J. H. GRAY.

NAIL.

APPLICATION FILED JULY 26, 1916.

1,225,708. Patented May 8, 1917.

Fig. 1.

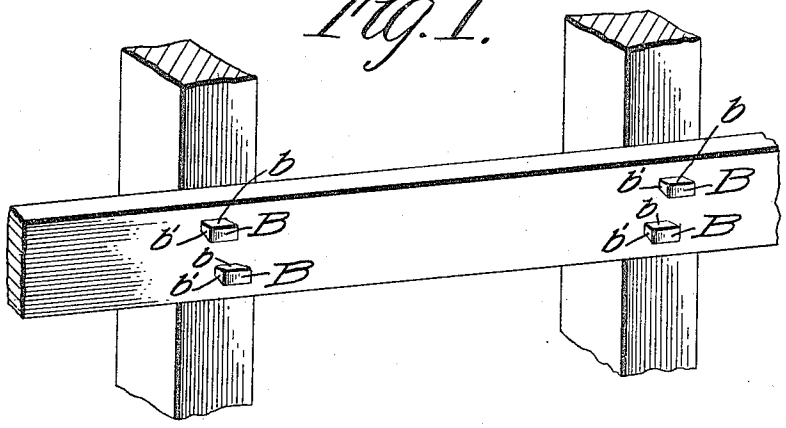


Fig. 2.

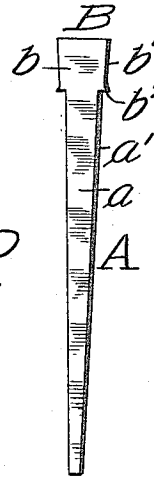


Fig. 3.

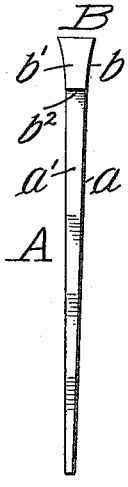
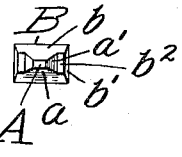


Fig. 4.



Witness:
C. F. Mason.

Inventor
John H. Gray.
By attorneys
Southgate & Southgate.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. GRAY, OF WORCESTER, MASSACHUSETTS.

NAIL.

1,225,708. Specification of Letters Patent. Patented May 8, 1917.

Application filed July 26, 1916. Serial No. 111,529.

To all whom it may concern:

Be it known that I, JOHN H. GRAY, a citizen of the Dominion of Canada, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Nail, of which the following is a specification.

This invention relates to a nail principally for use on temporary structures such as stages, concrete molds, and the like.

The principal objects of the invention are to provide a simple construction which can be made by the ordinary processes used for producing cut-nails without expensive complications, and which will be adapted to leave a head projecting from the wood under all ordinary conditions so that the nail can be withdrawn readily by ordinary hammer claws or equivalent devices, and to so form the head that even when carelessly driven it will still satisfy the above conditions, and at the same time properly hold the boards to which it is applied. More specifically the invention involves a cut-nail having a shank of the usual construction and provided with a head of a wedge shape, having its converging sides substantially flush with the slightly diverging sides of the shank at the point of juncture of the head with the shank so that the head itself can be driven part way into the board if desired, the head also projecting beyond the shank at the edges thereof so as to cause the head to hold the board and form a partial stop against driving the head in too far. Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which:—

Figure 1 is a perspective view of a small section of staging showing a few nails therein constructed in accordance with this invention;

Fig. 2 is a side view of one of the nails substantially full size;

Fig. 3 is an edge view of the same, and

Fig. 4 is an end view.

As stages are ordinarily put up the boards are fixed in position by ordinary cut-nails. When the staging is to be taken down an ordinary hammer cannot usually be employed to remove the nails. This necessitates the use of special tools in a good many cases, and the injury of the boards by these tools or by knocking them apart in the customary manner. This invention is designed, as stated above, for the purpose of overcoming these difficulties by providing a nail suitable for use for this purpose, and having a head which can be driven into the wood slightly if desired, and which has a shoulder that will hold the board and prevent the nail going far in, but which will project up even if carelessly driven so that it can be removed by the claws of an ordinary hammer without damaging the boards.

In the form shown in the drawings the nail is formed of a shank A having slightly diverging sides a and edges a' converging toward the point. It is furthermore provided with a head B which may be considered as made somewhat in the opposite manner for its sides b instead of being parallel diverge from each other toward the end of the head. These sides come close enough together at the point where the head joins the shank so that they are substantially flush with the two slightly diverging sides a of the shank. In this way the diverging surfaces b of the head, although substantially flat, are continuous with the side surfaces a of the shank, and no sudden projection is provided on these surfaces. Thus as far as they are concerned, the head can be driven into the board, especially so as the long dimension of the shank is driven in parallel with the grain. However, the head widens out toward the top which acts to resist the driving of the head in clear up to the end, but the principal purpose of this widening is to provide a construction which will permit of the ready withdrawal of the nail by the claws of an ordinary hammer.

Looking at the nail in the other direction, it will be seen that the edges b' of the head are parallel substantially and extend beyond the diverging edges a' of the shank at the point where they meet so as to form shoulders b^2 at this point to resist the driving of the head into the wood to any great depth. This further insures the projection of the head above the wood, but on account of the construction above described it is possible to drive the head pretty well into the wood so that it will not project very far. If it projects at all, however, as it always will, it can be drawn by a claw hammer as stated.

By the use of this construction of nail the

staging is not split by driving the nail in nor is it marred materially by the head of the nail, but the principal saving lies in the fact that no special tools that dig into the board have to be employed for removing the nail, and it is so easy to remove it that the workmen will not be tempted to separate the parts of the staging by prying them apart or pounding the boards off from the rear. In this way the staging is saved for use over and over again, and in fact the nails themselves can be used several times, if desired. Further these advantages are obtained by a construction which can be made by the ordinary nail cutting processes without a material increase in cost, and without waste of material.

Although I have illustrated and described only a single form of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claim. Therefore I do not wish to be limited to all the details of construction herein shown and described, but what I do claim is:—

As an article of manufacture, a square-ended cut-nail for use in wood having a shank provided with sides slightly diverging and edges diverging more widely from the point toward the head and farther apart than said sides, and having a head wider than the upper end of the shank, its two sides being substantially flush with the upper ends of the sides of the shank but diverging from each other from that point to the top of the head, the edges of the head being farther apart than the edges of the shank at any point and having square shoulders under them whereby when driven into the wood with its slightly diverging sides parallel with the grain the head can be driven slightly into the wood, but will be stopped by said shoulders before being driven materially into it.

In testimony whereof I have hereunto affixed my signature.

JOHN H. GRAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."