2 Sheets—Sheet 1.

W. J. SHELTON & W. W. SMITH.

POST-DRIVER.

No. 174,313. Patented Feb. 29, 1876.

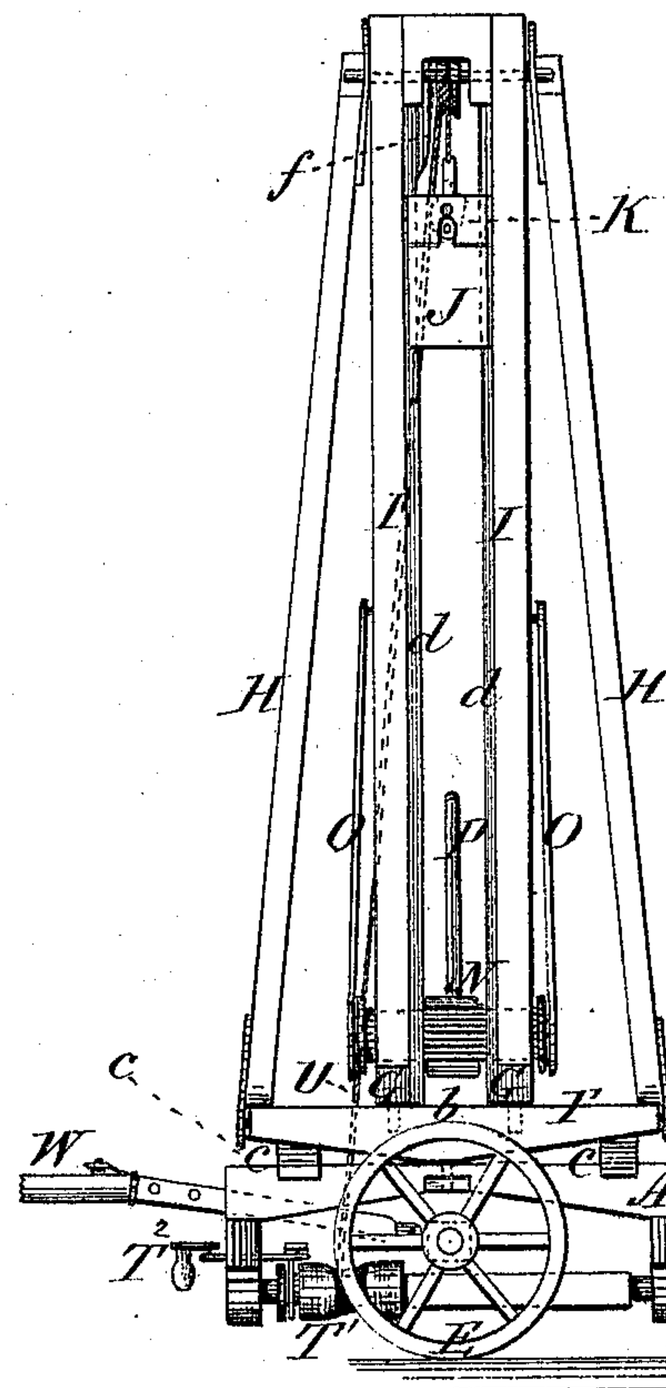

Fig. 1.

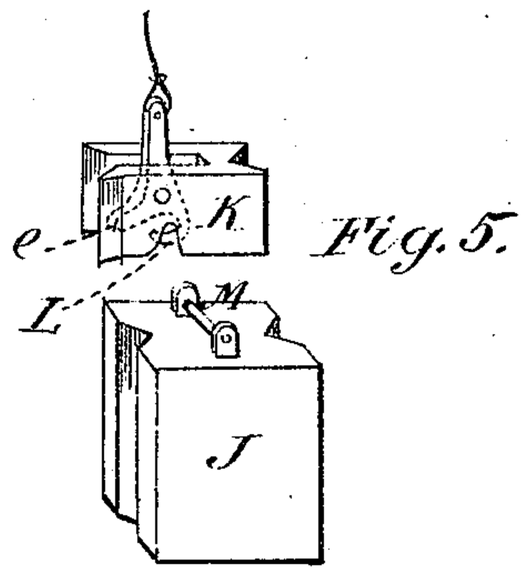

Fig. 5.

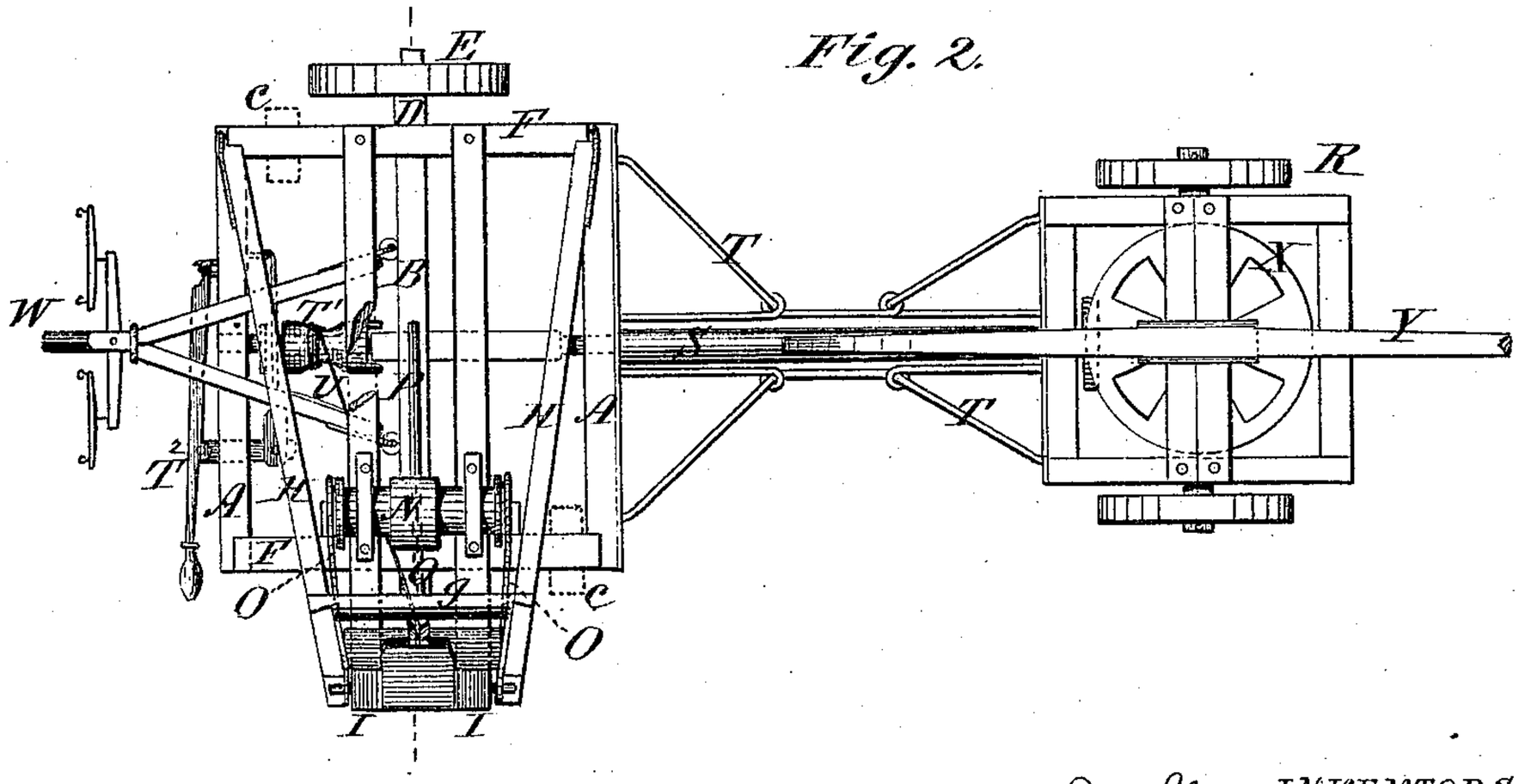

Fig. 2.

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POST-DRIVER.

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Fig. 3.

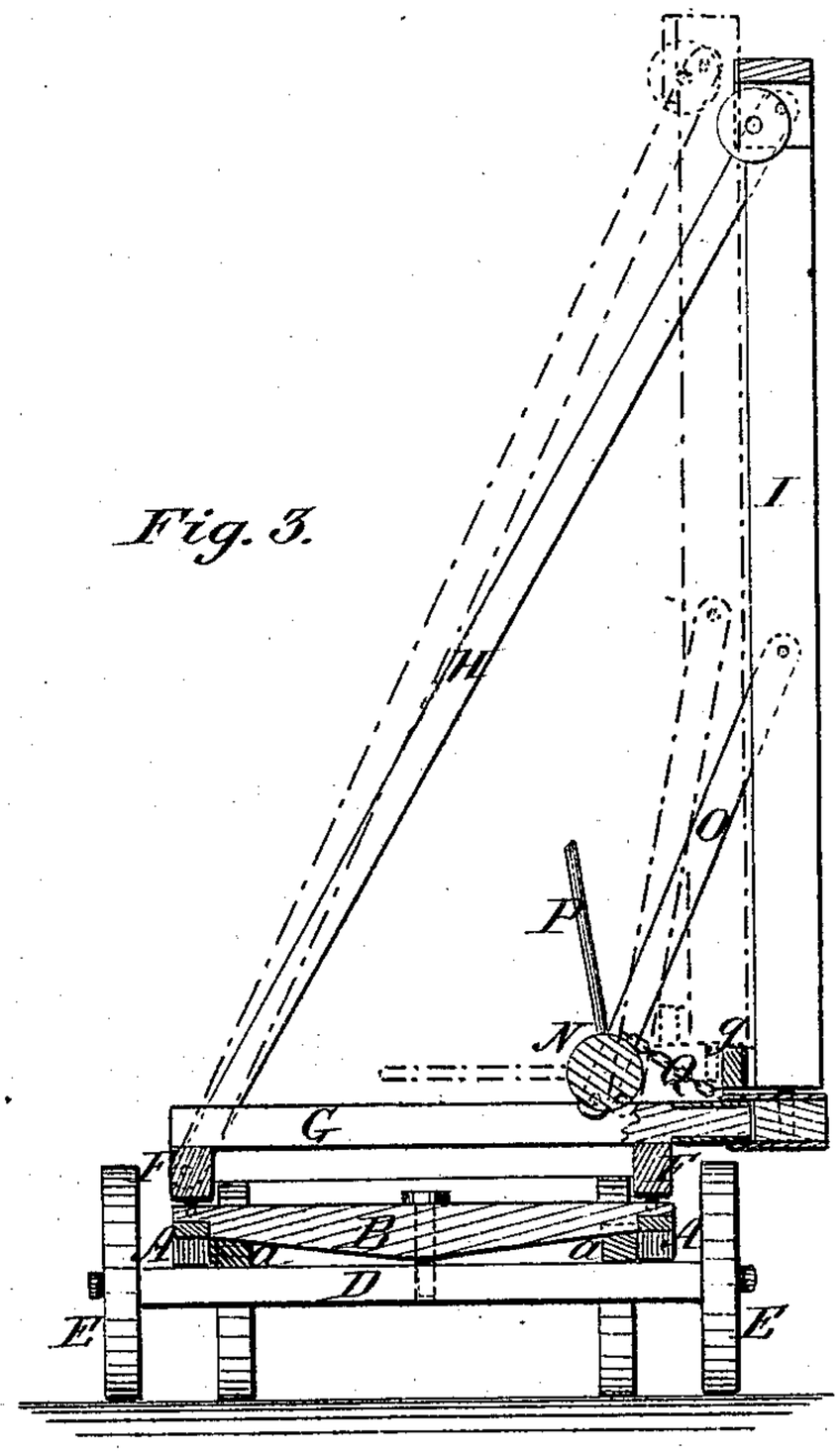
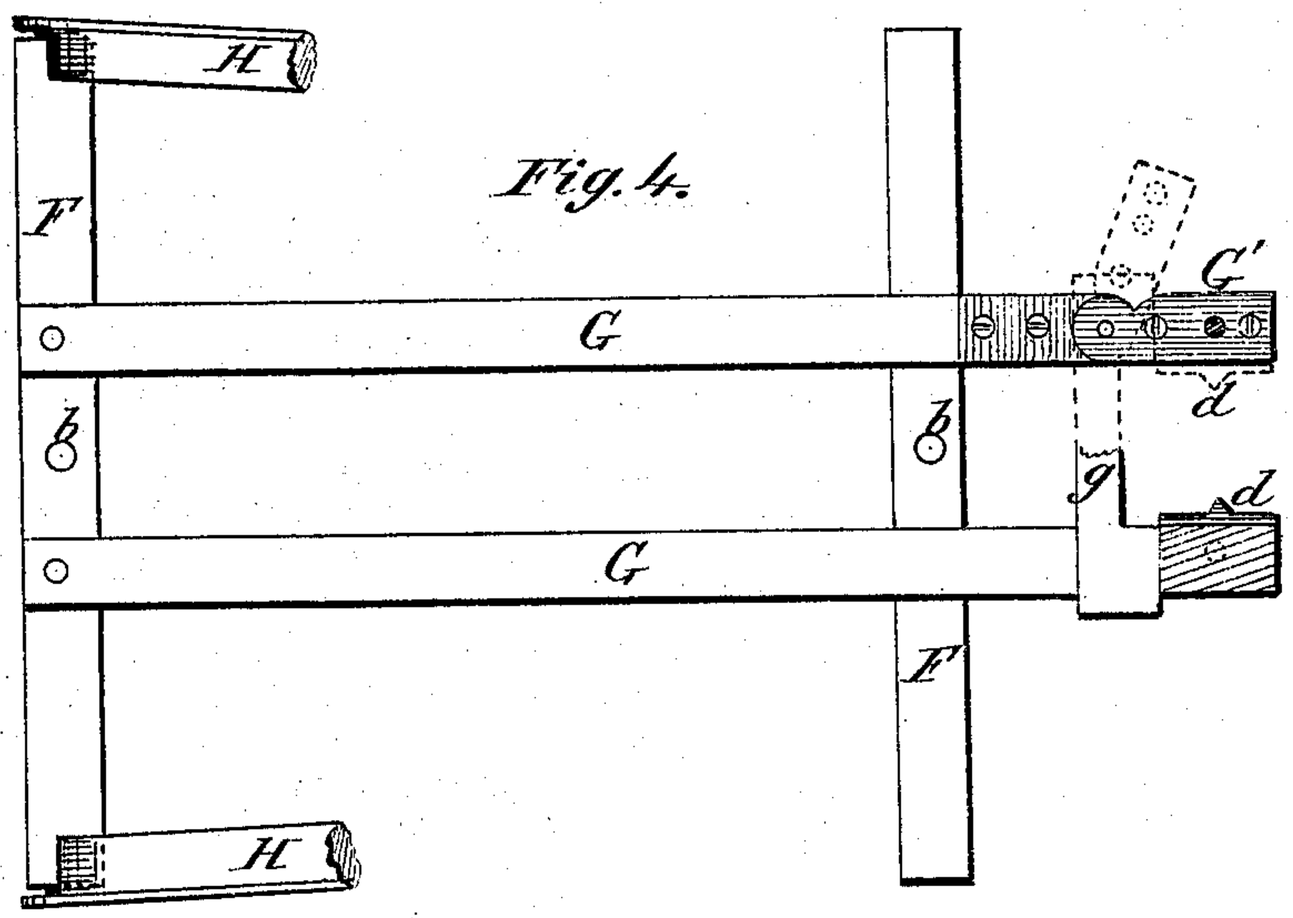


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM J. SHELTON AND WILSON W. SMITH, OF JOHNSONVILLE, TENN.

IMPROVEMENT IN POST-DRIVERS.

Specification forming part of Letters Patent No. **174,313**, dated February 29, 1876; application filed August 25, 1875.

To all whom it may concern:

Be it known that we, WILLIAM J. SHELTON and WILSON W. SMITH, of Johnsonville, in the county of Humphreys and State of Tennessee, have invented certain new and useful Improvements in Post-Driver; and we 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 pertains to make and use the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

In this invention special provision is made for obviating several disadvantages and objections of the ordinary portable post-drivers, and this we effect by hinging the vertical guide-standards of the ram or hammer to the inclined braces running up from the framework of the machine, the lower end of the hinged guides being connected by means of a chain with a drum or shaft, so that by turning said drum after the hammer has been dropped upon the post, the guides or hammer standards will be moved in an inward direction, thus clearing the same from the post and permitting the machine to be drawn forward for operation upon a new post. The guides are retained when the machine is in operation by means of the horizontally-projecting rests and hammer-stop of the machine, the rear one of which is hinged so as to move in a backward direction for clearing the post when the machine is being drawn forward. The invention also consists in other minor details of construction, which will be fully described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a portable post-driver constructed according to our invention; Fig. 2, top view of the same. Fig. 3 represents the machine in sectional elevation, the dotted lines showing the adjustment of the ram-carriage to clear the standards of the driven post; Fig. 4, a top view of the standard-sills, and Fig. 5 the hammer and its head-block.

In the drawing, A denotes a rectangular or quadrilateral front frame, which is provided with a central transverse bolster, B, through the center of which passes the king-bolt C of an axle, D, carrying wheels E. The lower side of the bolster is inclined from the ends toward the middle portion thereof so as to permit the axle and wheels to rock for accommodating themselves to the inequalities of the ground over which the machine is being drawn. Blocks *a*, Fig. 3, inserted between the bolster and axle of the wheeled truck-frame, serve to prevent the rocking of the axle when the machine is used upon level ground, or when the parts are set to operate upon uniform hilly land. A draft-tongue, W, is jointed to the axle of the truck in any suitable manner.

Upon the wheeled truck there is mounted an independently-rocking frame, which is composed of the longitudinal bolsters F, and the transverse beams or rests G. The bolsters F are also double inclined, and are pivoted to the base-truck by pins *b*, and blocks *c*, inserted between the truck-frame and bolsters, are employed for the same purpose as the blocks *a*—that is, to keep the hammer-carriage in vertical position. The inclined braces or struts H, rising from the left bolster of the rocking frame and pivoted thereto, have attached to their upper ends, by means of pivots or hinge-joints, the vertical ram or hammer guide standards I, having holding-pins *i* in their lower ends entering holes in the beams G. The hammer J, which operates between said guides, moves on rails or ways *d*, and it is raised by means of the head K, which is similar in all respects to the corresponding device found in ordinary post-drivers, except that it is provided with a more simple means for catching and disengaging the hammer or ram. The head-block is grooved or made hollow for the reception of a hook, L, which is pivoted in such a manner that its lower hooked end will catch a bail, M, on the ram or hammer when the two parts are brought together.

The hammer, after having been raised to a sufficient height, is released from the head, and caused to descend by means of a projecting top portion or rib, *f*, of the hammer guide-rail, which strikes the hook. Cam *e* turns the same upon its pivot, and thereby releases it from the hammer, the hook L moving to one side as the cam *e* moves down.

The hammer-guides are capable of being raised and drawn toward the center of the

machine, or moved in an inward direction, in order to enable the guides to clear the top of the post for not obstructing the forward movement of the machine. The vertical movement of the guides to release the holding-pins *i* is effected by means of a drum, N, which is journaled in the independently-rocking top frame of the machine, and connected with the guides by arms or links O, pivoted eccentrically to the ends of the drum, and to the braces. A lever, P, inserted into the drum, serves to turn the same for raising the guides by the eccentric action of the drum N upon the connecting-links, and a chain, Q, connected with the drum, and a block, *g*, at the lower end of the hammer-guides, serve to draw the latter in an inward direction after the holding-pins *i* are released, for the object specified. The rear rest-beam G has a hinged outer section, G′, Fig. 4, which is capable of turning in a rearward direction for the purpose of enabling the machine to move forward without hinderance by the post. The mechanism or apparatus for raising the hammer comprises a wheeled horse-power, R, which is connected with the truck or hammer frame by the longitudinal driving-shaft S, and the reach or brace rods T. The shaft S is journaled in the horse-power and main or truck frame, and it carries at its front end a loose drum, T′, upon which the rope, U, for hoisting the hammer is wound. Said drum has a clutch projection, which interlocks with a similar projection on the shaft S, so that it may be locked thereon for raising the hammer by a lever, V. After the hammer has been disengaged from the head and dropped, said head is itself lowered by unlocking the drum through the medium of a lever-shifting device, V. The portable horse-power mechanism is mounted upon a wheeled frame, which is narrower than the front frame, so as to allow the horse to pass the wheels and post when driven. A master-wheel, X, having the sweep-lever, Y, attached thereto, gears into a pinion, Z, on the end of the driving-shaft.

We claim—

1. In a portable post-driver, the combination of the vertically and horizontally movable hammer-guides I, with their holding-pins, the pivoted supporting-braces H, and a mechanism for adjusting the guides, substantially as and for the purpose set forth.

2. The combination of the pivoted hammer-guides I, the pivoted supporting-braces H, drum N, eccentrically pivoted links or arms O, and chain Q, with the truck-frame and hammer mechanism of a portable post-driver, as and for the purpose set forth.

3. The combination of the horizontal rest or beam G, having a hinged outer section, G′, with the guide-standards, braces, and the hammer mechanism, as and for the purpose set forth.

4. The double inclined side bolsters F F of the upper frame, in combination with the double inclined axle-bolster B of the main frame, and the adjustable blocks *a c*, as and for the purpose herein set forth.

In testimony that we claim the foregoing we have affixed our signatures in presence of two witnesses.

WILLIAM J. SHELTON.
WILSON W. SMITH.

Witnesses:
A. MYATT,
G. R. DOBSON.