

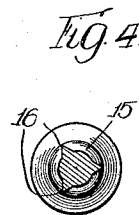
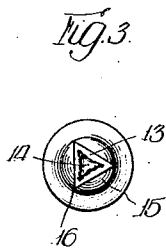
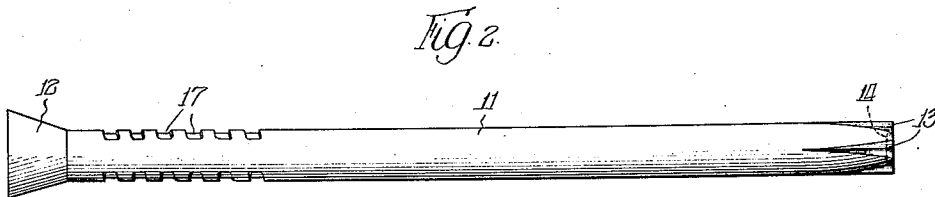
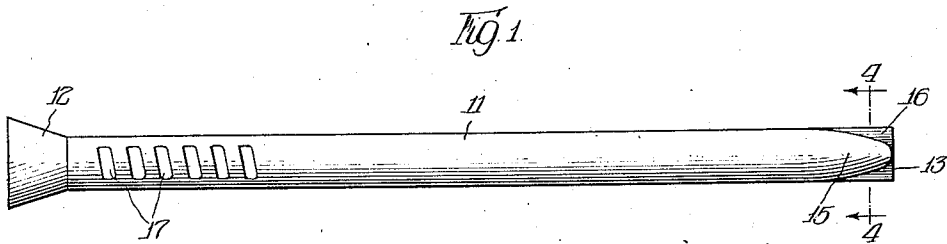
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H. S. STRONACH

1,771,867

NONSPLITTING NAIL

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UNITED STATES PATENT OFFICE

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NONSPLITTING NAIL

Application filed June 25, 1927. Serial No. 201,301.

This invention relates to a new and improved nail construction and more particularly to a non-splitting nail of the wire nail type. This invention is in the nature of an improvement on the wire nail covered in my previous Patent No. 1,466,676, granted September 4, 1923.

Wire nails as at present generally constructed are provided with a cylindrical body and with a point or entering end which is substantially pyramidal in form. When nails of this character are driven through light wood, such as box material, adjacent the ends of the wood strips, there is a marked tendency to split the wood. The point enters between the fibers and the pyramidal sides tend to separate them and start a splitting action. I have found that this splitting can be avoided by the provision of a non-pointed entering end which crushes and cuts the fiber. In my prior patent this entering end was shown as substantially flat. According to the present invention the entering end is preferably formed somewhat concave so that the edges of the entering end serve as cutting edges. This entering end is preferably not as large as the full cross sectional area of the nail as a certain amount of lateral thrust is necessary in order that the wood may properly grip the nail. This thrust is not sufficient in amount to cause splitting. The present nail has a firmer grip in the wood than the standard pyramidal pointed nail. The pointed nail wedges the wood fibers apart and the nail is merely gripped on two sides while my nail cuts and crushes the fibers and are gripped substantially throughout their circumference.

It is an object of the present invention to provide a new and improved nail adapted to cut and crush the fiber upon entering the wood or the like.

It is a further object to provide a construction of this character in which the entering face is substantially symmetrical about the axis of the nail so that the nail may be used in any position.

It is an additional object to provide a nail construction which may be readily made at

small cost and is adapted for commercial production.

Other and further objects will appear as the description proceeds.

I have illustrated a preferred embodiment of my nail in the accompanying drawings, in which

Figure 1 is a side view of one form of nail;

Figure 2 is a view of Figure 1 as seen from above;

Figure 3 is a view of the entering end of the nail; and

Figure 4 is a section taken on line 4—4 of Figure 1.

The nail as shown comprises the substantially cylindrical body 11 and a head 12. The form of head shown is that generally used in making flooring nails but it will be obvious that the nail may be provided with any desired form of head construction since the head has no bearing upon my present invention. The nail body 11 as shown is provided with a usual form of serration 17 adjacent the head adapted to aid in maintaining the nail in the wood.

The entering face 13 of the nail is triangular in form and somewhat concave, as best shown in broken lines at 14 of Figure 2. The triangle, as shown, is substantially that inscribed within the circle defined by the cross section of the body of the nail. This triangle may vary somewhat in area, however, and the apices of the triangle extend slightly beyond such circle or be enclosed within the circle. It is highly important, however, that the triangle have an area equal to a material portion of the cross sectional area of the nail. If the triangle is too small the nail has a wedging action similar to that of the usual type of nails.

From Figures 1 and 2 it will be apparent that the body 11 merges into the face 13 by means of convex sloping surfaces 15. The apices of the triangle join the body 11 by means of ridges 16. A nail of this character may be manufactured without loss of material as the wire blank may be cut transversely and the concave entering face formed by deforming the material adjacent the face without removing any material. I have found

that this concave face in practice renders the nail more efficient than the nail of my prior patent with the flat face. The concavity of the face causes the edges of the face to have
5 a definite cutting effect in addition to the crushing effect of the face area.

While I have described and shown a nail as having a triangular face, it will be understood that this is merely one specific preferred form by way of example. The face
10 may have more than three sides and be square, round or polygonal in form. I contemplate such other changes and modifications as come within the spirit and scope of the appended
15 claims.

I claim:

1. A nail comprising a head, a substantially cylindrical body, and a triangular entering end, the body meeting the sides of the
20 triangular end by sloping convex surfaces and the apices of the triangle joining the body by ridges extending above the convex surfaces.

2. A nail comprising a head, a substantially cylindrical body, and a triangular entering end, the body meeting the sides of the
25 triangular end by sloping convex surfaces, the apices of the triangle joining the body by ridges extending above the convex surfaces and the entering end being concave
30 whereby the sides of the triangle serve as cutting edges.

Signed at Chicago, Illinois, this 22nd day of June, 1927.

35 HARRY S. STRONACH.

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