

April 13, 1926.

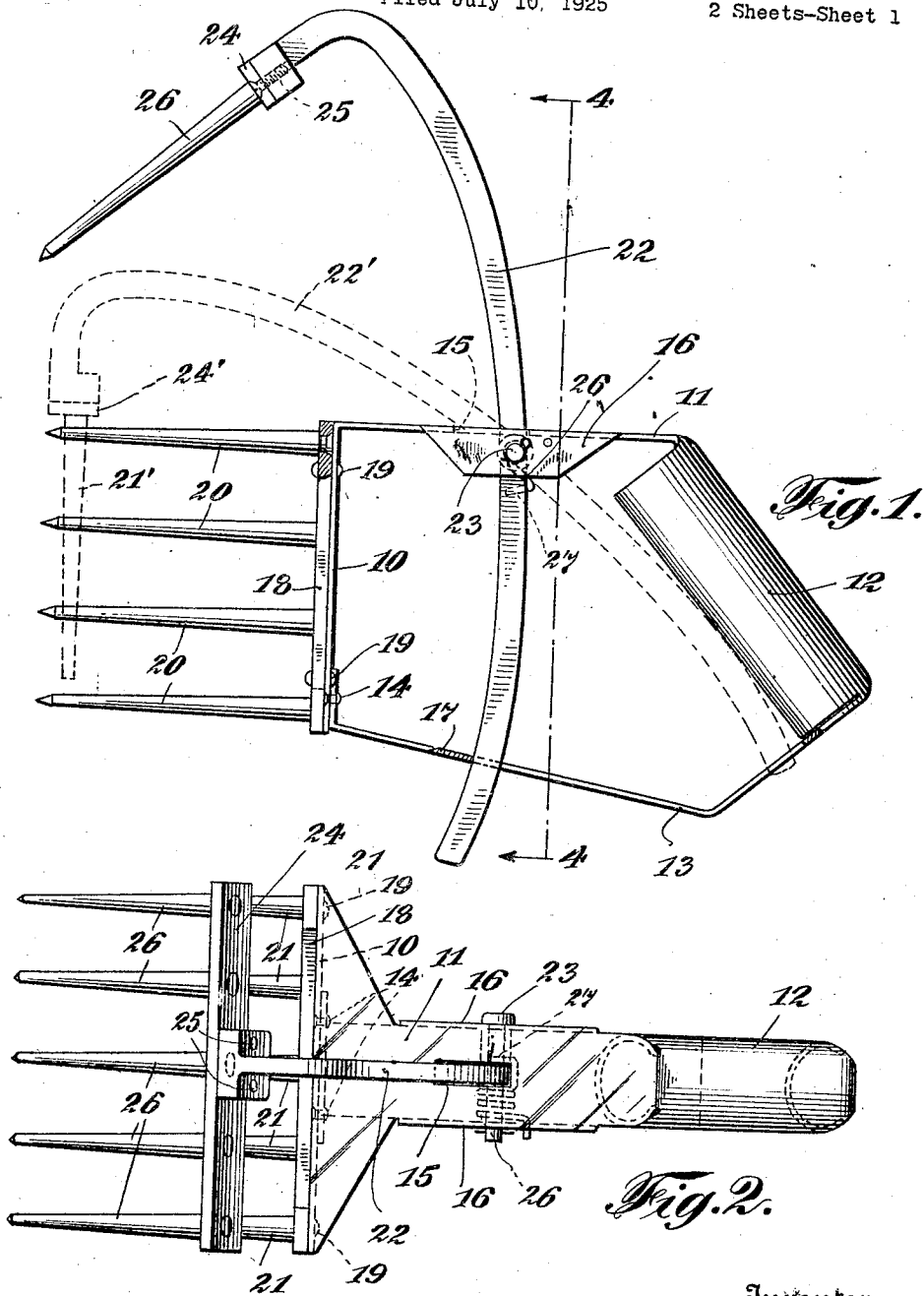
L. S. HORNE

1,580,731

NAIL CLUTCH

Filed July 10, 1925

2 Sheets-Sheet 1



Inventor
Luther S. Horne
By his Attorney
Harold Freeman

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2 Sheets-Sheet 2

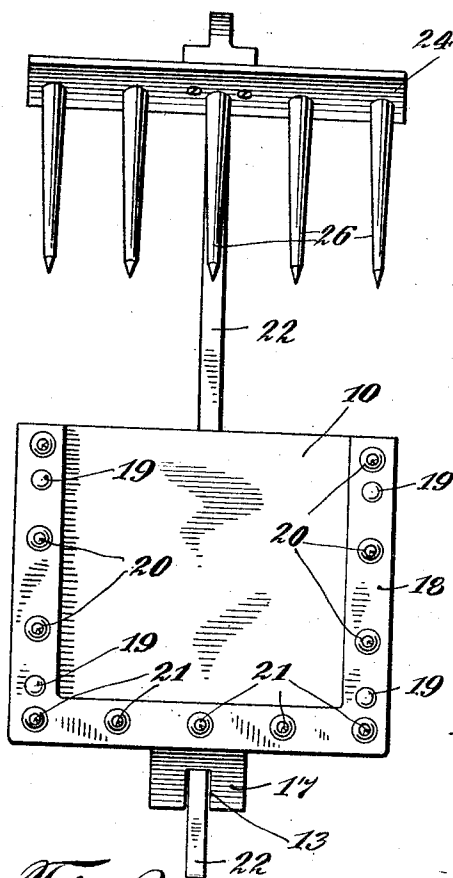


Fig. 3.

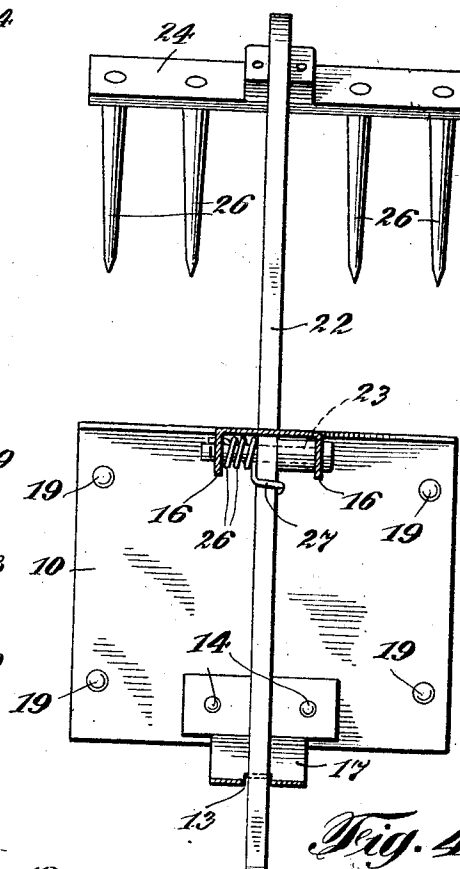


Fig. 4.

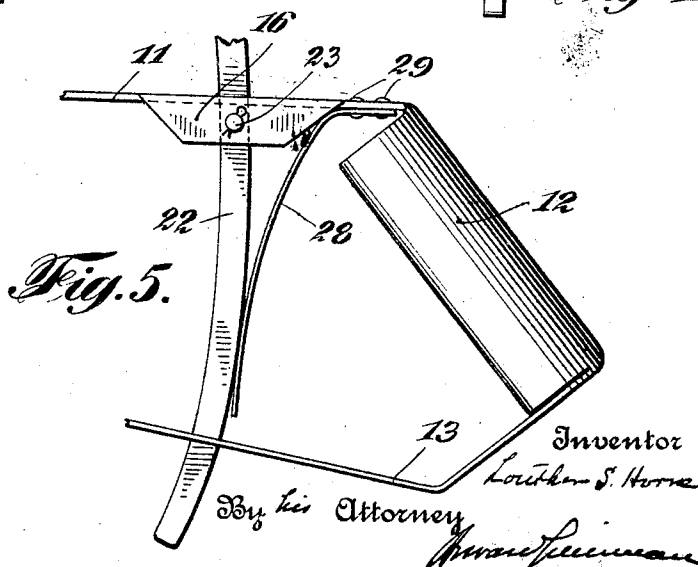


Fig. 5.

Inventor

Louise S. Horne

By his Attorney

Wm. J. Freeman

UNITED STATES PATENT OFFICE.

LOUTHER S. HORNE, OF BRONX, NEW YORK.

NAIL CLUTCH.

Application filed July 10, 1925. Serial No. 42,672.

To all whom it may concern:

Be it known that I, LOUTHER S. HORNE, a citizen of the United States, residing at the Bronx, county of Bronx, city of New York, and State of New York, have invented new and useful Improvements in Nail Clutches, of which the following is a full, clear, and exact specification.

My invention relates to nail clutches and refers particularly to nail clutches adapted for the removal of a plurality of nails from a mass of nails.

It is frequently desirable to remove a portion of a nail mass, as for instance, from a keg of nails, in order to weigh them or for other purposes.

Such a removal of nails by means of the hand is both inconvenient and dangerous and my invention is directed toward a device in which this can be easily and effectively accomplished without the hand of the operator coming into contact with the nails.

A nail clutch for the described purpose must be strong, easily introduced into the nail mass and of such a character that it may be easily withdrawn carrying a plurality of nails which may be easily deposited at the required place.

The device of my invention possesses these, and other desirable and valuable attributes as will be evident upon a consideration of my drawings and accompanying description thereof.

In the accompanying drawings illustrating modified forms of the device of my invention, similar parts are designated by similar numerals.

Figure 1 is a side view of one form of the device of my invention in normal open position, with the closed position indicated in broken lines.

Figure 2 is a top plan view of Figure 1.

Figure 3 is a front view of Figure 1.

Figure 4 is a cross-section through the line 4-4 of Figure 1.

Figure 5 is a modified form of spring control.

The particular form of the device of my invention shown in the accompanying drawings comprises a back supporting plate 10, extended into the horizontal plate portion 11, which in turn is extended into the cylindrical handle 12, the latter being extended into the plate portion 13 which is affixed to the plate 10 by the rivets 14, 14.

The upper plate 11 has a slot 15 and two downwardly extended flanges 16, 16. The lower plate 13 has a slot 17.

All of the above described device may be stamped, or cut out of one piece of metal and formed as shown.

A U-shaped piece of metal 18 is fixedly attached to the front face of the front plate 10 by means of the bolts 19, 19.

A plurality of outwardly extended side pins 20, 20, 20 and bottom pins 21, 21, 21 are carried by the U-shaped member 18.

An arm 22 is pivotally connected to the flanges 16, 16 by the pivot 23 and extends through the slots 15 and 17. The upper extremity of the arm 22 is fixedly attached to the cross-bar 24 by the rivets 25, 25, the cross-bar 24 carrying the extended rake-teeth 26, 26.

In order to retain the rake-arm 22 in the position shown in full lines in Figure 1, a coil-spring 26' is fixedly attached to one flange 16, is wound around the pivot 23 and is hooked at 27 over the rake-arm 22.

In the modification shown in Figure 5, the spring effect is produced by the leaf spring 28 fixedly attached at 29, 29, to the upper member 11 and abutting upon the rake-arm 22.

In operation, the prongs, or pins 20, 20, 21, 21 are pressed into the mass of nails and the lower part of the arm 22 is pressed toward the handle 12, thus causing the prongs, or pins, 26, 26 to enter the nail mass, thus forming a cage of the prongs 20, 20, 21, 21, 26, 26 enclosing a plurality of nails, the device is then withdrawn with the enclosed nails, and by releasing the arm 22, the spring 26' opens the prong enclosed cage allowing the nails to fall therefrom.

It is to be noted that the several series of prongs can be easily forced into the nail mass and then the device will remove a large number of nails, as they will extend outwardly of the cage and be retained by the binding force of the nail mass.

I do not limit myself to the particular size, shape, number or arrangement of parts as shown and described as these are given simply for a clear explanation of the device of my invention.

What I claim is:—

1. In a nail clutch, in combination, a plate having a plurality of extended pins upon three sides of one face thereof, a handle

carried by the plate, an arm pivotally attached to the handle, a plurality of extended pins carried by the arm capable of being positioned in front of the plate pins when the arm is moved toward the handle and means for removing the arm pins from in front of the plate pins when pressure is released from the arm.

2. In a nail clutch, in combination, a plate having a plurality of extended pins upon three sides of one face thereof, a handle carried by the plate, an arm pivotally attached to the handle, a bar fixedly attached to the arm, a plurality of extended pins carried by the arm bar so situated that the movement of the arm toward the handle will cause the arm pins to be positioned in front of the plate pins, means for limiting the movement of the arm and resilient means for returning the arm to its original position and removing the arm pins from in front of the plate pins.

3. In a nail clutch, in combination, a plate having a plurality of extended pins upon three sides of one face thereof, an upper plate carried by the upper portion of the plate and having an opening therein, a lower plate carried by the lower portion of the plate in an approximate vertical plane with the upper plate and having an opening therein, a handle member connecting the free extremities of the upper and lower plates, an arm passing through the two plate openings and pivotally carried within the upper opening, a plurality of extended pins carried by the upper portion of the arm, so positioned, that the movement of the lower por-

tion of the arm toward the handle member will cause the arm pins to be placed across the extremities of the plate pins and in approximate right angles to the plate pins and means whereby a release of pressure upon the lower portion of the arm will cause it to return to normal position.

4. In a nail clutch, in combination, a plate having a plurality of extended pins upon the bottom and two sides of the face thereof, a flat plate carried by the upper portion of the plate and having an opening therein, a flat plate carried by the lower portion of the plate spaced from and in an approximate vertical plane to the upper plate and having an opening therein, a handle member connecting the free ends of the plates, an arm passing through the two plate openings and pivotally carried within the upper opening, a bar carried by the arm, a plurality of extended pins carried by the arm bar so arranged, that the movement of the lower portion of the arm toward the handle will move the arm pins to a position in front of the plate pins and at right angles thereto. closing the device, means for limiting the movement of the arm in closed position. means for limiting the movement of the arm in open position and resilient means for returning the arm from closed position to open position when the lower end of the arm is released.

Signed at New York city, in the county of Bronx and State of New York, this 8th day of July, 1925.

LOUTHER S. HORNE.