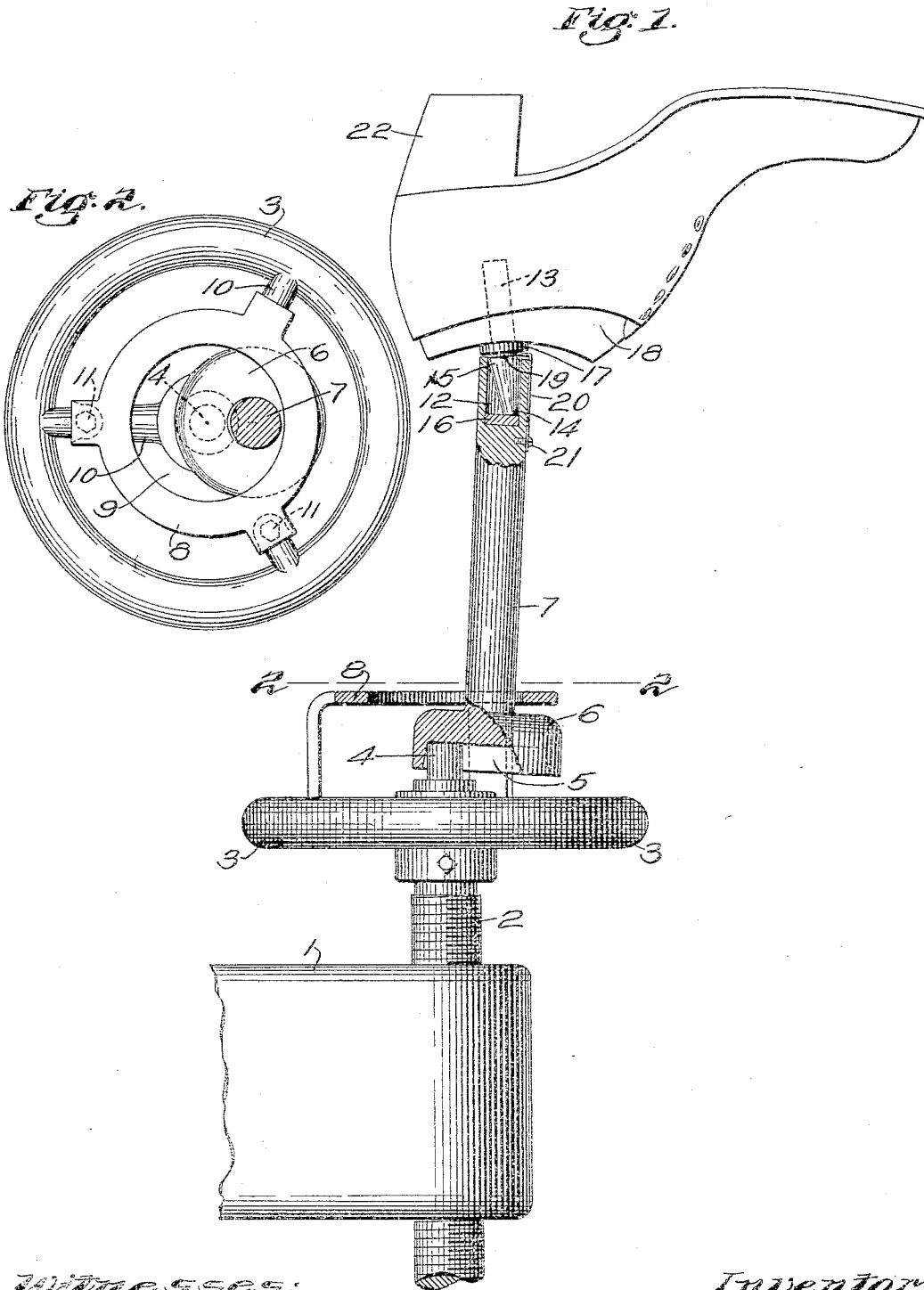


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JACK FOR SLUGGING AND OTHER MACHINES.
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UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM C. STEWART, a subject of the King of Great Britain, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Jacks for Slugging and other Machines, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

The invention to be hereinafter described relates to jacks for slugging and other machines, and has for its general object the provision of means whereby the heel to be slugged may be presented at the proper angle to the driving instrumentalities.

The further aims and purposes of the invention will best be made clear from the following description and accompanying drawings of one form of means for carrying the invention into effect, the true scope of the invention being definitely set forth by the claims.

In the drawings: Figure 1 is a side elevation of a jack or shoe support embodying the present invention, parts being broken away to show structures beyond; and Fig. 2 is a section on line 2—2, Fig. 1.

Referring to the drawings, the supporting frame 1 may be of any usual character and project as an arm from the frame of an ordinary slugging or other heel nailing machine having usual or desired forms of slugging or nailing devices, which, forming no part of the present invention, need not be shown and described.

Screw-threaded into the supporting arm 1 is the post 2 having a hand wheel 3 by which it may be rotated to thereby adjust its vertical height. Projecting upward from the post 2 is a supporting pin 4 which enters a socket 5 in an enlarged base portion 6 of a spindle 7, said base portion 6, by reason of the enlarged socket 5, being free, as will be obvious, to move and swing upon the upwardly projecting supporting pin 4. Secured to the hand wheel 3 is the cage 8 having a central opening 9 somewhat smaller in dimensions than the base piece 6 so that while the base piece 6 and spindle 7 carried thereby may freely slide and tilt upon the supporting pin 4, the cage 8 limits such freeing movement and prevents the disengagement of the base piece from its supporting pin 4.

In order that the parts may be readily assembled and then held in the relation hereinbefore indicated, the cage 8 is secured to the radial spokes 10 of the hand wheel 3 by means of detachable securing devices, such as the screw bolts 11.

The upper portion of the spindle 7 is provided with a socket 12 in which is received the lower end portion of a last supporting pin 13. The last supporting pin 13 is preferably formed somewhat conically at its lower portion, as indicated in Fig. 1, its lower end 14 being smaller than its upper portion 15, so that said last supporting pin 13 may readily be tilted in any direction, as will be obvious. The bottom of the socket 12 may be provided with a supporting piece 16 on which the lower end 14 of the last supporting pin may bear and over which it is readily movable, as hereinbefore indicated. Disposed above the upper end 15 of the conical portion of the last supporting pin is a collar 17 against which the cone or crown of the last 18 may rest, and between said collar and the upper portion 15 of the conical end of the last supporting pin there is a groove 19 adapted to be engaged by the end of a spring 20 secured at 21 to the spindle 7, the construction being such that while the last supporting pin 13 may readily tilt in any direction with respect to the spindle 7, and thereby change the angular position of the heel 22 with respect to the slugging or other nailing instrumentalities, said last supporting pin may not be readily detached from its spindle 7, it being understood that the spring 20 in no manner interferes with the free tilting of the last supporting pin and that the lower end 14 of the last supporting pin rests in all positions on the bottom of the socket 12 in the spindle 7.

While the spindle 7 and its enlarged socketed base and last supporting pin connection with the post 2 will permit the shoe to be moved and tilted within certain limits, it will be evident to those skilled in the art that under some conditions this tilting action will not suffice for the proper direction of the slugs through the toplift, and that the provisions herein made will permit the desired angular adjustment of the work with respect to the slugging or other nailing instrumentalities; and it will likewise be evident that, regardless of the fact that the last pin socket in the last is not always cen-

trally disposed thereof, the free universal connection between the last supporting pin and spindle will permit the proper positioning of the lasted shoe, notwithstanding such fact.

Obviously various changes may be made in the form and character of the parts within the true scope of the present invention and various forms of last supporting pins may be employed, it being understood that the present invention contemplates a construction wherein capacity for proper positioning of the heel with respect to the slugging or other nailing means is made possible.

What is claimed is:

1. In a jack for slugging and other machines, the combination of a supporting post and spindle, a loose socket and pin connection between the post and spindle, said spindle at its upper end being provided with a socket extending longitudinally thereinto, and a last supporting pin freely tiltable at all times in said spindle socket and having its end within the spindle socket resting on the bottom thereof.

2. In a jack for slugging and other machines, the combination of a supporting pin, a spindle having an enlarged socketed base portion free to slide and tilt on said pin, and a cage for retaining the spindle base portion on said pin, said cage extending over the base portion and having an enlarged opening through which the spindle extends.

3. In a jack for slugging and other machines, the combination of an adjustable post having a supporting pin, a spindle having an enlarged socketed base portion free to slide and tilt on said pin, and a cage for retaining the spindle base portion on said pin, said cage extending over the base portion and having an enlarged opening through which the spindle extends.

4. In a jack for slugging and other machines, the combination of a post and spindle, a loose socket and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, said spindle having a socketed upper portion extending longitudinally into the body of the spindle, and a last supporting pin having an enlarged bearing portion adjacent the upper end of the socket and a smaller end portion bearing upon the lower end of the socket.

5. In a jack for slugging and other machines, the combination of a post and spindle, a loose socket and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, said spindle having a socketed upper portion, a last supporting pin loosely sustained in said socketed portion and free to tilt therein, and means to detachably retain the last supporting pin in said socketed portion.

6. In a jack for slugging and other machines, the combination of a post and spindle, a loose socket and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, said spindle having a socketed upper portion, and a last supporting pin having a conical lower portion loosely sustained in said socketed portion and free to tilt therein.

7. In a jack for slugging and other machines, the combination of a post and spindle, a loose socketed and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, a last supporting pin loosely sustained by said spindle and free to tilt with respect thereto, and means for detachably connecting the loosely sustained pin and spindle.

8. In a jack for slugging and other machines, the combination of a post and spindle, a loose socketed and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, said post having a socket at its upper portion, and a last pin the upper part of the lower portion of which is larger than the end of said portion to permit the last supporting pin to freely tilt in said socket.

9. In a jack for slugging and other machines, the combination of a post and spindle, a loose socketed and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, a last supporting pin loosely sustained by said spindle and free to tilt with respect thereto, and a cage overlying the base of the spindle and having an opening of less dimensions than the base of the spindle through which the spindle extends.

10. In a jack for slugging and like machines, the combination of a post having a supporting pin, a spindle having an enlarged socketed supporting base free to slide and tilt on said pin and provided at its upper portion with a socket, and a last supporting pin having a conical lower end seated in said socket and free to tilt universally therein, the enlarged portion of the conical end having a bearing in the upper part of the socket and the small end portion resting on the lower wall of the socket and free to move thereover.

11. In a jack for slugging and like machines, the combination of a post having a supporting pin, a spindle having an enlarged socketed supporting base free to slide and tilt on said pin and provided at its upper portion with a socket, a last supporting pin having a conical lower end seated in said socket and free to tilt universally therein, a groove in said pin, and a spring engag-

ing said groove to maintain the last supporting pin in said upper socket of the spindle while permitting the pin to tilt universally therein.

5 12. In a jack for slugging and other machines, the combination of a post and spindle, a loose socketed and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt
10 with respect to the post, a last supporting pin loosely sustained by said spindle and free to tilt with respect thereto, a cage overlying the base of the spindle and through which the spindle extends, said cage having
15 an enlarged surrounding rim to limit the tilting movement of the spindle, and means to detachably connect the cage to the post.

13. In a jack for slugging and other machines, the combination of a post and
20 spindle, a loose socketed and pin supporting connection between the post and spindle permitting the spindle to freely tilt and slide with respect to the post, said spindle having
25 a socket at its upper portion, a last supporting pin loosely sustained in said socket, and a cage having an enlarged opening through which the spindle extends and by which the spindle is limited in its tilting and sliding movements.

30 14. In a jack for slugging and other machines, the combination of a post having a pin 4, a spindle 7 having a socketed base 6

mounted to slide and tilt on said pin, a cage 8 having an enlarged opening 9 smaller in diameter than the base 6, through which the
35 spindle passes, said cage acting to limit the sliding and tilting capacity of the spindle on said pin and its removal therefrom, and a pin at the upper end of the spindle to engage the last pin socket.
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15. In a jack for slugging and other machines, the combination of a post and spindle, a loose socket and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt
45 with respect to the post, a last supporting pin, and a loose socket and pin connection between the last supporting pin and spindle permitting the last supporting pin to tilt
50 with respect to the spindle to determine both the location of the slugs or fasteners with respect to the edge of the work and the direction of the slugs or fasteners into the work, the end of the last supporting pin resting upon the lower end of the socket and
55 movable thereon as the pin is tilted.

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

WILLIAM C. STEWART.

Witnesses:

ROSWELL F. HATCH,
REDFIELD H. ALLEN.