

No. 639,203.

Patented Dec. 12, 1899.

H. B. WOODILL & B. F. HULSE.

BORING MACHINE.

(Application filed July 24, 1899.)

(No Model.)

Fig. 1.

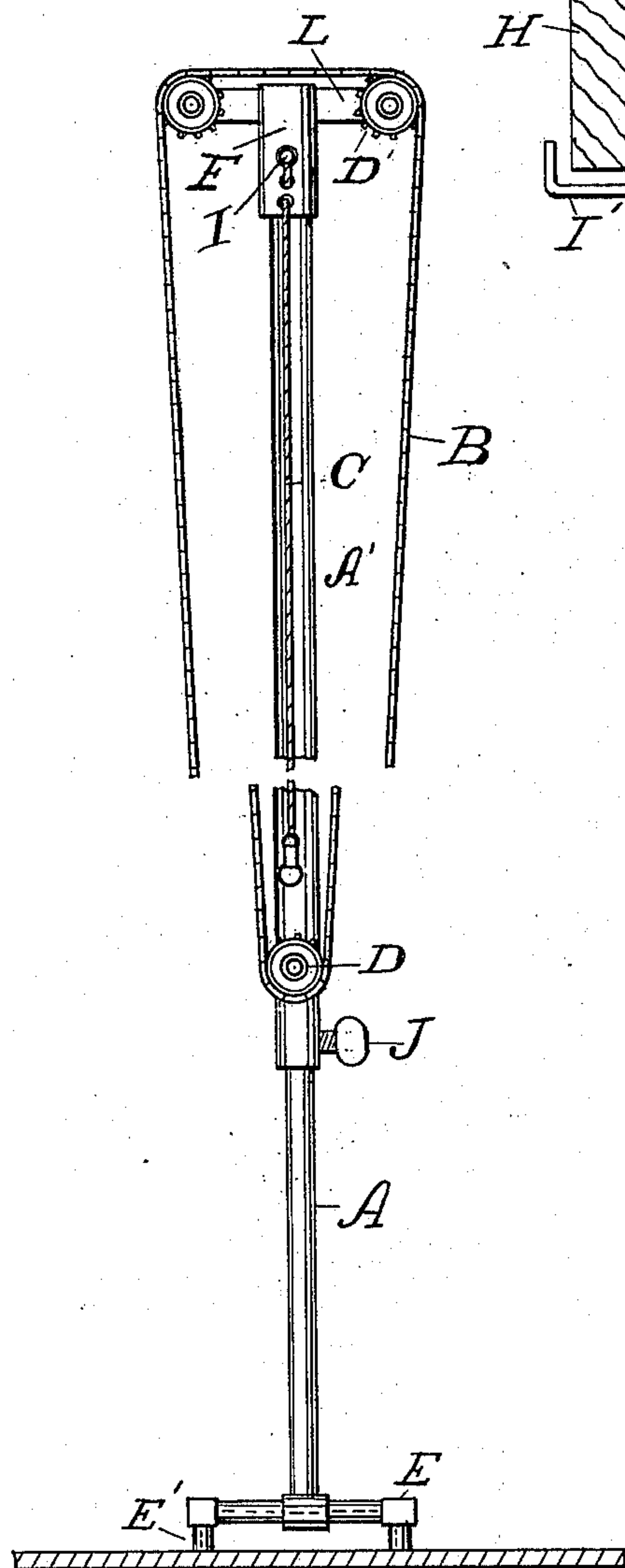
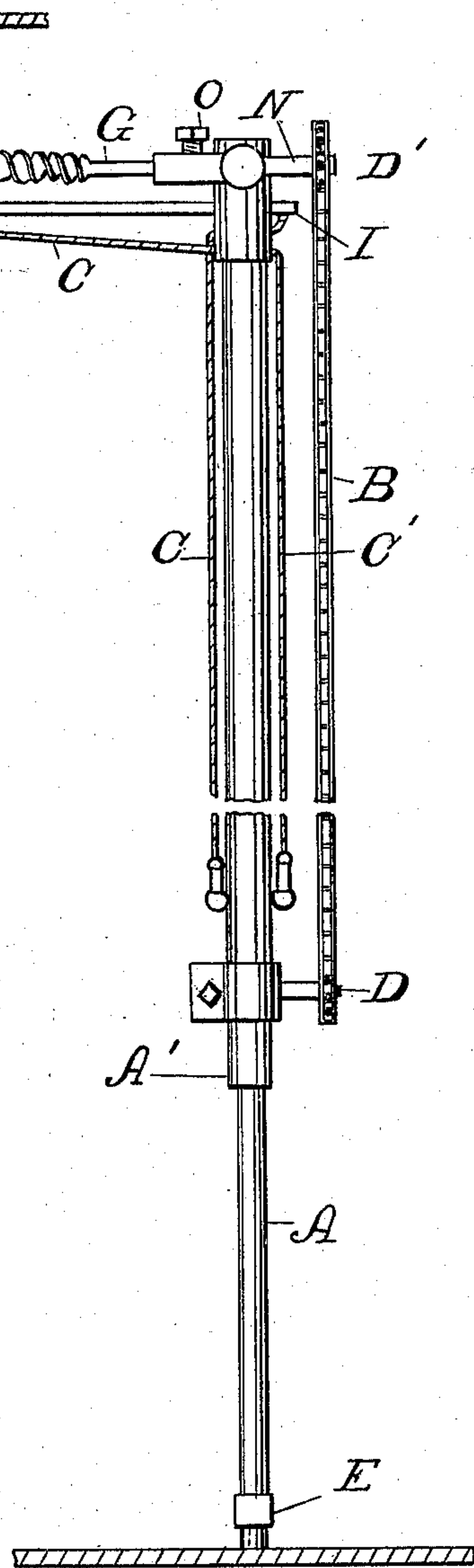


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

HIRAM BLANCHARD WOODILL AND BENJAMIN F. HULSE, OF LOS ANGELES,
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BORING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 639,203, dated December 12, 1899.

Application filed July 24, 1899. Serial No. 725,000. (No model.)

To all whom it may concern:

Be it known that we, HIRAM BLANCHARD WOODILL and BENJAMIN F. HULSE, citizens of the United States, residing at Los Angeles, county of Los Angeles, and State of California, have invented new and useful Improvements in Boring-Machines, of which the following is a specification.

Our invention relates to boring-machines designed to bore holes in ceiling-joists for electric wiring without the use of a ladder; and it consists in the novel features herein shown and described.

The objects of our invention are to dispense with the operating-crank usually attached to the lower sprocket-wheel of the ordinary boring-machines for operating the sprocket-chain; to provide means for holding the machine firmly to the floor while being operated; to provide a machine that will bore all the holes of one uniform height; to provide simple means whereby the bits can be held in place and the necessary pressure applied thereto while boring, so as to secure the best results, and to provide means to readily withdraw the bit from the hole when bored and at the same time to have it adjustable for boring joist in high or low ceilings. We accomplish these objects by means of the mechanism shown in the accompanying drawings, in which—

Figure 1 is a front elevation of our boring-machine, being partly broken away; and Fig. 2 is a side view of the same, partly broken away, showing the machine in place ready for boring.

In the drawings, A is a tubular upright support telescoping into an upper tubular support A' in the usual well-known manner, whereby the proper adjustment as to the height of the boring-bits from the floor is obtained. They are held in their adjusted position by the thumb-screw J.

B is the usual endless sprocket-chain, which passes over the two upper sprocket-wheels D' and around and under the lower sprocket-wheel D.

In the cross-head L are rotatively mounted shafts N, into one end of which the bits G are fitted and held tightly therein by screw-bolt O, and on the other end of the shafts N

are non-rotatively mounted the sprocket-wheels D'. Projecting laterally through the upper section F of the upright and having a longitudinal movement therein is the cord-operated bracket I. This bracket has a downwardly-curved portion I' at its outer end, the sides of which are adapted to fit around the lower edge of a ceiling-joist, as K. Now by pulling down on cord C' while the machine is in this position the bits will be moved forward toward and against the joist, and by a continued pull thereon the bits will be held against the joist with any desired pressure while the holes are being bored. When the holes are bored, by releasing the cord C' and pulling down on cord C the bits will be withdrawn from the holes in the joist, when the machine can be removed to the next joist for repeating the operation. The cords C pass over two antifriction-rollers (not shown) mounted in section F of the upright support.

In operating the machine the bracket I is placed so that the lower edge of the joist to be bored is received in depression I' in the bracket, the left foot is placed on the foot-rest E, the cord C' is pulled down by the left hand, and with the right hand the sprocket-chain B is pulled downward, imparting motion thereto. If the threads on the bits are sufficiently sharp, the bits will be drawn into the joist sufficiently fast without continuing to pull the cord C', as the forward impulse imparted to the bit by the pressure of the left foot on the foot-rest E and the pressure given by the hands on the sprocket-chain will be ample to feed the bits as fast as desirable under all ordinary conditions, when both hands can be employed in operating the sprocket-chain. The foot-rest E when placed on the floor parallel with the joist to be bored will operate to keep the two bits parallel with each other and at all times at the same height from the floor, whereby all the holes bored will be uniform in height from the floor. The legs E' of the foot-rest, standing on the floor, will prevent the machine from swaying in the plane parallel with the joist, but will permit the necessary movement at right angles thereto. This movement, however, is limited by the bracket I, over the movement of which the operator has control.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a boring-machine, the combination
5 with the upright supports A, having foot-rest E with legs E' on the lower end thereof; of the endless sprocket-chain B, arranged to pass over the sprocket-wheels D' and under and around the sprocket-wheel D; the sprocket-
10 wheel D rotatively mounted on a bearing adjustably affixed to the upright A; the sprocket-wheels D' keyed to the shafts N; the shafts N rotatively mounted in the cross-head L; the bits G fitted into shafts N; the cords C and
15 C', adapted to impart motion to the bracket I; the bracket I having joist-receiving depression I'.
2. The herein-described boring-machine, comprising a telescoping upright support or
20 frame A and A', having bifurcated foot-rest E at the lower end of section A thereof; sprocket-wheels D and D' mounted on the upper section A' thereof; sprocket-chain B passing over and engaging said sprocket-wheels; sprocket-wheels D' being keyed to the shafts
25 N in the upper end of said section A' of said upright support; sprocket-wheel D mounted on the lower end of section A'; bracket-operating cords C mounted in the upper end of
30 section A'; bracket I movably mounted in the upper part of the support and having depression I' in the outer end thereof; shafts N car-

rying sprocket-wheel D' at one end and boring-bit G at the other end, the boring-bits G fitted to the shaft N, arranged substantially
35 as shown and described.

3. A joist-boring machine, comprising an upright support or frame, formed in two sections, one section telescoping into the other
40 section, and being bifurcated at its lower end, two shafts in the upper end of the upper section projecting laterally therethrough and being revoluble therein; two boring-bits fitted into the ends of said shafts; sprocket-wheels mounted in the opposite end
45 of said shafts; a sprocket-wheel at the lower end of the upper section of the upright support; a sprocket-chain passing around and engaging said sprocket-wheels; a bracket, having a joist-receiving depression therein,
50 mounted in the upper end of the upper upright, and being movable longitudinally in its bearing; cords attached to either end of said bracket, and adapted to give a longitudinal movement to said bracket.
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In witness that we claim the foregoing we have hereunto subscribed our names, this 13th day of July, 1899, at Los Angeles, California.

HIRAM BLANCHARD WOODHILL.
BENJAMIN F. HULSE.

Witnesses:

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