

A. Weeks,

Wood Auger.

N^o 10,872.

Patented May 2, 1854.

Fig. 1.

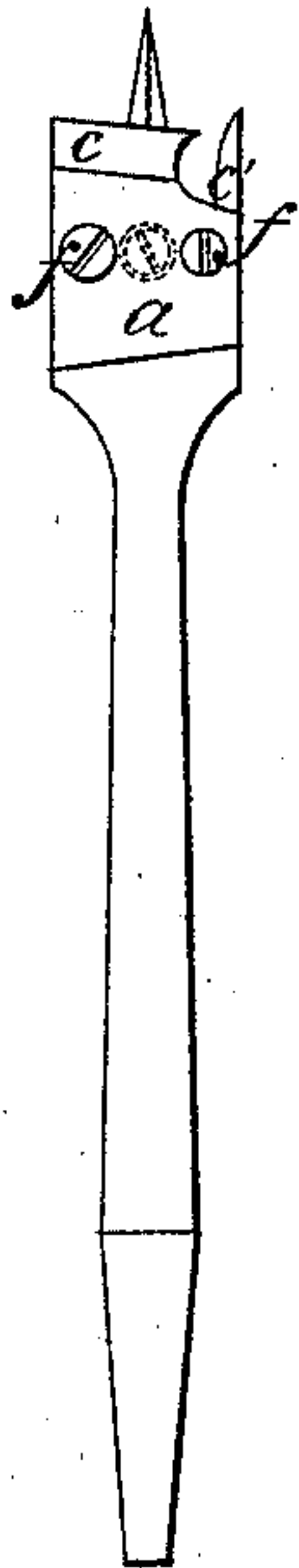


Fig. 2.

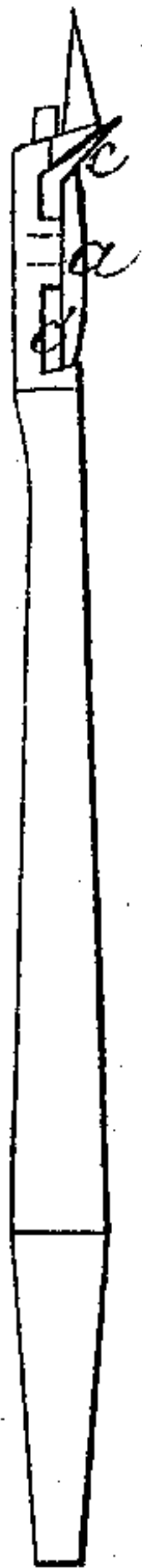


Fig. 3.

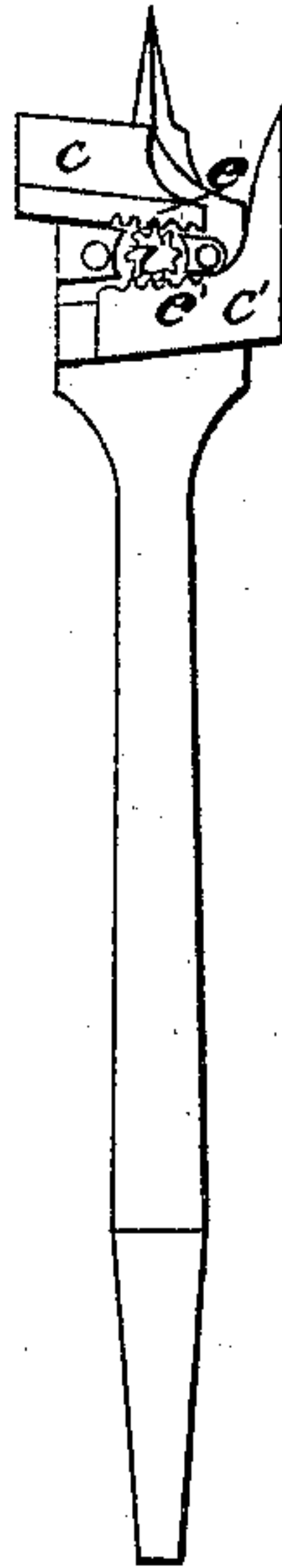


Fig. 4.

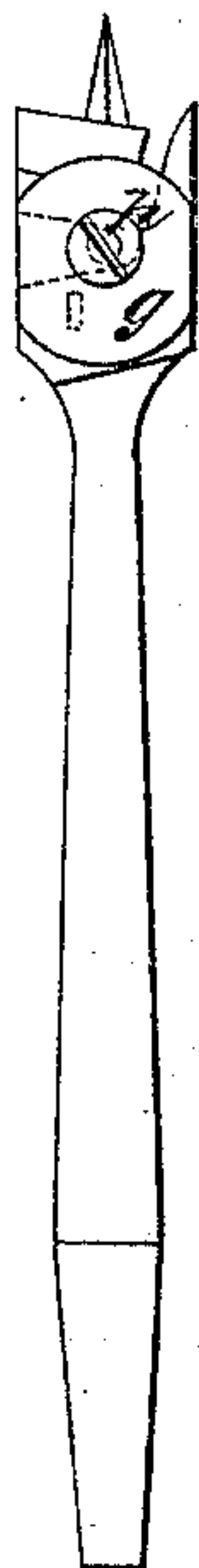


Fig. 5.

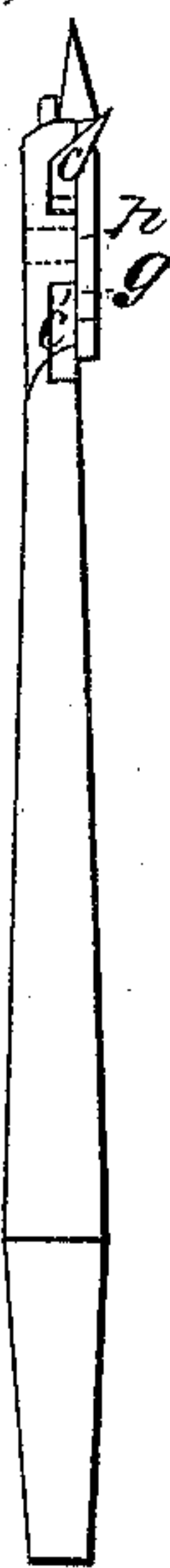


Fig. 6.

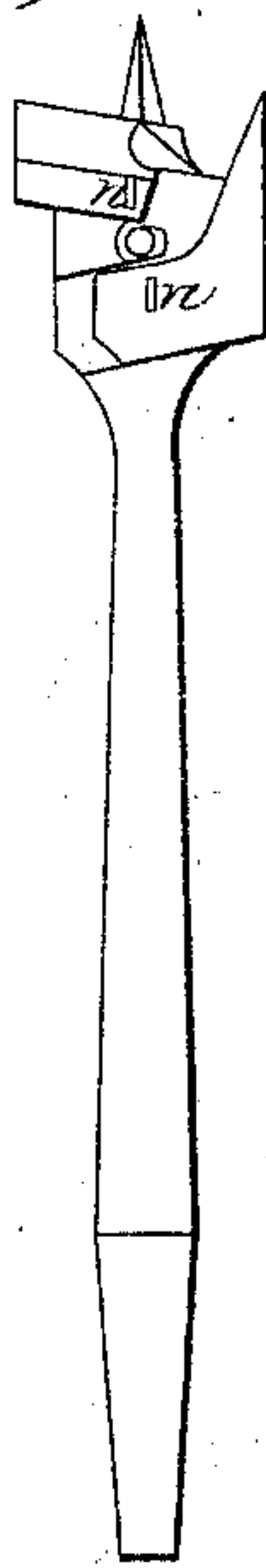


Fig. 7.



UNITED STATES PATENT OFFICE.

ASA WEEKS, OF SOUTH BOSTON, MASSACHUSETTS.

EXPANSION-BIT.

Specification of Letters Patent No. 10,872, dated May 2, 1854.

To all whom it may concern:

Be it known that I, ASA WEEKS, of South Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in the Construction of Expanding Center-Bits, of which the following is a full, clear, and exact description, reference being had to the drawings making part of this specification, in which—

Figure 1 is a front view of the bit ready for use; Fig. 2, an edge view of the same. Fig. 3 is a view of the same, the cap *a* being removed to show the parts within. Fig. 4 is a modification of the bit which I propose sometimes to make use of; Fig. 5, an edge view of the same; Fig. 6, a view of the same with the cap *g* removed to show the parts within; Fig. 7, a view of the cap *g* detached.

Expanding bits have been constructed in which each of the cutters were capable of being drawn out to suit the size of the hole to be bored; in every instance however with which I am acquainted, the cutters have been moved out independently of each other, the distance of each from the center of the bit requiring to be accurately measured whenever they are moved, should one of the cutters be farther from the center of the bit than the other, a smooth hole cannot be bored.

To obviate this inconvenience is the object of my present invention, which consists in so connecting the two cutters with each other that they shall move out and in simultaneously, each an equal distance from the center of the bit.

To enable others skilled in the art to make and use my invention I will proceed to describe its nature and construction.

In Figs. 1, 2 and 3, *c c'*, are the cutters, which are furnished with the rack teeth *e e'*, that engage with a small pinion *i*, the shaft

of which passes through the bit and is furnished with a screw head by means of which the pinion is turned and the cutters are run out as required. The last cog of the rack *e'* upon the cutter *c'* is so enlarged (as seen in Fig. 3) that it cannot enter the spaces in the cogwheel, and thus the cutters are prevented from falling out and being lost. When the cutters are placed in the position required, the cap *a* is drawn up against them by tightening the screws *f f*, and they are thus held firmly in place. The screws *f f* are to be loosened each time the cutters are to be moved.

In Figs. 4, 5, 6 and 7 is represented a modification of the bit which I propose sometimes to adopt. *g* is a cap secured to the bit by the screw *h*, and which is furnished with two small pins *m*, which enter slots *n n* in the cutters, and thus hold them in place. When this form of bit is to be operated the screw *h* is loosened, and the cap *g* is turned until the bits are run out a sufficient distance. The screw *h* is then tightened, and the tool is ready for use. In certain cases it may be found necessary to prevent the cutters from falling out. For this purpose small pins upon the body of the bit, running in grooves in the back of the cutters, as seen in Fig. 2, may be made use of.

I do not claim an expanding bit, neither do I claim making both of the cutters capable of motion independent of each other, but

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

The method herein described of connecting the two cutters with each other, so that they shall move out and in simultaneously and equably as set forth.

ASA WEEKS.

Witnesses:

SAM. COOPER,
JNO. MURDOCK.