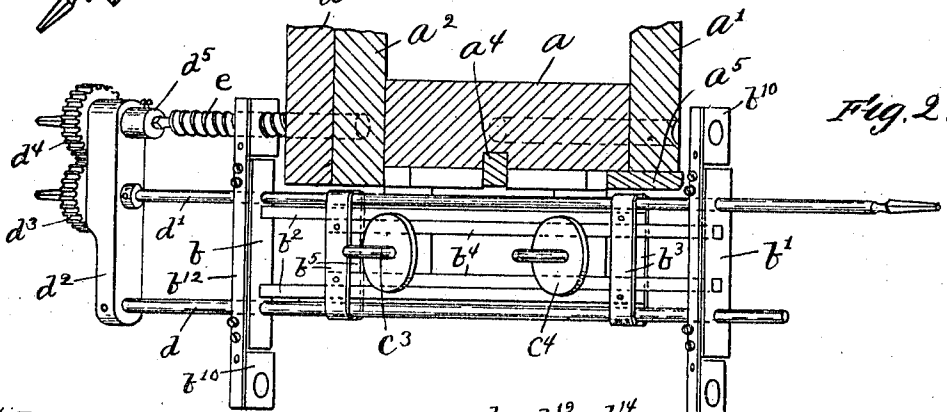
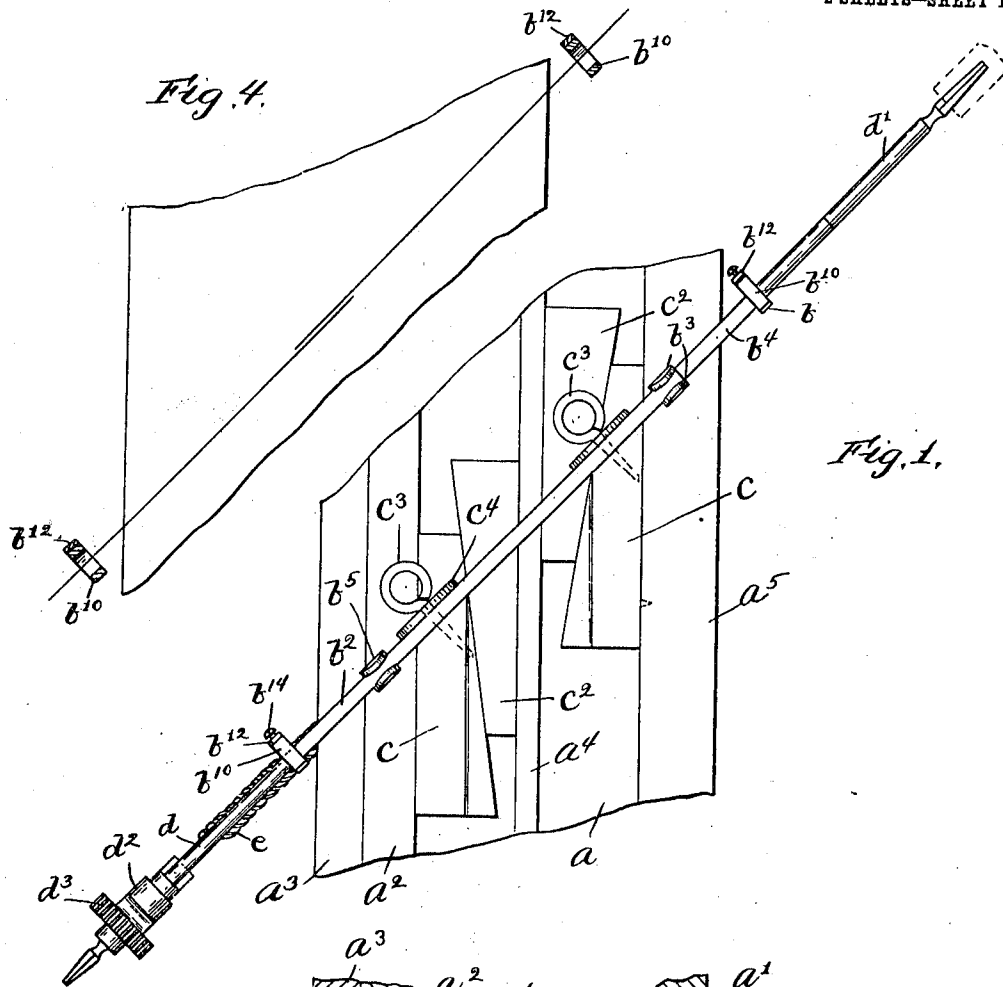


E. PRESCOTT.
BORING MACHINE.
APPLICATION FILED NOV. 16, 1908.

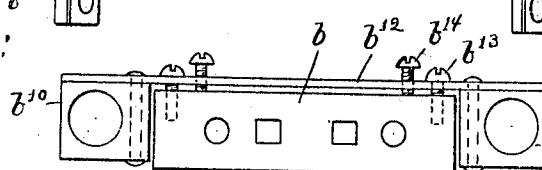
957,090.

Patented May 3, 1910.

2 SHEETS—SHEET 1.



Witnesses:
H. B. Davis
Cynthia Doyle



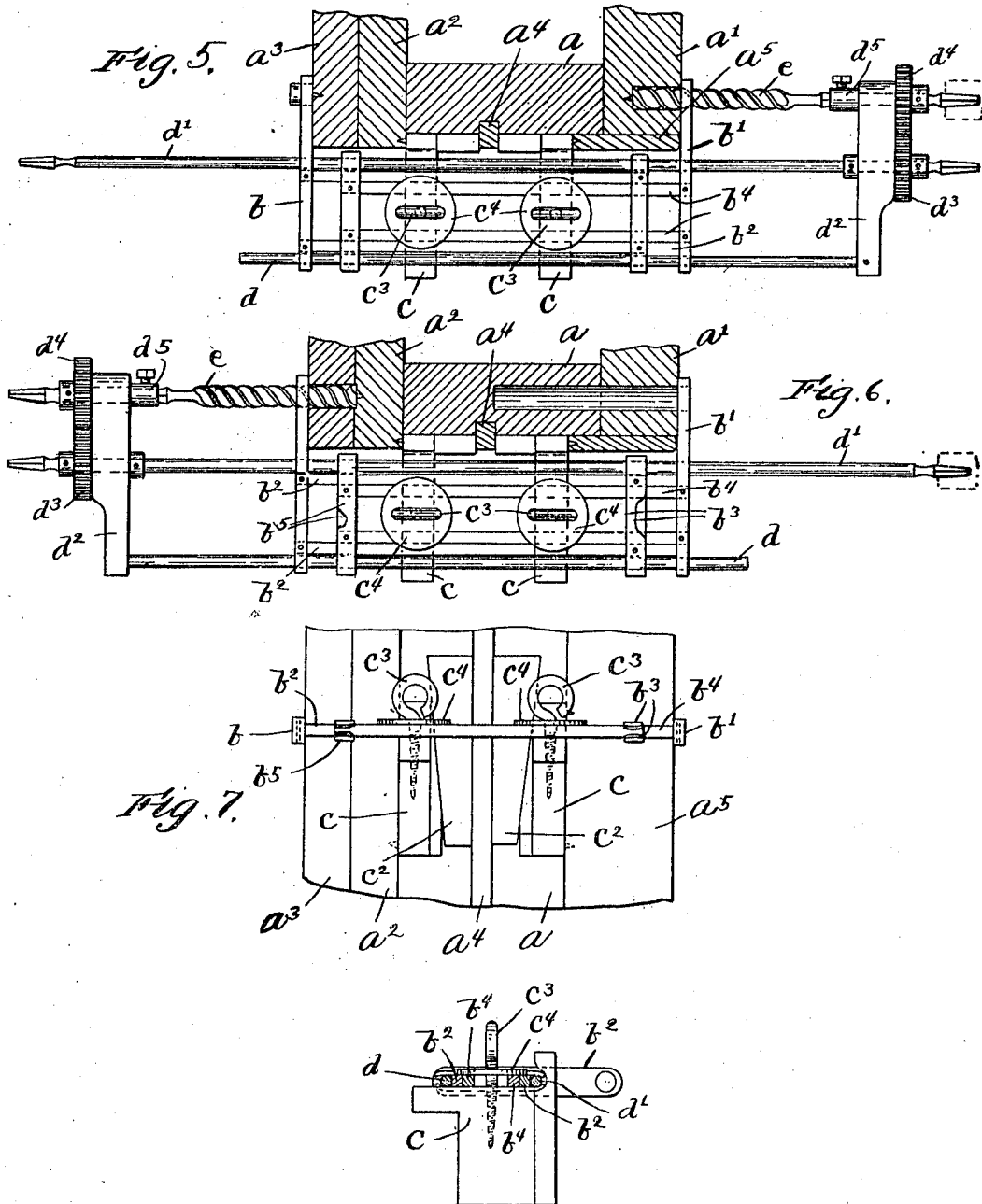
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Fig. 8.

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UNITED STATES PATENT OFFICE.

EDWIN PRESCOTT, OF ARLINGTON, MASSACHUSETTS.

BORING-MACHINE.

957,090.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed November 16, 1908. Serial No. 462,773.

To all whom it may concern:

Be it known that I, EDWIN PRESCOTT, of Arlington, county of Middlesex, State of Massachusetts, have invented an Improvement in Boring-Machines, of which the following is a specification.

This invention relates to boring machines, and is particularly adapted for boring holes through the walls of a building at the sides of the windows. In such cases it is important that the ends of the hole, both inside and outside of the wall be correctly disposed. When an ordinary long bit is employed for this purpose, it is almost impossible to aim it so that it will come out at the place desired; and the hole is sometimes so far out of true that a straight rod cannot be pushed through it, especially when the bit is aimed at an oblique angle, as the point then tends to follow the grain of the wood, and the bit is thereby deflected.

The object of this invention is to construct a machine whereby a hole may be bored through the wall in such a way that both ends shall be located in exactly the desired positions and that the hole, at whatever angle it is bored, may be straight, or at least sufficiently straight to permit a straight rod to be pushed through it.

In carrying out my invention I employ a bit which is adapted to bore a hole part way through the wall, and provide means for supporting it and for guiding it both inside and outside of the wall so that the wall may be bored from both sides inward toward the middle, such supporting and guiding means being arranged to so support and guide the bit that the two holes will meet and will be disposed in substantially true alinement, at least sufficiently so to enable a straight rod to be thrust through the hole and turned freely on its axis, and so that if there is any deflection it will be within the wall, where it can be corrected without defacement of the window-frame either inside or outside.

Figure 1 is a front elevation of a boring machine embodying this invention, the tool-carrier being arranged to support the bit to bore a hole from the outside of the wall toward the inside thereof. Fig. 2 is a plan view of the boring machine shown in Fig. 1. Fig. 3 is a view of the inner end of the supporting-frame and guiding-means for the

tool-carrier, shown in Fig. 1. Fig. 4 is a detail showing in diagram the relation of the two oppositely arranged bit guides to each other. Fig. 5 is a plan view of a modified form of boring-machine embodying this invention, the tool-carrier being arranged to support the bit to bore a hole from the inside of the wall toward the outside. Fig. 6 is a similar view of the boring machine shown in Fig. 5, the position of the tool-carrier being reversed. Figs. 7 and 8 are enlarged details showing particularly the clamping-device by which the machine is secured to the side of a window-frame.

For the purpose of illustration a Fig. 2 represents the jamb of a window-frame, a' the inside casing and a^2 the screen piece, a^3 the outside casing, a^4 the parting bead, and a^5 the inside stop bead. The portions a' and a^2 , however, may represent the inside and outside walls of a building, but as they are shown merely for the purpose of describing the invention, and its general application, and method of use, they may be considered as the parts of a window-frame.

The supporting-frame is constructed and arranged to be secured to the window-frame, it being adjustable to accommodate itself to window-frames of different thicknesses, and also to be secured to a window-frame at different angles with respect thereto, and said frame is adapted to support the tool-carrier in such manner that the boring-tool may be operated from the inside outwardly or from the outside inwardly. In Figs. 1 to 4 the supporting-frame is adapted to be secured to the window-frame at an angle other than a right angle, and in Figs. 5 to 8 it is adapted to be secured thereto at a right angle.

Referring to Fig. 2, b , b' represent a pair of end pieces or plates made substantially alike. The end plate b has rigidly secured to it, and extended from it at right angles a pair of parallel bars b^2 , b^2 , which are arranged a short distance apart. The outer ends of said bars b^2 having rigidly secured to them a pair of plates b^3 , b^3 , arranged one above and the other below said bars. Both ends of the plates b^3 extend beyond the bars b^2 for a short distance, and said ends are bent slightly toward each other to provide spaces between them to receive the parallel rods of the tool-carrier to be described. The end plate b' has likewise rigidly secured to

it and extended at right angles from it a pair of parallel bars b^4 , b^4 , which are arranged a short distance apart. The outer ends of said bars b^4 have rigidly secured to them a pair of plates b^5 , b^5 , arranged one above and the other below said bars. Both ends of the plates b^5 extend beyond the bars b^4 , for a short distance, and said ends are bent slightly toward each other to provide spaces between them to receive the aforesaid parallel rods of the tool-carrier, and also the parallel bars b^2 of the other end frame. The two end frames thus constructed are placed end to end, the bars b^4 being arranged inside of and in parallelism with the bars b^2 , and when so arranged the bars b^4 pass through the open space between the plates b^3 , and the ends of the plates b^5 , on said bars b^4 , extend over the bars b^2 . The two end frames when assembled are movable toward and from each other, thereby forming a supporting-frame for a tool-carrier which is longitudinally extensible. The dimensions of the supporting-frame are such as to enable it to embrace the side of a window-frame or building wall, and its adjustability is such as to provide for embracing window-frames or building walls of different thicknesses, and it is reversible in that it may be applied to either side of the window-frame. My invention, however, is not limited to a longitudinally extensible supporting-frame of this particular construction.

The end plates b , b' of the supporting-frame carry the guides for the bit, and, as shown in Figs. 2 and 3, said bit-guides each consist of a block b^{10} of any suitable shape having a hole of circular or other shape through it for the bit. Two bit-guides are provided on each end plate, being located one at each end thereof, and they are adjustably supported on said end plates. They are riveted or otherwise secured to the opposite ends of a bar b^{12} , Fig. 3, which extends over the top of the end plate, and said bar b^{12} is held in place on the plate by screws b^{13} , which extend through said bar b^{12} and into the end plate and the position of said bar b^{12} , with respect to the end plate, is regulated by adjusting-screws b^{14} . By adjusting said plate b^{12} the bit-guides may be moved, and, if required, either bit-guide may be moved with respect to the other to a slight extent. In lieu of forming the bit-guides independently of the end plates and attaching them thereto in an adjustable manner or otherwise, they may be formed integral with said end plates, as shown in Figs. 5 and 6, wherein the end plates are extended at one end, and said end extensions are each formed with a hole for the bit.

The supporting-frame is adapted to be placed in position next the window-frame with the bit-guides extending respectively over the inside and outside thereof, see Fig.

2, and to be adjusted so that the bit holes in said end plates will be in line with the direction of the hole it is desired to bore in the wall, and a clamping-device is provided for securing it in such position.

c , c Fig. 7 represent a pair of blocks arranged to enter the sash runs and to be pressed against the outside casing and inside stop-head, they preferably having small spurs adapted to enter the parts mentioned to assist in holding them. These blocks c are formed with one straight wall to engage the said pieces and one inclined wall, and when placed in position a wedge block c^2 will be driven between the inclined wall of each block and the parting bead. The blocks c are adapted to be adjustably connected with the supporting-frame, and, as herein shown, a screw c^3 is provided for each block, which extends through a hole in a plate c^4 resting on the supporting-frame over the opening between the parallel bars thereof, and then into the block. The screw is turned down until its head bears against the plate c^4 and further movement thereof forces said plate into firm engagement with the supporting-frame and thereby holds the block in whatever position it may be set. The block may be moved along by loosening the screw. Thus it will be observed that the blocks may be adjusted to engage the sash runs which may be disposed at greater or less distances apart. If it is desired to arrange the supporting-frame at an angle other than a right angle to the window frame, as for instance, as represented in Fig. 1, the blocks c will be provided with inclined faces at or near the top into which the screws c^3 are turned, but if it is desired to arrange the supporting-frame at right angles to the window-frame, as shown in Figs. 5, 6 and 7 said blocks will be provided with right angularly disposed faces.

The tool-carrier which is provided is reversible in that it may be placed in the supporting-frame from the outside or from the inside, so that the bit may be arranged upon either side to be operated to bore the hole toward the middle. One form of tool-carrier is herein shown merely for illustration. It consists of a pair of parallel rods d , d' see Figs. 5 and 6 adapted to be projected through properly aligned holes in the end plates b , b' . The rod d is rigidly secured to one end of a head d^2 , and the rod d' extends through said head d^2 and is adapted to be rotated. A gear d^3 is secured to the rod d' which engages a gear d^4 secured to a rotatable bit-stock d^5 , which is supported at the opposite end of said head d^2 . The bit-stock d^5 is located opposite the hole in the bit guide, so as to hold a bit e in proper position to project it through said hole. The rotatable bit-stock d^5 has a squared end to receive an ordinary bit-stock or other tool by which it may be

rotated, and both ends of the rod d' are also preferably formed with similar squared ends to receive a bit-stock or other tool. The bit may thus be rotated by turning either rod and may be operated from the inside regardless of the position of the tool-carrier. The bit-guides may be adjusted so as to be in alinement with each other, or one may be set to guide the bit in a plane a little above or below the other.

When boring a hole through a wall at right angles thereto, the liability of the boring-tool swerving is less than when boring a hole at an oblique angle, as, in the latter instance the tool has a tendency to follow the grain of the wood. Hence in the latter instance I prefer to adjust the bit-guides so that the uppermost guide will guide the tool in a plane a little above the lowermost guide, as represented in Fig. 4, the uppermost guide being adjusted a little above and the lowermost guide being adjusted a little below a straight line. Hence the desirability of providing adjustment for the bit-guides.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a boring-machine, a supporting-frame, two substantially alined bit-guides borne by it, means for attaching said frame to a window-frame with the bit guides at opposite sides thereof, and a tool-carrier slidably supported by said supporting-frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

2. In a boring-machine, a longitudinally extensible supporting-frame, two substantially alined bit-guides borne by it, means for attaching said frame to a window-frame with the bit-guides at opposite sides thereof, and a tool-carrier slidably supported by said frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

3. In a boring-machine, a supporting-frame, two substantially alined bit-guides borne by it, adjustable means for attaching said frame to a window-frame with the bit guides at opposite sides thereof, and a tool-carrier slidably supported by said frame having means for supporting a bit in aline-

ment with said bit-guides, substantially as described.

4. In a boring-machine, a supporting-frame, two bit-guides borne by it, means for adjusting said bit-guides, means for attaching said frame to a window-frame with the bit-guides at opposite sides thereof, and a tool-carrier slidably supported by said supporting-frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

5. In a boring-machine, a supporting-frame adapted to support a reversible tool-carrier, two substantially alined bit-guides borne by said supporting-frame, means for attaching said frame to a window-frame with the bit-guides at opposite sides thereof, a reversible tool-carrier slidably supported by said supporting-frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

6. In a boring-machine, a supporting-frame, two substantially alined bit-guides borne by it, means for attaching said frame to a window-frame with the bit-guides at opposite sides thereof, a tool-carrier slidably supported by said supporting-frame comprising a pair of supporting-rods, one of which is rotatable, a head bearing said rods, a rotatable bit-stock borne by said head, and gears connecting said rotatable supporting-rod with said bit-stock, substantially as described.

7. In a boring-machine, a reversible supporting-frame, two substantially alined bit-guides borne by it, means detachably connected with said supporting-frame for attaching it to a window-frame with the bit-guides at opposite sides thereof, a tool-carrier slidably connected with said supporting-frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

EDWIN PRESCOTT.

Witnesses:

B. J. NOYES,

H. B. DAVIS.