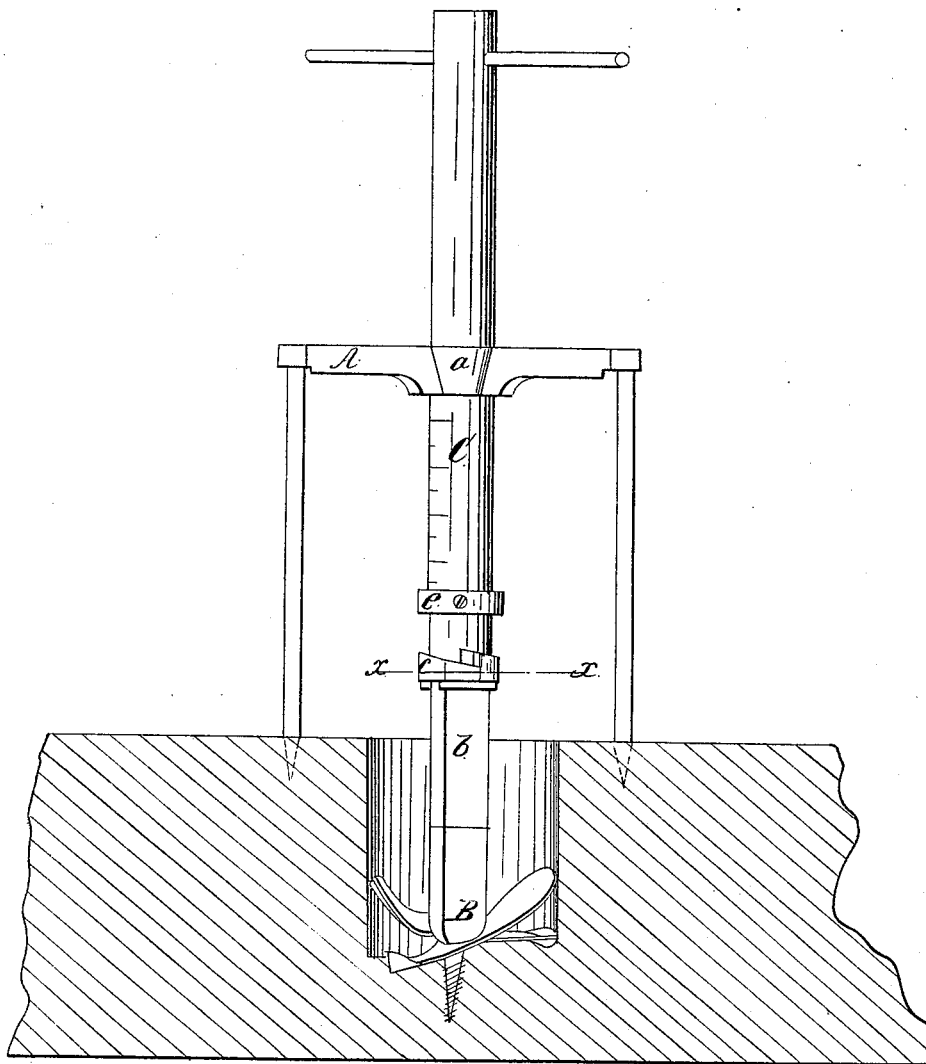
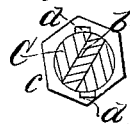


*E. C. Gillette,*  
*Wood Auger.*  
*N<sup>o</sup> 46,854. Patented Mar. 14, 1865.*  
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*M. M. Livingston*

*Inventor:*  
*E. C. Gillette*  
*By M. M. Livingston*  
*Att'y*

# UNITED STATES PATENT OFFICE.

E. C. GILLETTE, OF RICHFIELD, BRITISH COLUMBIA.

## IMPROVEMENT IN AUGERS.

Specification forming part of Letters Patent No. 46,854, dated March 14, 1865.

### *To all whom it may concern:*

Be it known that I, E. C. GILLETTE, of Richfield, in British Columbia, have invented a new and useful Improvement in Augers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of my invention. Fig. 2 is a transverse section of the same, taken in the plane indicated by the line *xx*, Fig. 1. Fig. 3 is a partial longitudinal section of the same.

Similar letters of reference indicate like parts.

This invention consists in the application of a cam-sleeve, in combination with a slot in the lower end of the shaft, and with a flat-notched shank of the auger, in such a manner that the auger can be readily fastened to or unfastened from the shaft whenever it may be desired.

Boring large deep holes in timber is slow and laborious work, particularly on account of the large resistance which must be overcome over and above what is caused by the action of the auger on the wood. This extra resistance must be overcome by extra labor consumed in carrying round with every turn of the auger the chips which become wedged into the twists. After penetrating a few inches every turn becomes more difficult, until soon no further progress can be made, and the chips have to be removed, which is effected by withdrawing the auger, when the chips are found jammed into the twists and ground to powder, while the metal is hot with friction. The severe strain to which the tools are thus exposed soon spoils them, and augers which have been used any considerable length of time are generally found more or less bent; also, one end of the tool being held by the wood and the other by the hands which serve to turn the auger, makes it rather difficult to bore the hole truly and evenly.

These disadvantages are obviated by the

use of the standard A, which is supported by three (more or less) legs, and with an eye, *a*, through which the shaft C passes. The auger B is secured in the lower slotted end of this shaft, and to effect this purpose it is provided with a flat notched shank, *b*, and it is fastened in its place by a cam-sleeve, *c*. This cam-sleeve works in a recess or groove in the shaft and in the shank of the auger, and the groove in the shaft is provided with inclined planes to correspond to the inclined planes of the cam-sleeve, and to form stops which prevent said sleeve being turned beyond a certain point in either direction. The cam-sleeve is provided with two notches, *d*, (see Fig. 2,) equal in width to the thickness of the shank *b*, and of such a depth that when the sleeve is turned, until the notches register with the edges of the slot in the shaft, the auger can be withdrawn or introduced, as the case may be. An additional sleeve, *e*, which slips over the shaft C, is made adjustable in the desired position. This sleeve serves to keep the upper end of the shank *b* of the auger in the slot of the shaft and prevent it being tilted spontaneously.

The shaft C, which passes up through the eye in the standard A, forms a guide for the same and for the auger, whereby the operator is enabled to bore an even and true hole, and the auger can be made with two blades only, one on either side, dispensing with all the extra twists which are necessary in ordinary augers to serve as guides.

By making on the shaft C a graduated scale the depth of the hole can be determined at any moment without lifting out the auger.

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

The cam-sleeve *c*, in combination with the slotted shaft C and with the flat notched shank *b* of the auger, constructed and operating in the manner and for the purpose substantially as set forth.

E. C. GILLETTE.

Witnesses:

I. V. LEE,

DANL. B. CHISHOLM.