

C. F. STAHLER.
Post-Boring Machine.

No. 205,920.

Patented July 9, 1878.

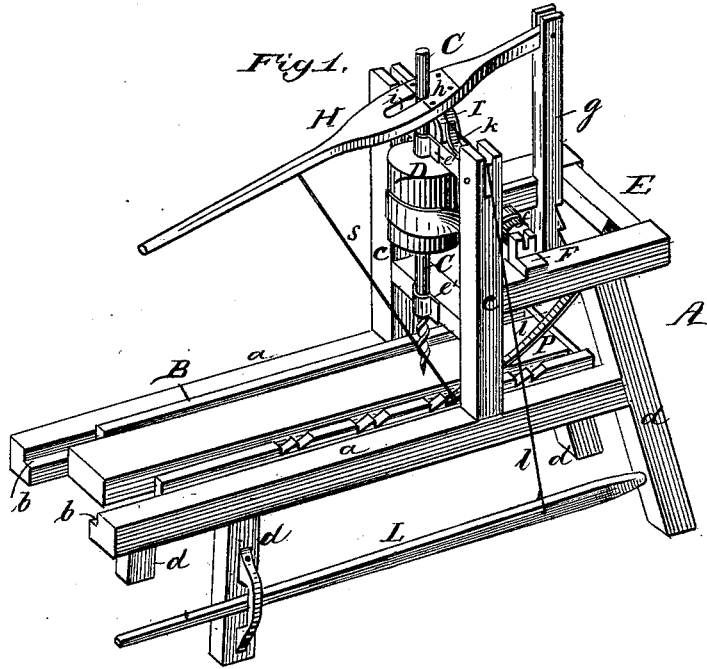


Fig. 2.

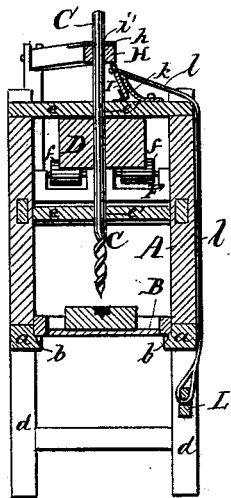
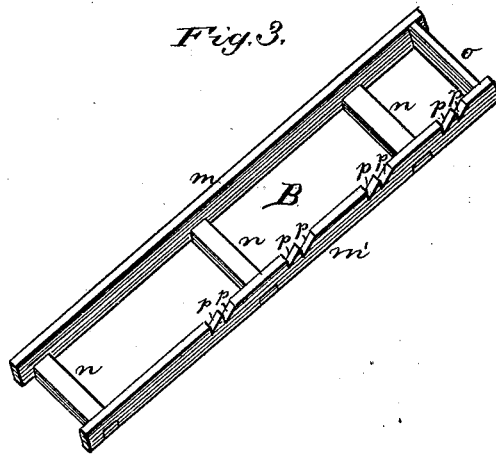


Fig. 3.



Attest
Jno. P. Brooks.
August 1878

Inventor:
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UNITED STATES PATENT OFFICE.

CHARLES F. STAHLER, OF SHIMERSVILLE, PENNSYLVANIA.

IMPROVEMENT IN POST-BORING MACHINES.

Specification forming part of Letters Patent No. 205,920, dated July 3, 1878; application filed March 4, 1878.

To all whom it may concern:

Be it known that I, CHARLES F. STAHLER, of Shimersville, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Post-Boring Machines; 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 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved post-boring machine complete. Fig. 2 is a cross-section of the same; and Fig. 3 is a perspective view of the carriage detached.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to that class of machines which are used for boring holes transversely through posts or planks, it being especially designed for boring the holes in fence-posts, into which the ends of the boards or planks of which the fence is built may be inserted; and it consists in the construction and combination of parts, hereinafter more fully shown and described.

In the drawing, A is the frame or bed of my improved machine. This consists of two parallel beams, *a a*, having grooves or guides *b b* for the carriage B, and elevated from the ground by legs *d*. Upon beams *a a* are secured two uprights, *c c*, having cross-braces *e e*, which have bearings *e' e'* for the vertical drill or auger C. Upon the drill or auger shaft C is affixed a drum-wheel, D, by which it is operated by means of an endless belt. The rear legs *d* of the machine extend some distance above the bed of the same, and are connected with uprights *c c* by a frame, E, having a cross-piece, F, which forms bearings for two horizontal drum-heads, *f f*, the object of which is to guide the belt by which the machine is operated, and prevent it from getting out of position when the drill is raised or lowered.

The rear end of frame E has an upright, *g*, to the upper end of which is pivoted a lever, H, for raising and lowering the drill, to which it is connected in the following manner: Lever H has a slot, *i*, of a width equal to

or slightly exceeding the diameter of drill-shaft C, which extends up through it. Drill-shaft C has a circumferential slot, *i'*, and upon lever H is affixed a slotted plate, *h*, partially covering the slot *i*. Previously to pivoting lever H to upright *g* the end of shaft C is passed through the end of slot *i* not protected by plate *h*, and the groove *i'* is then made to engage with the slot in plate *h*, by which the shaft C may thus be afterward raised or lowered, while it is at the same time permitted to revolve freely.

I is a block of wood or other material, hinged on top of cross-brace *e'*, and forced, by a spring, *k*, against lever H. When this is lifted for the purpose of bringing the drill C out of play the block I is forced under it, thus preventing it from dropping down until released. For this purpose a string, *l*, is attached to block I and to a foot-lever, L, pivoted to one of the rear legs *d*. Pressure upon this lever withdraws block I from under lever H, and permits this latter to be again lowered.

The construction of the carriage B, used in combination with my improved boring-machine, will be readily understood by reference to Fig. 3 of the drawings. It consists of two parallel beams, *m m'*, secured together by cross-pieces *n* and an end piece, *o*. The width of the carriage is such as to enable it to slide easily in the grooves *b b*, provided for this purpose in beams *a a* of frame A.

One of the side pieces, *m'*, of carriage B has a series of notches or ratchets, *p p*, engaging with a spring-pawl, P, which is arranged upon the inside of frame E. Pawl P is connected, by a spring, *s*, with the handle of lever H, which thus, when lifted, throws pawl P out of operation and permits carriage B to be slid freely forward.

I prefer to have upon the side piece *m'* a series of eight ratchets, *p*, arranged in groups of two each, the groups being at equal distances from each other, and the length of each ratchet being slightly less than the diameter of the drill C. This arrangement is preferable when the fence-posts are to be provided each with four slots for the insertion of the ends of boards or planks, each slot being thus made of a length equal to nearly twice the diameter of drill C; but, if necessary or desira-

ble, the number of ratchets may be increased or diminished, or their distribution upon the side piece *m'* of the carriage may be different from the one just described, without altering the spirit of my invention.

The operation of my invention is as follows: The plank or post which is to be bored is placed upon the carriage B, which is pushed forward by pressing the post against the end piece *o*, the lever H and the drill being, of course, raised at the time, but not sufficiently to throw the pawl P out of action. The pawl, as soon as it comes in contact with the first ratchet, prevents the further progress of the carriage, which thus, by simply pushing upon the plank or post, is kept immovably in position. The pivoted block I is now, by pressing upon foot-lever L, withdrawn from under lever H, and the latter is pressed down, thus forcing the drill C against the post and boring it through. The belt G for operating the drill connects with the drive-wheel of the horse-power or steam-engine by which the machine is operated. After boring the first hole the lever H is raised, carrying with it the drill, and releasing pawl P sufficiently to permit the carriage to be slid forward the space of one ratchet, thus bringing the post into proper position under the drill. The block I, actuated by spring *k*, is in the meanwhile forced in under lever H, thus preventing it and the drill from coming down until released by pressing upon lever L.

The advantages of my improved post-boring machine will be readily understood from the foregoing description.

The post which is to be bored does not require to be fastened upon the carriage, the pressure exerted upon its end (in order to push the carriage into position) and the weight of the auger and pulley D being sufficient to keep it firm.

Split and sawed posts may be bored with equal facility; and if, as is often the case, the post should be crooked, the middle of it is easily brought under the drill by simply pushing its butt end to the right or left.

The carriage B may, after boring each post, be pushed back far enough to allow the post to be removed without interfering with the working parts of the machine; and the ratchets *p* upon the carriage, in combination with the pawl P, obviate the necessity of marking and measuring each post preparatory to boring, thus saving time and labor.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of drill C, having circumferential groove *i'*, lever H, having slot *i* and slotted plate *h*, hinged block I, spring *k*, cord *l*, and lever L, substantially as and for the purpose shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES F. STAHLER.

Witnesses:

DAVID RADLER,

CHARLES STAHLER.