

(No Model.)

C. A. MAYNARD.

MANUFACTURE OF SHOVELS, SPADES, &c.

No. 389,934.

Patented Sept. 25, 1888.

Fig. 1.

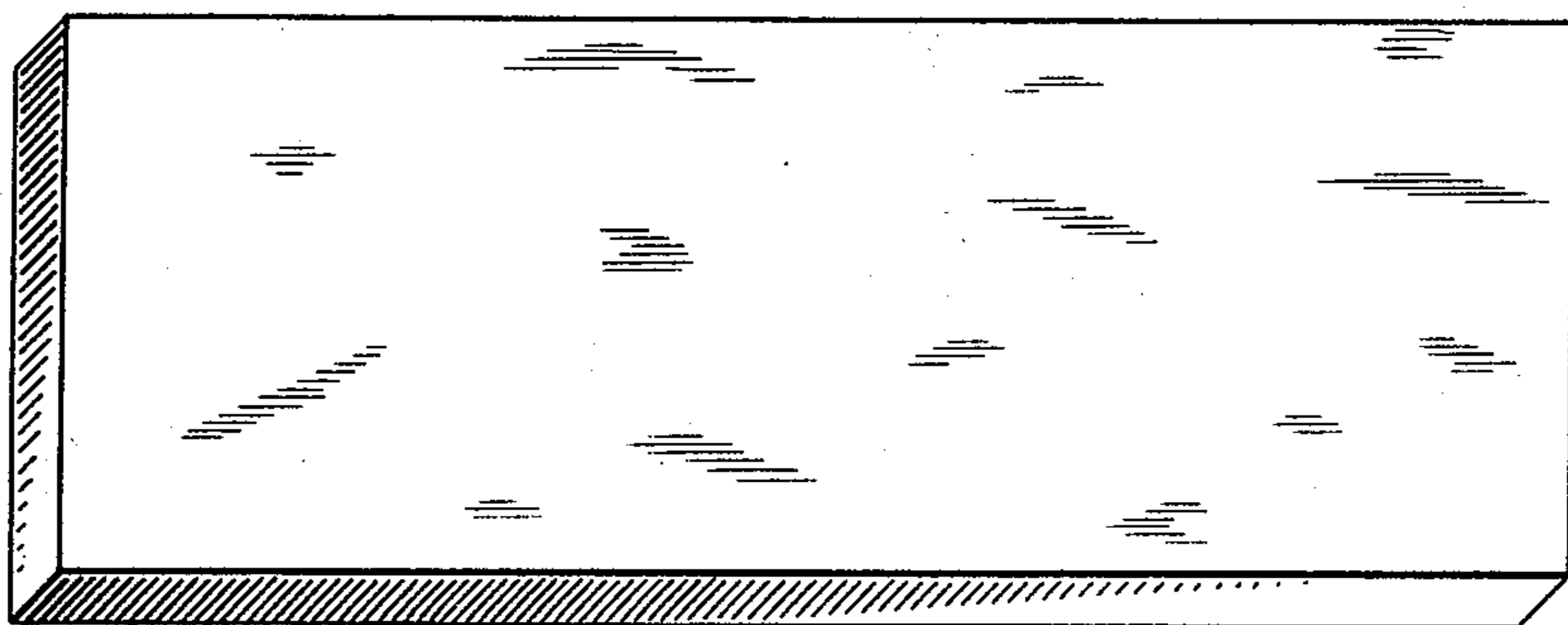


Fig. 2.

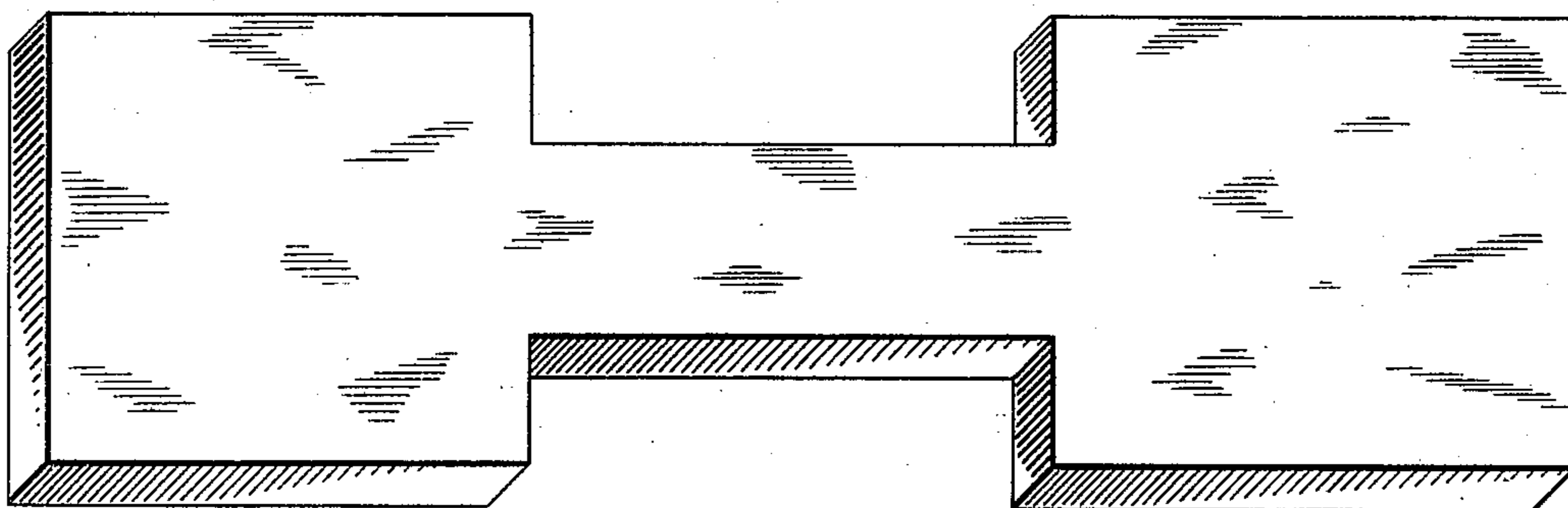
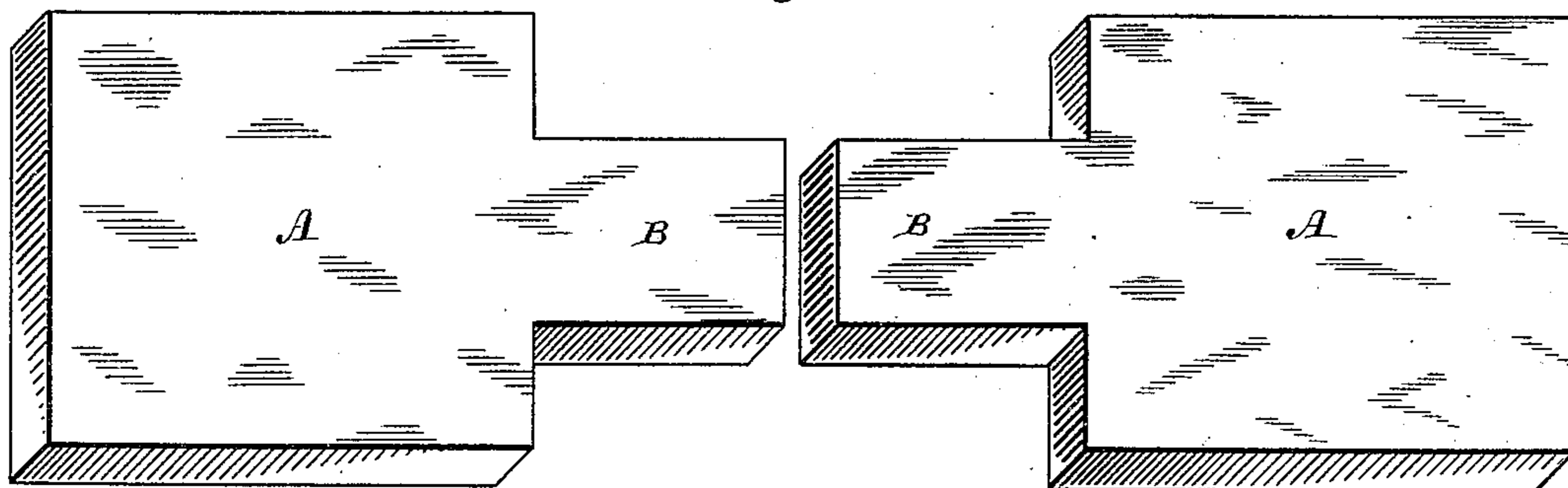


Fig. 3.



WITNESSES

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MANUFACTURE OF SHOVELS, SPADES, &c.

SPECIFICATION forming part of Letters Patent No. 389,934, dated September 25, 1888.

Application filed December 19, 1887. Serial No. 258,261. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. MAYNARD, of Northampton, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in the Manufacture of Shovels, Spades, &c., of which the following is a specification, reference being had to the accompanying drawings, in which—

10 Figure 1 represents a small block or bar of metal designed to be of sufficient dimensions for manufacturing two shovels. Fig. 2 represents the same block after it has been transformed by means of a drop hammer or press and reduced in its central part, substantially as shown. Fig. 3 shows a reduced double blank severed in the center, so as to form two separate shovel-blanks.

20 The object of my invention is to produce a shovel or spade of a single piece of metal with economy and expedition. Accordingly, I take a steel bar of convenient dimensions as to width and thickness and cut from it a piece such as shown in Fig. 1, of sufficient length for 25 two shovels, each to be composed of a blade, shank, and socket, or a blade, shank, and tang, as the case may be, all in one piece. The form of the bar may be varied, but the rectangular form indicated is preferable. The quantity of metal for two shovels can be determined by weight with sufficient accuracy, the weight varying according to the different size or weight of the completed shovel or spade to

be produced. I heat such a piece suitably for forging, and then set it down with dies or by 35 means of a drop hammer or press in its central part, substantially as, for example, shown in Fig. 2. I then sever the forged piece in the center, as indicated in Fig. 3, forming two separate shovel-blanks. In these blanks A in- 40 dicates the part for forming the blade, and B the part for forming the shank and tang, or shank and socket, as the case may be. I then take these blanks and form them separately into shovels in any usual way, but preferably 45 in accordance with my United States Patent No. 373,530, as described and illustrated in Figs. 11, 12, 13, and 14 of said patent.

What I claim to be new, and desire to secure by Letters Patent of the United States, 50 is—

The improvement in the art of manufacturing shovels, which consists in first cutting a suitable piece from a metal bar of proper dimensions for two shovels, then heating and 55 forging down the central part of the piece, then severing it in the center, and forming two blanks adapted to form blade, shank, and handle-fastening of a shovel or spade all in one piece, substantially as set forth. 60

In testimony whereof I have hereunto subscribed my name.

CHARLES A. MAYNARD.

Witnesses:

ANNIE B. CLARKE,
WM. H. CLAPP.