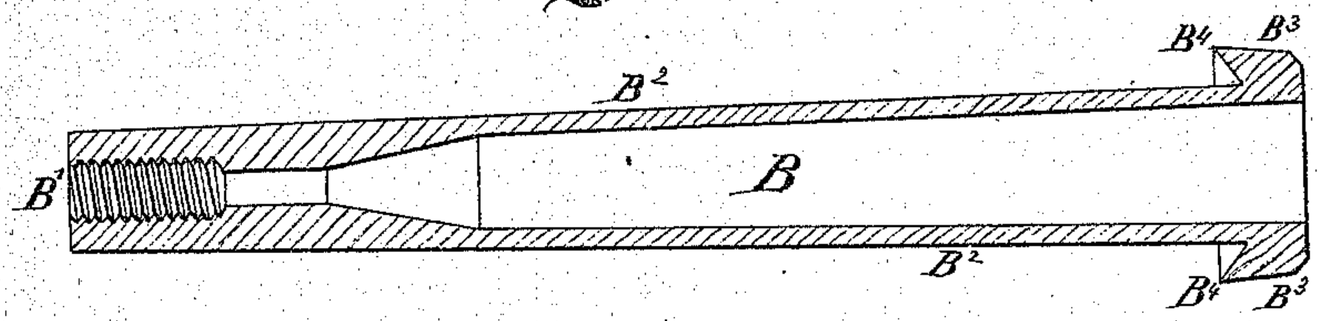
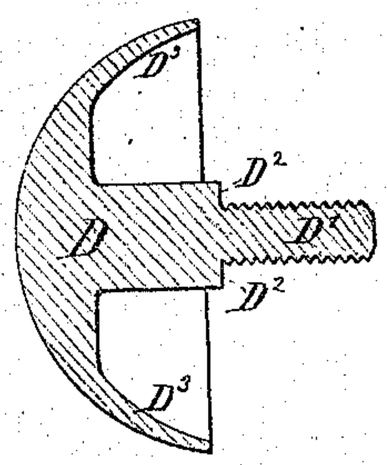


Fig. 4.



Witnesses,

A. Hoermann.

C. C. Livings.

Inventor,

J. B. Davids.

by his atty

D. D. Watson

UNITED STATES PATENT OFFICE.

JOHN B. DAVIDS, OF NEW YORK, N. Y.

IMPROVEMENT IN TOOL-HANDLES.

Specification forming part of Letters Patent No. **105,919**, dated August 2, 1870.

To all whom it may concern:

Be it known that I, JOHN B. DAVIDS, of New York city, in the State of New York, have invented a certain new and Improved Handle for Chisels and Analogous Instruments; and I do hereby declare that the following is a full and exact description thereof.

Chisels, files, and a great variety of hand-tools are provided with tapering tangs adapted to drive into wood. Wood is an excellent material for handles, on account of its readiness of adaptation to slight differences in the form or dimensions of the tangs, as also its lightness, cheapness, and its non-conducting qualities with regard to heat and cold; but it is liable to split and to variously fail when subjected to hard usage. My improved handle employs wood to receive and fit around the tang and to form the exterior surface of the greater portion, and, in short, to form the main body of the handle; but the material is effectually defended against splitting or serious injury either from too forcible driving in a large tang or from any ordinary violence in continued striking on the handle with a mallet.

I will proceed to describe what I consider the best means of carrying out my invention, and will afterward designate the point which I believe to be new therein.

The accompanying drawings form a part of this specification.

Figure 1 is a central longitudinal section of one form of the interior arrangement. Fig. 2 is a corresponding section of another (which I esteem a preferable) form of the interior. The latter differs from the former in the form of the wood and metal at the front end and in having the back end piece screw into instead of upon the main metal portion. Fig. 3 is a central longitudinal section of the main metal portion of my handle. Fig. 4 is a corresponding section of the back end piece.

Similar letters of reference indicate like parts in all the figures.

A is the main body of the handle, turned from well-seasoned wood in the form and size desired, but with a portion turned a little smaller at each end to allow the castings to overlap thereon, as will presently appear. A hole is produced through the central or axial line of the handle, which hole is considerably larger at one end than the other and adapted to receive a tapering casting, (represented generally by the single letter B, and several distinct portions of which will be designated, when necessary, by B′ B^2, &c.) The casting B is hollow and contains a close-fitting part of wood, C, which should be bored to a size approximating that of the tang which it is to receive. A casting having the external form of a smoothly-rounded cap (represented by D) is secured by screwing, as represented, in the back end of the handle, or the end farthest from the chisel E.

The casting B may be described as composed of four parts: first, a part which may be cylindrical and is marked B′; second, the main body, which is tapering and is marked B^2; third, an extended flange, which covers the front end of the handle, (marked B^3;) and, fourth, a hollow cylindrical lip extending backward from the flange B^3 and designed to serve as a ferrule at the front of the handle. This is represented by B^4. Both the exterior and the interior of the portion B^2 may be roughened, threaded, or otherwise prepared to take a very firm hold on the wood. I propose to both roughen these parts and to cement them to the wood by vinegar-glue or any other suitable cement which will join the wood and the iron strongly and permanently.

The cap-casting (marked generally by D at the back of the handle) may be described as composed of three parts: first, a screw, which is threaded into a correspondingly-tapped hole in the casting B and is marked D′; second, a thick and well-fitted shoulder, D^2, adapted to press fairly and firmly against the rear end of the casting B; and, third, a broad spheroidal flange or shell, D^3, fitting over and embracing the wood A at the back end of the handle. The lip or shell B^4 at the front of the handle and the similar corresponding lip or shell, D^3, at the back of the handle should both abut their edges against corresponding shoulders nicely turned in the wood A, as represented.

The castings B and D may be made of brass, German silver, or various other strong materials; but I prefer malleable cast-iron for general use.

All the several parts of my handle may be fitted cheaply and very accurately by machinery.

I propose to produce the handles in several sizes and styles adapted for ordinary chisels, firmer-chisels, and tools generally.

Modifications of my plan may adapt it for socket firmer-chisels and socket framing-chisels. With either form or size the shoulders D^2 transmit any blow on the back of the handle directly to the casting B, and the wood portion A has simply to perform the function of filling out the handle and making a smooth form not liable to become highly heated in the sun or to injure the hand by its extreme cold. The metallic shells B^4 and D^3 have so little mass that they rapidly assume the temperature of the hand without causing any inconvenience.

I am aware that handles entirely metallic and handles of wood cased in metal have been before known, as also handles provided with metallic fastenings variously and complexly arranged; but I know of none adapted to receive irregular tangs and to afford all the advantages of mine.

To prevent the shoulder of the chisel from breaking I can introduce a washer of rubber between this and the handle.

I claim—

The improved handle herein described, having an exterior or body, A, of wood, and an interior socket, C, also of wood or analogous slightly-yielding and strong material, with the strong casing B interposed between the parts C and A and secured by the cap D or its equivalent, all substantially as and for the purpose herein set forth.

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

JOHN B. DAVIDS.

Witnesses:
WM. C. DEY,
THOMAS D. STETSON.