

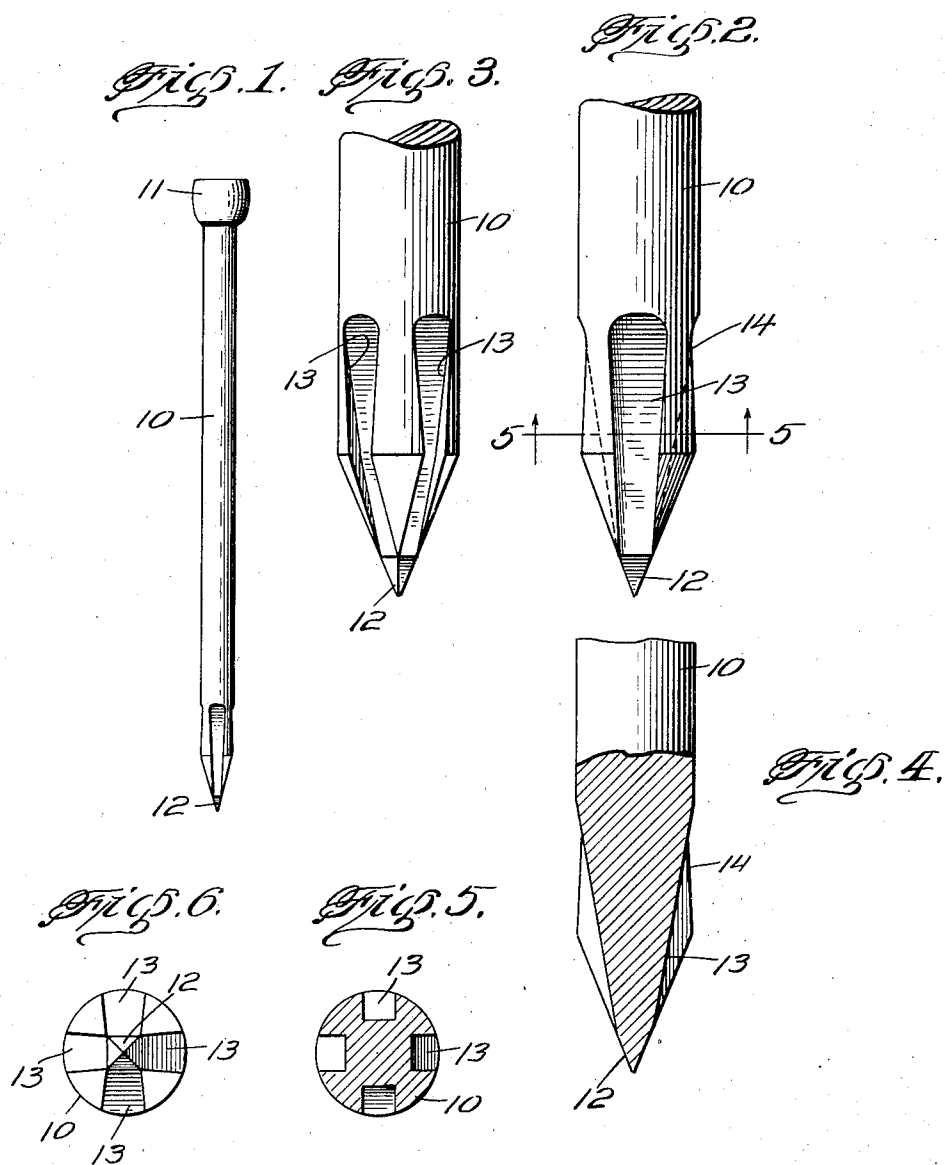
Aug. 27, 1940.

M. E. MILLER

2,212,787

NONSPLIT NAIL

Filed Sept. 23, 1938



Malcolm E. Miller

INVENTOR

BY Victor J. Evans & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE

2,212,787

NONSPLIT NAIL

Malcolm E. Miller, Columbus, Ohio

Application September 23, 1938, Serial No. 231,448

1 Claim. (Cl. 85—19)

This invention relates to a nonsplit nail and has for an object to provide a nail which may be inexpensively manufactured and which will be provided with wedge shaped grooves at the point tapering from a small entrance end to a wide end on the shank of the nail so that the wood or other material may expand in the groove as the nail is driven in and prevent splitting of the wood as is the case when conventional nails expand the wood outside of the nail in a lateral direction and split the wood when the nail is being driven.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of this specification,

Figure 1 is a side elevation of a nail constructed in accordance with the invention.

Figure 2 is an enlarged side elevation of the entrance end of the nail showing one of the grooves in front elevation.

Figure 3 is an enlarged side elevation of the entrance end of the nail turned through an angular distance of about 45 degrees from Figure 2.

Figure 4 is an enlarged longitudinal sectional view of the pointed end of the nail taken through two oppositely disposed grooves.

Figure 5 is a cross sectional view taken on the line 5—5 of Figure 2.

Figure 6 is an end elevation of the end of the nail.

Referring now to the drawing in which like characters of reference designate similar parts in the various views, 10 designates the shank, 11 the head, and 12 the entrance point of a metal nail constructed in accordance with the invention.

In carrying out the invention a plurality of

grooves 13 are formed longitudinally of the entrance end of the nail, beginning a short distance back of the point 12 and extending for any distance upon the shank. As best shown in Figure 3, each groove tapers from the point toward the rear end thereof, the end at the point being narrow and the rear end being comparatively wider so that a wedge shaped groove is produced into which the wood may be received as the nail is being driven, and expand therein until the nail is completely driven home at which time the expanded wood in each groove will form a wedge to tightly anchor the nail in place. At the same time the expanding action of the wood as it enters each groove eliminates the usual expanding action of the wood outside of conventional nails so that stresses and strains will not be set up which might tend to crack the wood.

As best shown in Figure 4 the shank of the nail adjacent the point 12 may be reduced in diameter as shown at 14 and the grooves have flat bottom walls and the inner diverging side walls of the grooves terminate in rounded ends which merge outwardly with the surface of the shank of the nail. The grooves, moreover, are substantially rectangular in cross section, as best shown in Figure 5.

From the above description it is thought that the construction and operation of the invention will be fully understood without further explanation.

What is claimed is:

A nonsplit nail comprising a nail formed with wedge-shaped grooves at the point tapering from a small entrance end to a wide rear end on the shank of the nail, the grooves having flat bottom walls, the inner diverging side walls of the grooves terminating in rounded ends which merge with the surface of the shank, the wedge-shaped contour of the grooves permitting the wood or other material, into which the nail is driven, to expand in the wide end of the grooves and prevent splitting of the material.

MALCOLM E. MILLER.