E. R. KING.

WOOD BORING MACHINE GUARD.

APPLICATION FILED FEB. 10, 1908.

899,412. Patented Sept. 22, 1908.

Fig. 1

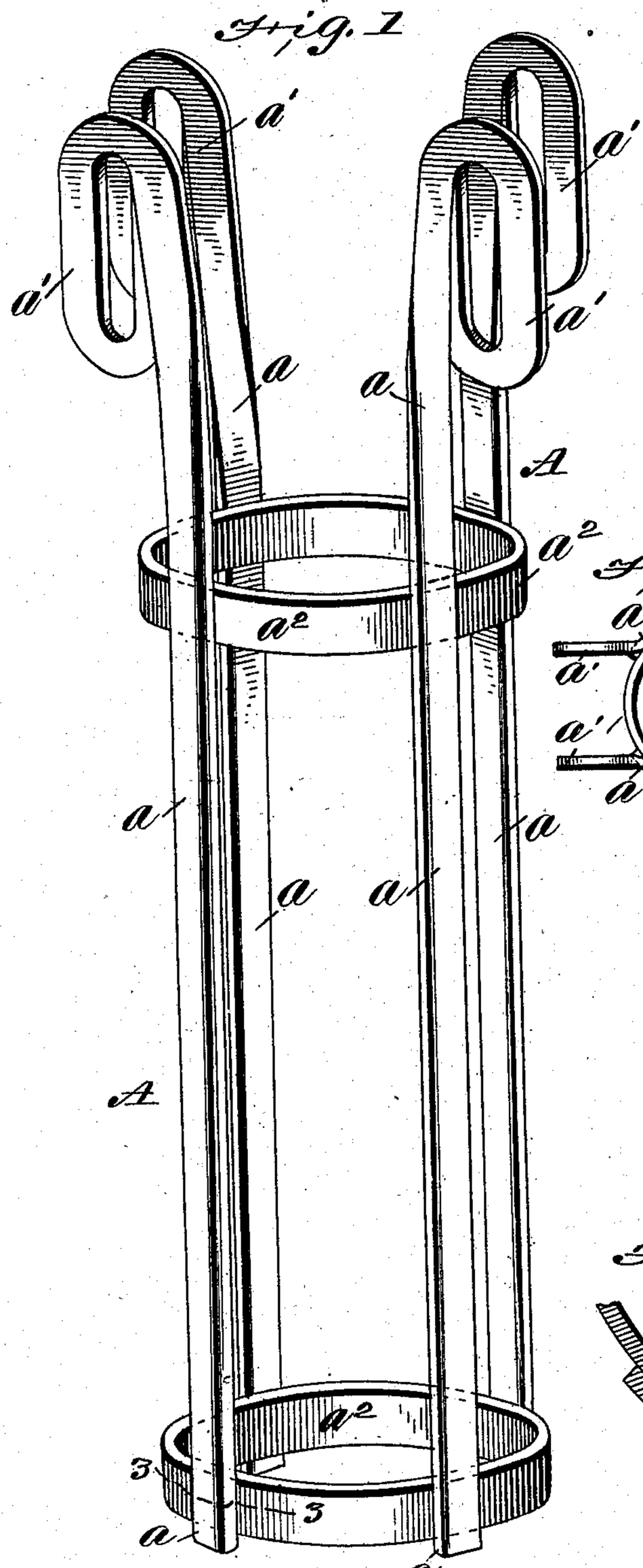


Fig. 2.

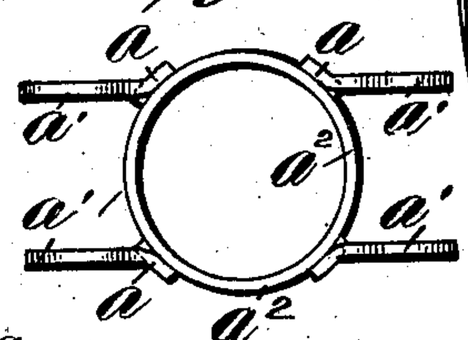


Fig. 3.

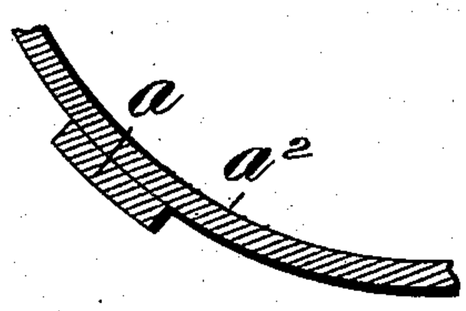
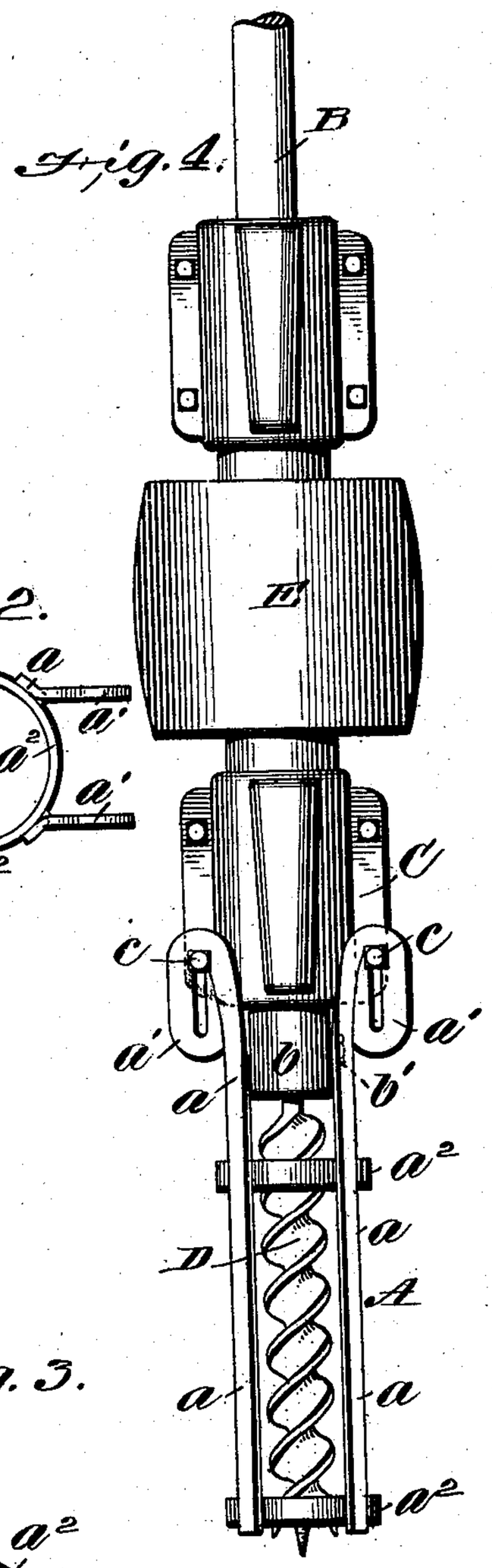


Fig. 4.



WITNESSES

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WOOD-BORING-MACHINE GUARD.

No. 899,412. Specification of Letters Patent. Patented Sept. 22, 1908.

Application filed February 10, 1908. Serial No. 415,161.

To all whom it may concern:

Be it known that I, EDGAR R. KING, a citizen of the United States, residing at Memphis, in the county of Shelby, State of Tennessee, have invented an Improvement in Wood-Boring-Machine Guards, of which the following is a specification.

The operators of wood-boring machines are frequently injured, or their clothing torn, by contact with the rotatable heads or clamping-screws of the boring bits. In general, such accidents occur while handling the lumber, or placing it under the bits or adjusting or removing it, and the operators are most liable to injury by the bit which is adjacent to the one they are at the time using. I have devised and have put into successful use, a skeleton guard which effectually prevents such accidents, it being adapted for attachment to the screws which ordinarily secure the fixed bearings of the machine in which a boring bit rotates, and hang therefrom so as to practically inclose the bit proper and the rotating spindle head or socket in which the bit is secured.

The details of construction and attachment of my improved guard, are as hereinafter described, and illustrated in the accompanying drawing, in which

Figure 1 is a perspective view of the guard; Fig. 2, a top view of the same; and Fig. 3, a section on the line 3—3 of Fig. 1. Fig. 4 is a side view illustrating the attachment of the guard, as in use, to a boring machine.

A indicates my improved skeleton guard which is formed of a series of parallel bars *a* and rings a^2 which are arranged within the bars and hold them spaced apart to a distance required by the size of the bit to which the guard may be applied, it being understood that guards of different sizes will, in practice, be manufactured and sold. The upper ends of the bars are turned outwardly and form elongated eyes or loops *a'*. In applying the guard as required for practical use, the said eyes or loops *a'* receive the bolts *c* of the fixed head C in which rotates the spindle B to which the boring bit D is attached, and with which it is in alinement. The shank of the bit enters a socket or enlarged head *b* formed on the lower end of the spindle and is secured by a clamp-screw *b'* attached to such head. The pendent guard practically incloses or surrounds the boring bit D and thus serves to prevent the operator being injured or his clothes torn by contact with the bit and especially with the clamp screw *b'* of the rotatable spindle head or socket.

In general, a guard adapted for a boring bit of a particular diameter will be made of such length that the lower ring of the guard will be directly opposite the cutters of the bit, as indicated in Fig. 4. When the bit is operated, as is well known by those skilled in the art, it is rotated by a belt (not shown) applied to the pulley E keyed on the spindle B, and the spindle is advanced, or fed downward, by means of a lever and pull rod (not shown) with which the spindle is suitably connected. In such advance of the spindle, the head *b* with its screw *b'* remains inclosed and protected by the guard. Thus the guard remains fixed in position by reason of its attachment to the fixed head or bearing C, irrespective of the up-and-down movement of the boring bit.

I preferably construct the upper ends of the guard bars *a* with vertically elongated loops or eyes, as shown, in order to provide for adjustment of the guard corresponding to the length of the boring bit. It is obvious that the guard may be quickly applied to, or detached from, the screw bolts *c* of the fixed bearing C.

The vertical members *a* of my skeleton guard may of course be variously constructed and the word bars is therefore to be construed in a generic sense.

It will be understood that, in practice, the rotatable boring bit is attached to the spindle B which is connected by a loose joint with a horizontal lever journaled and weighted in such manner as to counterbalance the spindle and bit, and this lever may be pulled down to carry the bit into contact with the wood and to feed the same while boring, by means of a pendent rod provided with a handle.

What I claim is:

1. The combination, with a rotatable boring bit, the spindle socket in which said bit is clamped, and the fixed bearing wherein the spindle rotates, of the bit-guard comprising a series of parallel bars and rings secured thereto and holding them spaced apart, the upper ends of the bars having eyes to receive the clamping screws of the bearing, whereby the guard is secured detachably and in pendent position and surrounding the bit, as shown and described.

2. The combination, with a rotatable bearing bit, the spindle socket in which said bit is

clamped and the fixed bearing wherein the spindle rotates, the same being provided with clamp screws extended horizontally, of the bit-guard composed of a series of parallel bars and rings secured thereto, the upper ends of the bars having eyes which are elongated vertically and receive the clamping screws of the bearing, whereby the guard is adapted for vertical adjustment to accommodate it to bits of different lengths, substantially as described.

E. R. KING.

Witnesses:
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