April 21, 1953 O. LANGER 2,635,237

NAIL HOLDER

Filed June 6, 1950

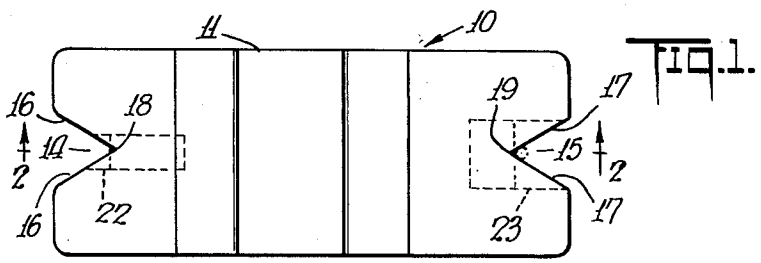


Fig. 1.

Fig. 2.

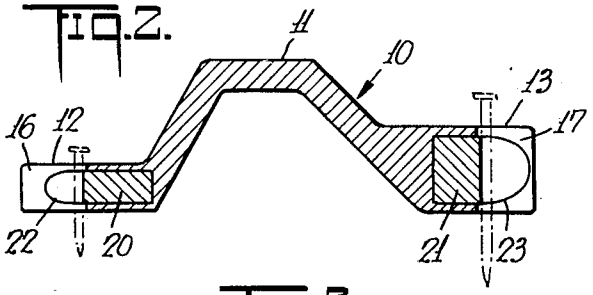


Fig. 3.

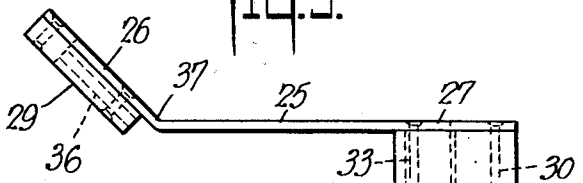


Fig. 4.

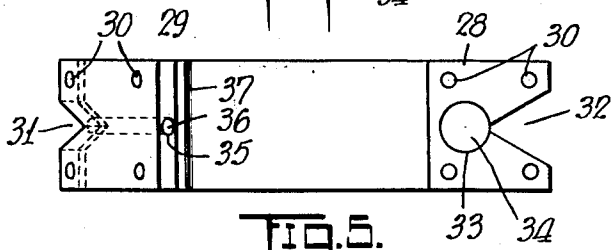


Fig. 5.

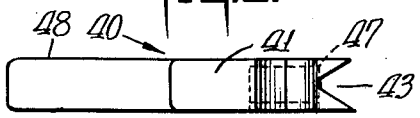
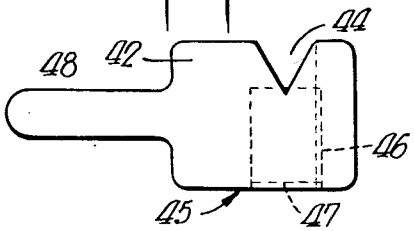


Fig. 6.



INVENTOR
Olgierd Langer
BY
Harry Ernest Rubens
ATTORNEY

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NAIL HOLDER

Olgierd Langer, Silvermine, Conn.

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2 Claims. (Cl. 1—47)

1

My invention relates to a nail holding device and more particularly to a device that will support a nail or the like in a selected starting position and facilitate the manual holding of the nail while it is being hammered.

Nail holders of narrow dimensions have been devised making it necessary for the operator to grip the device with the finger in close proximity to the hammer with the likelihood of injury to the fingers, and in this respect the device had the same inherent danger as hammering a nail without any holder. In addition holders of this type were devised for particular types of installation and were limited in the range of nail sizes that the holder could accommodate.

It is therefore a primary object of my invention to provide a holder which can be gripped by the operator a sufficient distance from the position where the nail is supported to avoid possible injury to the fingers of the operator and to the surface into which the nail is driven.

It is a further object of my invention to provide a holding device that will accommodate nails of various sizes and thus have universal application.

Another object is to provide a nail holder which will hold the nail in a substantially rigid position.

Still another object of my invention is to provide a holder that will support a nail in a predetermined position by a magnetic force, and that has lateral supporting surfaces to maintain the nail and avoid accidental displacement thereof at the start of the driving action.

Other objects of my device are to provide a device that does not require special skill in handling, but is simple in operation for use by the ordinary householder as well as by a skilled workman; to provide a holder that can be easily removed from the nail to complete the driving action; and to provide a holder that can be easily and economically manufactured from a variety of materials.

I accomplish these and other objects and obtain my new results as will be apparent from the device described in the following specification, particularly pointed out in the claims, and illustrated in the accompanying drawing, in which—

Fig. 1 is a top plan view of my novel nail holder employing a magnet;

Fig. 2 is a side elevation, in section, taken along line 2—2 of Fig. 1;

Fig. 3 is a side elevation view of a modified form of nail holder;

Fig. 4 is a bottom plan view of the same;

Fig. 5 is a side elevation of a third modification;

2

Fig. 6 is a top plan view of the same.

In the drawing, reference character 10 designates one form of my nail holder which may be constructed of any suitable material, preferably non-magnetizable material that is light in weight, such as aluminum, plastic or wood. The holder may be block-like in form having a central portion 11, which may be utilized as a handle by the user, and lateral nail supporting extensions 12 and 13. Nail supporting extension 12 may be relatively thin to support small nails, such as tacks and brads while nail engaging extension 13 has a greater thickness to support larger sized nails. It is apparent that the thickness of the nail engaging extensions 12 and 13 must be less than the length of the nail to be supported thereto. The nail engaging extensions are provided with re-entered V-shaped recesses 14 and 15 having walls 16 and 17 respectively, to receive and support the nails to be driven. In the form illustrated in Figs. 1 and 2, the recesses are constructed with preferably sharply formed apexes 18 and 19 respectively to enable the nails to be tangentially supported at two points on the walls 16, or 17. To maintain the nails within the recesses permanent magnetic pieces of metal 20 and 21 are positioned preferably at the apexes 18 and 19, and may be of the type manufactured under the trade-name "Alnico." The magnets 20 and 21 may be mounted within the nail engaging extensions 12 and 13 in a plurality of ways. As illustrated in Figs. 1 and 2, magnet 20 may be relatively small in size and rod shaped for use in the nail engaging extension 12 that is to accommodate small nails, while magnet 21 is of larger diameter for supporting the large and heavier nails. The magnets may be press fitted within longitudinally extending bores 22 and 23 respectively with the outer end of the magnet positioned at the apex. Preferably the ends of the magnets should not project substantially beyond the apex of each recess so as to touch the nail, which might cause the supported nail to lose its contact with both sides of the recess and give it a tendency to tilt and become unstable. The magnets in this manner of mounting are also in a protected position in the holder and generally free from likelihood of damage by the hammer when the nail is driven. It is to be understood that the magnets may be mounted longitudinally or transversely as desired. The magnets have a sufficient magnetic force to maintain firmly the nails in an upright supported position in the V-shaped recesses.

As shown in Fig. 1, the holder is supported on its bottom surfaces in a flat position. The

nails are held substantially vertical by their respective magnets against the walls of the recesses. The nails are visible through the respective re-entered recesses and thus can be accurately located in the desired position with respect to the surface into which the nails are to be driven. After the nails have been started and driven to a sufficient depth, the holder may be easily removed or shifted to a thinner holding recess until completion of the nail is almost completely driven.

If it is desired to drive the nail at an inclined position, the holder may be inverted and supported in a canted position, not shown, between the central portion and an end of the nail engaging extension.

In Figs. 3 and 4, I have illustrated a modified form of my nail holder which may be constructed of a strip 25 of material, such as aluminum, which may form a handle, and having integral spaced end nail supporting extensions 26 and 27 to which blocks 28 and 29 of varying thicknesses have been suitably secured, as by screws 30.

V-shaped recesses 31 and 32, as previously described, are formed in the ends respectively of the nail supporting extensions and associated blocks.

A bore 33 extends through the depth of block 28, into which a rod 34 of magnetic material may be force-fitted or otherwise suitably secured. In this arrangement, a part of the cylindrical area of this rod closely fits adjacent the apex of the V-shaped recess 32, providing maximum attraction throughout its depth for the heavy nails to be accommodated therein. In the thinner extension and associated block, 26 and 29, respectively, the bore 35 may extend in the opposite direction and the magnetic rod 36 positioned therein will thus point directly toward the apex of the recess 31. This position of the magnet provides sufficient attraction for the small nails supported in the thin extension.

The bend 37 in the strip 25 permits one extension to act as a handle when the other extension supports a nail to be driven.

It is apparent that the bores for containing the magnets may be of the same size, to permit a single magnet to be used for both positions, one at a time.

In Figs. 5 and 6, I have illustrated a form of holder employing a single magnet for a plurality of V-shaped recesses of varying thicknesses.

The nail holder 40 is provided with a body having a narrow width as indicated by the top side 41, and a relatively greater depth as indicated by the side 42. The narrow width contains the V-shaped recess 43 running the depth of the body, while the side 42, contains the V-shaped recess 44 positioned a distance from the end containing the recess 43 equal to about the depth of the apex of recess 43.

In the side 45 opposite the recess 44, an opening 46 is provided to accommodate a magnet 47 which may be force-fitted therein. The dimensions of the magnet permit one side to be positioned at the apex of recess 44, with one side positioned along the apex of recess 43. There is thus provided a single magnet which will attract and support nails held in the recess 44 to be used for small nails, and which will also attract and support larger nails held in the recess 43. An arm 48 may extend from the nail holder body 40 for convenience in handling.

It is to be understood that by the use of the term nails used throughout the specification, I intend to include tacks, screws, brads and the like.

By the foregoing device I have devised a nail holder that will firmly support nails of various sizes to be driven, without the likelihood of injury to the fingers or to the surface into which the nails are driven. My device will readily support small nails, such as tacks, that are difficult to grasp by the fingers.

By providing a re-entered portion with a sharply formed apex, the nail is firmly supported and guided when driven, and the use of the magnet maintains the nail in the holder and simplifies the procedure of driving nails. The holder is of a construction that can be easily and inexpensively manufactured out of a variety of materials.

I have thus described my invention, but I desire it understood that it is not confined to the particular forms or uses shown and described, the same being merely illustrative, and that the invention may be carried out in other ways without departing from the spirit of my invention, and, therefore, I claim broadly the right to employ all equivalent claims, and by means of which, objects of my invention are attained and new results accomplished, as it is obvious that the particular embodiments herein shown and described are only some of the many that can be employed to attain these objects and accomplish these results.

I claim:

1. A device for holding a nail or the like in a position to enable it to be driven into a supporting surface comprising a holder body having a nail engaging extension at one end thereof provided with two walls inclined to one another forming a centering slot, said slot having a sufficient height to support a nail in an upright position, a magnet mounted at the end of the slot to position the nail at the innermost extremity of the slot, the remaining portions of the walls being made of a non-magnetic material.

2. The device of claim 1 wherein a plurality of centering slots of different heights are provided in the nail engaging extensions, each slot positioned adjacent a side of the magnet, whereby nails of different lengths may be supported in their respective slots.

OLGIERD LANGER.

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