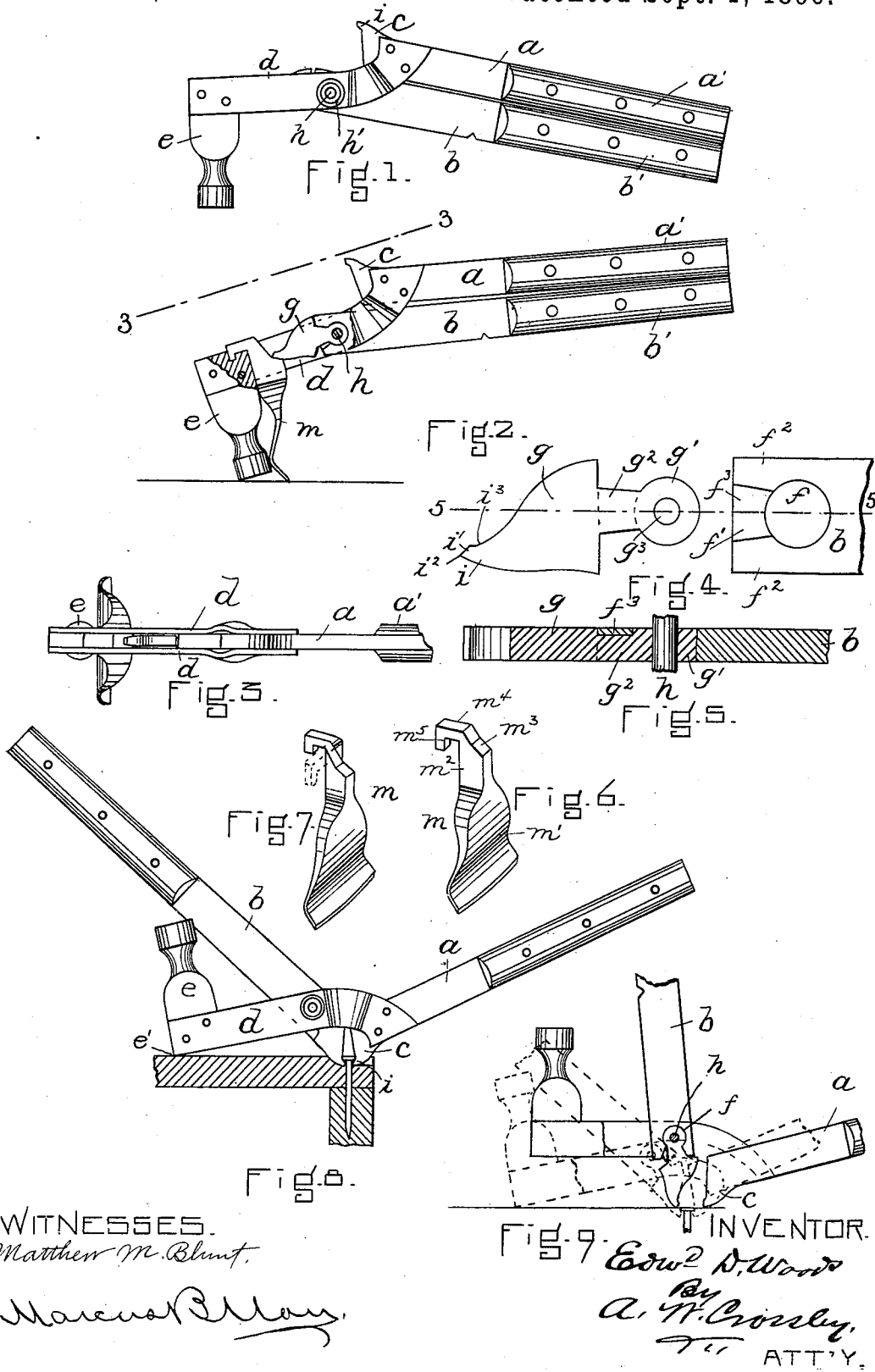


(No Model.)

E. D. WOODS.
SHIPPER'S TOOL.

No. 566,955.

Patented Sept. 1, 1896.



WITNESSES.

Matthew M. Blunt.

Marshall May.

Fig. 9. INVENTOR.

Edw. D. Woods

By A. H. Crossley,

ATT'Y.

UNITED STATES PATENT OFFICE.

EDWARD D. WOODS, OF MANCHESTER, VERMONT, ASSIGNOR OF ONE-HALF
TO JOHN H. WHIPPLE, OF SAME PLACE.

SHIPPER'S TOOL.

SPECIFICATION forming part of Letters Patent No. 566,955, dated September 1, 1896.

Application filed September 23, 1895. Serial No. 563,375. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. WOODS, of Manchester, in the county of Bennington and State of Vermont, have invented certain new and useful Improvements in Shippers' Tools, of which the following is a specification.

This invention relates to tools for shippers, merchants, and others who receive and send off packing-receptacles. In unpacking, re-boxing, and readdressing packages, boxes, and the like it is necessary to use at least three distinct tools, namely, a nail-extractor, a hammer, and an eraser, which, being independent of each other, are likely to be mislaid or lost. Hence the object of my invention is to provide a single tool which may be employed in extracting the nails, so as to remove a portion of the box or receptacle, nailing the loose portion on the receptacle again, and erasing or planing off the old printed or painted address, so that a new shipping-address may be repainted or printed thereon. The object in providing a single tool is to combine the parts so that they shall not be separated or lost, so as to decrease the number of parts necessary to form the three tools, and by simplifying the tool decrease the cost of manufacture thereof.

My invention has many other objects which it is unnecessary here to enumerate, further than to state that they are to provide an extractor which may be easily operated without greatly injuring the box or receptacle and without bending the nails in withdrawing them; to provide the extractor with two grippers attached to two handles, with one of the grippers slightly movable relatively to its handle, whereby a better grasp of the nail may be obtained; to provide one of the handles with a head, whereby the tool may be used as a hammer; to provide the tool with a scraper or eraser attachment, and to so construct all of the parts that they shall mutually contribute to hold the attachment in place and take the spring of the blade, so as to prevent it from vibrating as it is drawn over the surface to be erased or planed.

To these ends the invention consists of a tool so constructed and arranged as to serve the purposes above set forth, all as I shall now

proceed to describe with particularity, and set forth in the appended claims.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

On the drawings, Figure 1 is a side elevation of my improved tool, showing it with the parts in the positions adapting it to be used as a hammer. Fig. 2 is a side elevation of the tool, partially in section, showing the scraper or eraser attachment in place ready for use. Fig. 3 is a plan view of the same, the end of the handle being broken off. Fig. 4 shows the movable gripper detached from its socket in the handle, a portion of the latter being also illustrated. Fig. 5 is a horizontal section through the movable gripper and a portion of the handle. Fig. 6 is a perspective view of the scraper attachment. Fig. 7 is a similar view showing another form in which the scraper attachment may be made. Fig. 8 shows the tool as it appears just as a nail is gripped and about to be withdrawn. Fig. 9 illustrates the positions assumed by the parts of the tool when a nail is being gripped.

In carrying out my invention I have had in view the constructing, combining, and arranging of the parts of my tool whereby they shall coact in their peculiar relations to best adapt the tool for use as a hammer, a nail-extractor, and a scraper or eraser, as will appear from the following description.

a b indicate two handle-bars provided with riveted semicylindrical wooden or other strips *a' b'* to adapt them to be easily grasped by the hands of the operators. These handle-bars are preferably formed of steel to withstand the sudden strains put upon them, the handle *a* being formed at its end into a gripper *c*.

d d are side bars riveted or otherwise rigidly secured on both sides of the end handle-bar *a*, and curved as shown, so as to project forward at an angle thereto. Between the ends of the said side bars I rigidly secure a driving-head *e*, so as to adapt the tool to be used as a hammer. It also serves for

other purposes which will be hereinafter referred to.

The handle-bar *b* is slightly longer than handle-bar *a* and is pivotally mounted between the side bars *d*. Referring to Figs. 4 and 5, it will be seen that the end of the handle-bar *b* is square and that it is provided with a circular aperture or socket *f* and a recess *f'*, thereby forming two arms *f*², connected by a web *f*³.

g is a gripper having a cylindrical portion *g'*, connected therewith by a neck *g*², which is cut away, so as to be slightly thinner than the rest of the gripper. The cylindrical portion *g'* fits in the socket *f*, and the neck *g*² lies in the recess *f'* between the two arms *f*², and being of a cross-diameter less than the distance between said arms can have a limited oscillatory movement. The cylindrical portion *g'* of the gripper is centrally perforated at *g*³ to receive a pivot-bolt *h*, which passes through apertures in the side bars *d* and is threaded on its end to receive milled nut *h'*. Thus it will be seen that when the gripper is mounted in the end of the handle-bar and they are both slipped between the side bars the pivot-bolt passing through the gripper will hold them both in place. The two grippers *c* and *g* are of the same shape upon the outer ends, each having a small finger *i* with a flat end *i'*, between which the nail may be grasped in extracting it. There is a sharp edge *i*³, which will cut into the wood far enough to enable the nail to be grasped between the flat surfaces, the fingers projecting far enough beyond the side of the gripper to leave a space between the grippers for the head of the nail, as shown in Fig. 8.

It is of essence in my invention that one of the grippers shall have a limited movement relatively to its handle-bar, as I shall now show. In employing the tool as an extractor, the handle-bars are spread apart, as shown in Fig. 9, with the finger of gripper *g* pressing against the wood of the box or receptacle and beside the head of the nail. The finger of gripper *c* is at a distance from the head of the nail, either slightly below the edge of the box-cover or upon the surface thereof, as in Fig. 9. Then firmly grasping both handles a downward pressure is exerted, the handles being separated at the same time. The handle *b* will swing on its pivot-pin *h*, and the edge of the finger of the gripper *g* will sink into the wood beside the nail, but will not move otherwise, while the edge of the finger of gripper *c* being stiff or rigid with its handle-bar will cut down into the wood, swinging on the pivot-pin *h* as a fulcrum. In this way I am enabled to sink the fingers of the grippers down sufficiently to enable the head of the nail to be grasped between the two surfaces indicated at *i*³, or the body of the nail to be grasped between the flat ends *i'* of the gripper-fingers. Thus, although I provide sharp edges to sink into or cut down into the fiber of the wood, yet the nail is grasped

between two flat surfaces. Were both the two grippers rigid with the handle-bars, instead of having one handle swing on its pivot while the end of the gripper remained stationary, except to sink into the wood, the two edges would have a positive movement toward each other and would shear off the head of the nail or fail to grasp it.

When the nail has been grasped, as illustrated in Fig. 8, the end *e'* of the head or the side bars is rested against the box and operates as a fulcrum when the handles (still held firmly apart) are swung bodily upward to withdraw the nail. By reason of the length of the side bars the fulcrum is at a distance from the nail, and the fingers of the grippers move in a curved path that so nearly approaches a straight line that the nail is practically straight after it has been extracted. It will be observed that the grippers are in such relationship that a space is left between the surfaces *i*³ wide enough to allow a nail to project through it, so that in extracting a very large nail the latter may be partially withdrawn and the grippers released and slipped down, so as to obtain a new grasp of the nail. It will be observed that the head *e* is of such length that it can abut against the handle *b* and serve as a stop, in case the edges of the grippers should slip, and prevent the grippers from meeting and injuring each other; and it will be further observed that when the handles *a* and *b* are parallel, as in Fig. 1, to permit of the tool being used as a hammer, the movable gripper lies entirely between and within the side bars *d*, so that it may not be injured in any way. The side bars, the grippers, the handles, and the driving-head, as has just been shown, mutually contribute to insure a perfect operation in extracting the nail.

In order that the tool may be employed for erasing the printed name, address, and other marks that may be upon the box or receptacle, I provide an eraser or scraper attachment *m*, such as illustrated in Fig. 6. It has a blade *m'*, a shank *m*² with an inclined shoulder *m*³, a forwardly-extending arm *m*⁴, and a downwardly-projecting finger *m*⁵. The shank *m*² is of a width equal to the distance between the side bars *d*, so that when it is desired to put the attachment in place the shank is slipped up between the said bars, and the arm *m*⁴ and the finger *m*⁵ fit, respectively, in a groove and a recess in the head *e*. Then the handle-bar *b*, which had been swung on its pivot to allow the attachment to be put in place, is swung back into the position shown in Fig. 2, and the finger *i* of gripper *g* rests on the inclined shoulders of the shank of the attachment and holds the shank down and close against the side of the head *e*, thus locking it in place. The blade of the scraper is bent so that it rests against the head when locked in place, and when the scraper is drawn over the wood the head takes the spring of the blade and prevents it from vibrating.

The head is of such length that one edge of it rests on the box and acts as a gage to prevent the blade from sinking too deep into the fibers of the wood when it is drawn forward, as clearly illustrated in Fig. 2. Hence it will be again observed that the head, the gripper, and the scraper all coact in removing from the exterior of the box the marks or printed directions.

10 In Fig. 7 I have illustrated how the arm *m*⁴ may be struck out with a die so as to extend laterally from the shank of the scraper attachment and then bent to the rear, the shank being twisted in the operation.

15 The parts of my tool may be drop-forged or drawn out of steel, and are of great strength; and the handle-bars are so pivoted together that I obtain an enormous leverage to enable the gripper to grasp the nail very powerfully.

20 Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

25 1. A nail-extractor comprising in its construction, two handle-bars, a gripper secured rigidly to one of the handle-bars, a gripper secured movably to the other of the handle-bars, and a single pivot for securing the handle-bars, and the movable gripper together.

30 2. A nail-extractor comprising in its construction two grippers pivoted together, a handle-bar rigid with one of said grippers and a handle-bar attached to the other of said grippers and having an independent limited rocking movement around the pivot of said grippers as an axis, substantially as set forth.

35 3. A nail-extractor comprising in its con-

struction two side bars, a gripper rigidly secured between said side bars, a handle therefor rigid therewith, a gripper pivoted in said side bars and a handle therefor having a limited movement relatively thereto, substantially as set forth.

45 4. A tool comprising in its construction two pivoted handle-bars provided with grippers, one of said bars being extended beyond the pivot and a scraper-blade adapted to be placed in said extension, said handle-bars and grippers coacting to retain said blade in place.

50 5. A tool comprising in its construction, a handle-bar, a driving-head projecting laterally therefrom, and a removable scraper-blade, adapted to have its upper end secured to said handle and head, and to have its free end rest against the end of the head for the purposes set forth.

60 6. A tool comprising in its construction two side bars, a gripper handle-bar rigid with said side bars, and a gripper handle-bar pivoted therebetween, a driving-head secured to the end of said side bars and having a socket and a scraper-blade having a shank adapted to pass between said side bars and a projection adapted to rest in said socket, the parts being so combined that the pivoted gripper locks the scraper-blade in place and against the head, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 16th day of July, A. D. 1895.

EDWARD D. WOODS.

Witnesses:

C. C. STECHER,
M. B. MAY.