

G. D. CLARK.

Manufacture of Clock-Keys.

No. 157,064.

Patented Nov. 24, 1874.

Fig. 1.

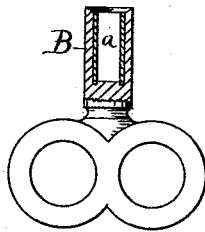


Fig. 2.

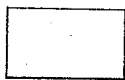


Fig. 3.



Witnesses
Henry A. Mitchell
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UNITED STATES PATENT OFFICE.

GEORGE D. CLARK, OF PLAINVILLE, CONNECTICUT, ASSIGNOR TO NORRIS CLARK AND WILLIAM L. COWLES, OF SAME PLACE.

IMPROVEMENT IN THE MANUFACTURE OF CLOCK-KEYS.

Specification forming part of Letters Patent No. **157,064**, dated November 24, 1874; application filed March 2, 1874.

To all whom it may concern:

Be it known that I, GEORGE D. CLARK, of Plainville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in the Manufacture of Clock-Keys, of which the following is a specification:

In the manufacture of key-pipes, in accordance with my invention, a square sheet-metal shell is formed of the desired size, and then set within a mold, and the key-pipe is cast around and upon it, as hereafter described.

In the accompanying drawing, Figure 1 is a central longitudinal section of a key-pipe which embodies my invention. Fig. 2 is a plan view of the blank from which the shell of the hole in the key-pipe is formed; and Fig. 3 is an end view of said shell.

I form the shell of the hole in the key-pipe of sheet metal. I prefer to use for this purpose sheet tin, which I blank out as shown in Fig. 2. By means of a suitable bending-machine, it is rolled up and squared, as shown in Fig. 3. This shell may be formed of other sheet metal, and in any ordinary manner. In Fig. 1, *a* designates the shell of the hole; and B designates the key-pipe, provided with any proper handle. The shell *a* is slipped upon a square shaft, when the shell and the portion of the square shaft that is within the shell are set so as to project into a suitable mold. Molten metal is then run into the mold, which metal flows around the shell *a* and forms the pipe B, thus rigidly securing the shell within

the pipe. The casting is then removed from the mold and the square shaft withdrawn from within the shell *a*, which leaves a good square hole in the end of the key-pipe B ready for use. The metal from which the pipe B is cast may be either hard or soft, as iron or zinc, and the molds may be formed in the ordinary manner of making molds for such metals.

By this process key-pipes, having square holes of a uniform size, are produced at a very small cost.

I do not claim casting one piece of metal upon another; neither do I claim forming hollow articles by casting metal around and upon a tube, as in the manufacture of cannon, &c., but

I claim as my invention—

1. The improvement in the manufacture of clock-keys herein described, consisting of first forming the sheet-metal blank, Fig. 2, then forming said blank into the four-walled shell, Fig. 3, placing said shell upon a square shaft, and within a clock-key mold, and casting the key-pipe around and upon the shell, all as described, and for the purpose set forth.

2. As a new article of manufacture, the herein-described clock-key, consisting of a cast-metal pipe having an interior sheet-metal shell, *a*, which forms the walls of the square hole, all substantially as described.

GEO. DWIGHT CLARK.

Witnesses:

JAMES SHEPARD,
M. E. CLARK.