(No Model.)

W. P. KELLOGG.

ADJUSTABLE STOP FOR BORING MACHINES.

No. 454,051. Patented June 16, 1891.

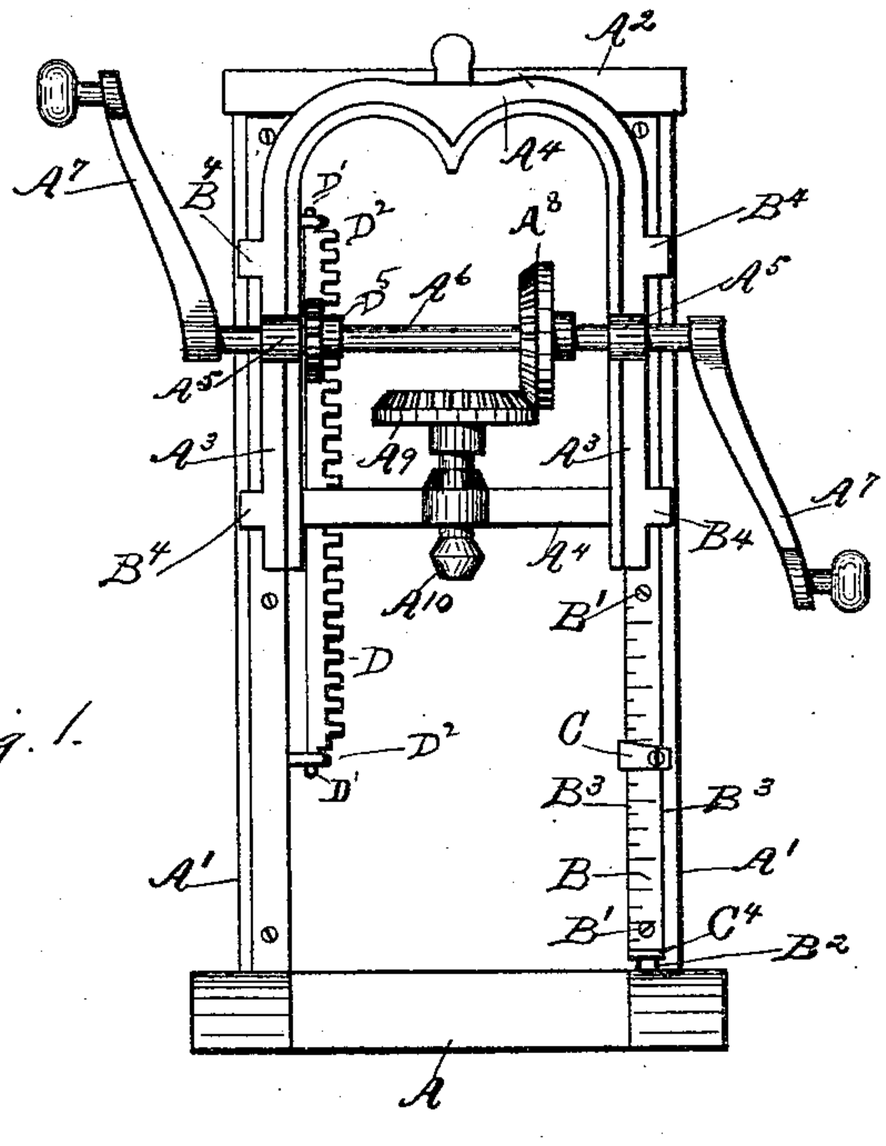

Fig. 1.

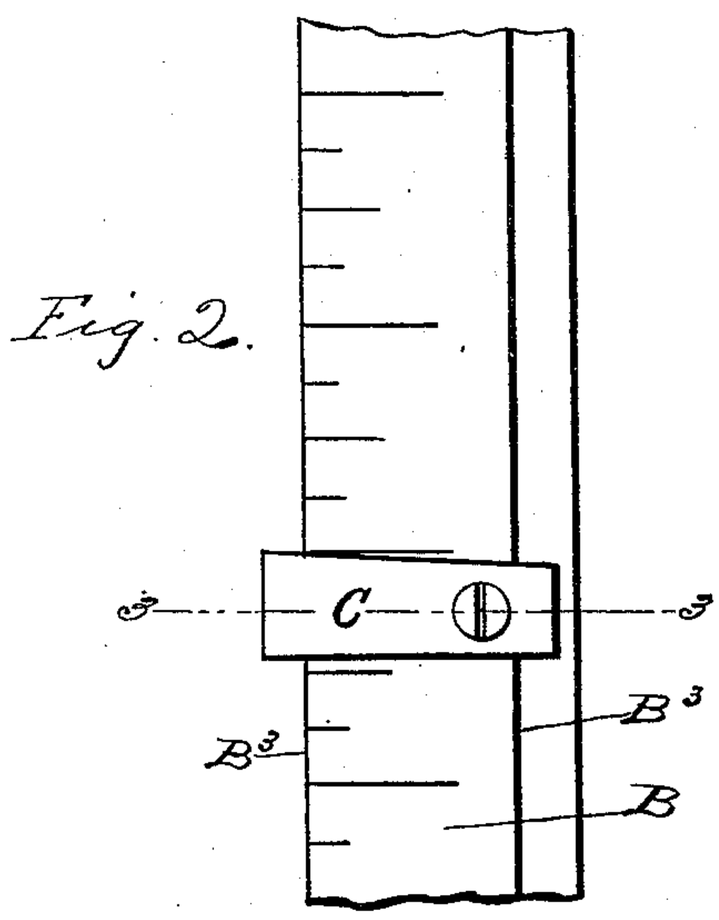

Fig. 2.

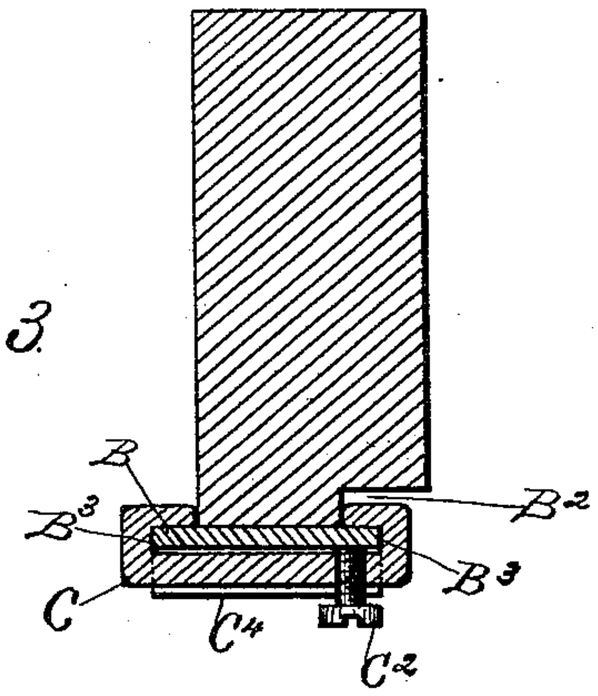

Fig. 3.

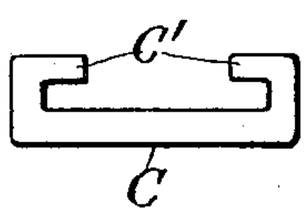

Fig. 4.

Witnesses:
Frank E. Curtis.
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UNITED STATES PATENT OFFICE.

WILLIAM P. KELLOGG, OF TROY, NEW YORK.

ADJUSTABLE STOP FOR BORING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 454,051, dated June 16, 1891.

Application filed June 12, 1890. Serial No. 355,185. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. KELLOGG, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Adjustable Stops for Boring-Machines, of which the following is a specification.

My invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

Figure 1 is a view in front elevation of a boring-machine with my improved adjustable stop attached. Fig. 2 is a similar view of a portion of the supporting-frame and stop on an enlarged scale. Fig. 3 is a horizontal cross-section taken on the line 3 3 in Fig. 2. Fig. 4 is a top edge view of the adjustable stop detached from the frame. Figs. 2, 3, and 4 are drawn upon the same enlarged scale.

The boring-machine may be of the usual well-known form, comprising the base portion A, which supports the uprights A′, connected at their upper ends by the yoke A^2. The vertically-reciprocating slide-frame, consisting of the uprights A^3 and connecting cross-bars A^4, is adapted to slide vertically upon the uprights A′ and supports the bearings A^5 for the shaft A^6. The shaft is provided at each end with an operating-crank A^7, fixed thereon, and with a beveled cog-wheel A^8, also fixed thereon and adapted to engage with the beveled cog-wheel A^9, fixed upon the vertical auger-spindle A^{10}, which has its bearing in the lower cross-bar A^4. Each of the uprights A′ is provided with the metallic plate B, secured thereon as by the screws B′. The edge of the upright is provided with the rabbet-groove B^2, and the plate projects beyond the contiguous portions of its supporting-upright to form by the projecting edges B^3 a slideway for the slide-frame, which may be provided with the usual clips B^4 to engage therewith. As the auger, which is not shown in the drawings, is drawn into the wood by its screw the slide-frame slides downward upon its slideway.

It frequently happens in boring a series of auger-holes that it is desirable to have all the holes of the same depth, and a graduated scale has been marked upon one of the uprights A′, by which it was possible to measure the depth of the auger-hole by noting the position of the lower end of the slide-frame on the scale; but it required careful observation and much time to determine just when the auger had made the hole of the required depth. By adjusting my improved stop at the desired point on the graduated upright I am able to bore any number of holes at the desired depth without the exercise of further care or the loss of time, as the lower end of the slide-frame strikes the stop and stops the downward movement of the auger at the desired depth.

The adjustable stop C consists of a clasp having introverted ends C′, adapted to reach around and inclose the projecting edges B^3 of the plate B. The clasp is slipped onto one end of the plate either before or after the latter is secured to the upright, and held in the desired position thereon by a set-screw C^2, inserted in a correspondingly-threaded aperture in the clasp, and bearing against the graduated plate.

The particular securing or fastening device can be varied by mechanical skill, the gist of the improvement having relation to the form and arrangement of the stop and other operative parts rather than to special form of securing device.

The screw-hole in the clasp is located near one end of the clasp, and the opposite end reaches higher up on the scale than the screw-threaded end, so that if the slide-frame should accidentally fall from its highest position upon the stop it would strike the end most remote from the screw and produce a binding friction between the ends of the clasp and the edges of the graduated plate to materially assist the screw in resisting the force of the blow, which would tend to move the clasp or stop downward upon the graduated plate and displace it.

I am able by means of my adjustable stop to bore a series of holes of exactly uniform depth without any expense of time or labor

after the stop has been once adjusted in the desired position.

My improved stop is easily and cheaply constructed, and very little change is required in the construction of boring-machines now in general use to adapt them to receive the stop.

When desired, the lower end C^4 of the graduated plate may be bent out at a right angle, as shown, to prevent the stop when loose upon the plate from slipping off the plate. When the auger has descended to the required depth, the toothed rack D, pivoted at D′ in the bracket-arms D^2, fixed upon the main frame, is swung into engagement in the usual well-known manner, with the pinion D^5 fixed upon shaft A^6, by which the slide-frame is raised to lift the auger from the hole in position to bore another hole. The rack is then swung out of engagement with the pinion and the boring operation repeated.

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

In a boring-machine, the combination, with an auger-supporting vertically-reciprocating slide-frame and a slideway, of a stop adjustably secured upon the slideway in the path of the slide-frame, having transverse parts embracing the slideway and adapted to bind upon the same when forced obliquely, said stop having one end secured to said way and the other end normally extending higher than the fastened end, whereby the transverse parts of the stop relieve the fastening from the blows of the auger-frame, substantially as set forth.

In testimony whereof I have hereunto set my hand this 7th day of June, 1890.

WILLIAM P. KELLOGG.

Witnesses:

GEO. A. MOSHER,

CHAS. L. ALDEN.