

No. 731,928.

PATENTED JUNE 23, 1903.

R. MATTICE.  
NAIL AND COATING THEREFOR.

APPLICATION FILED JAN. 19, 1903.

NO MODEL.

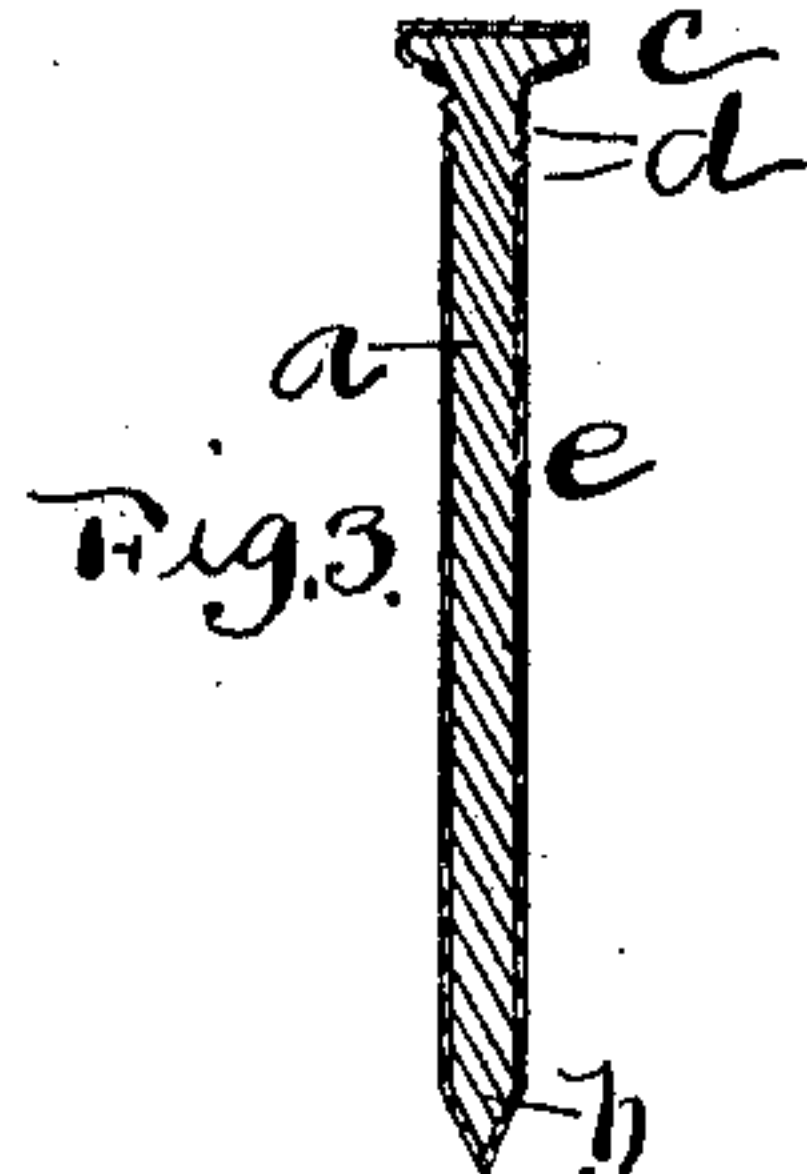
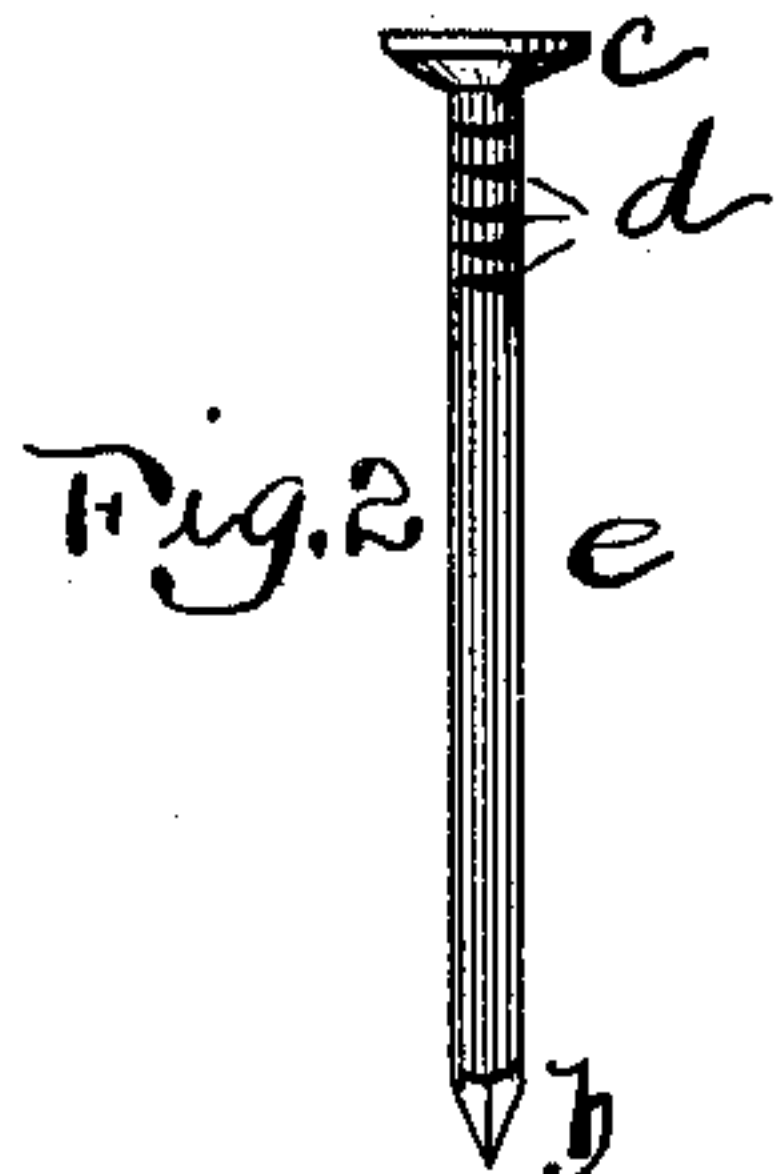
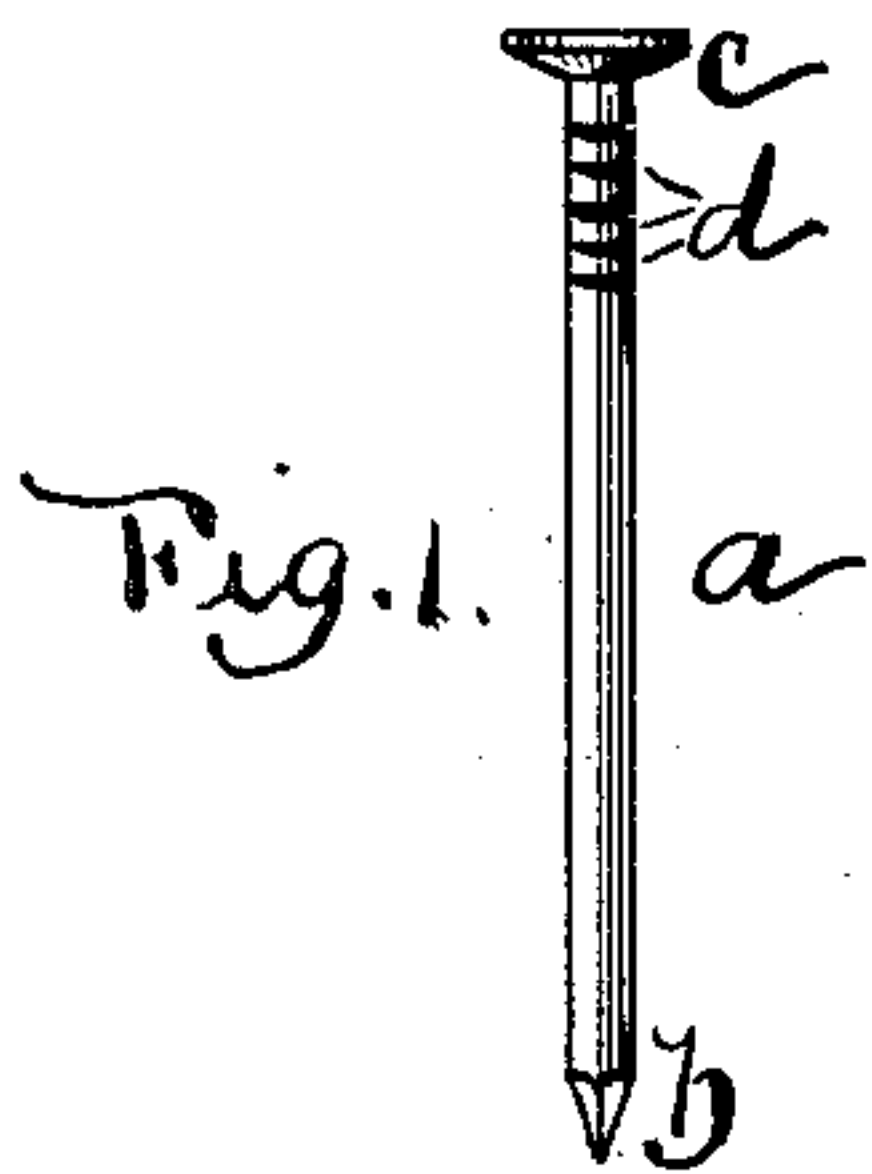
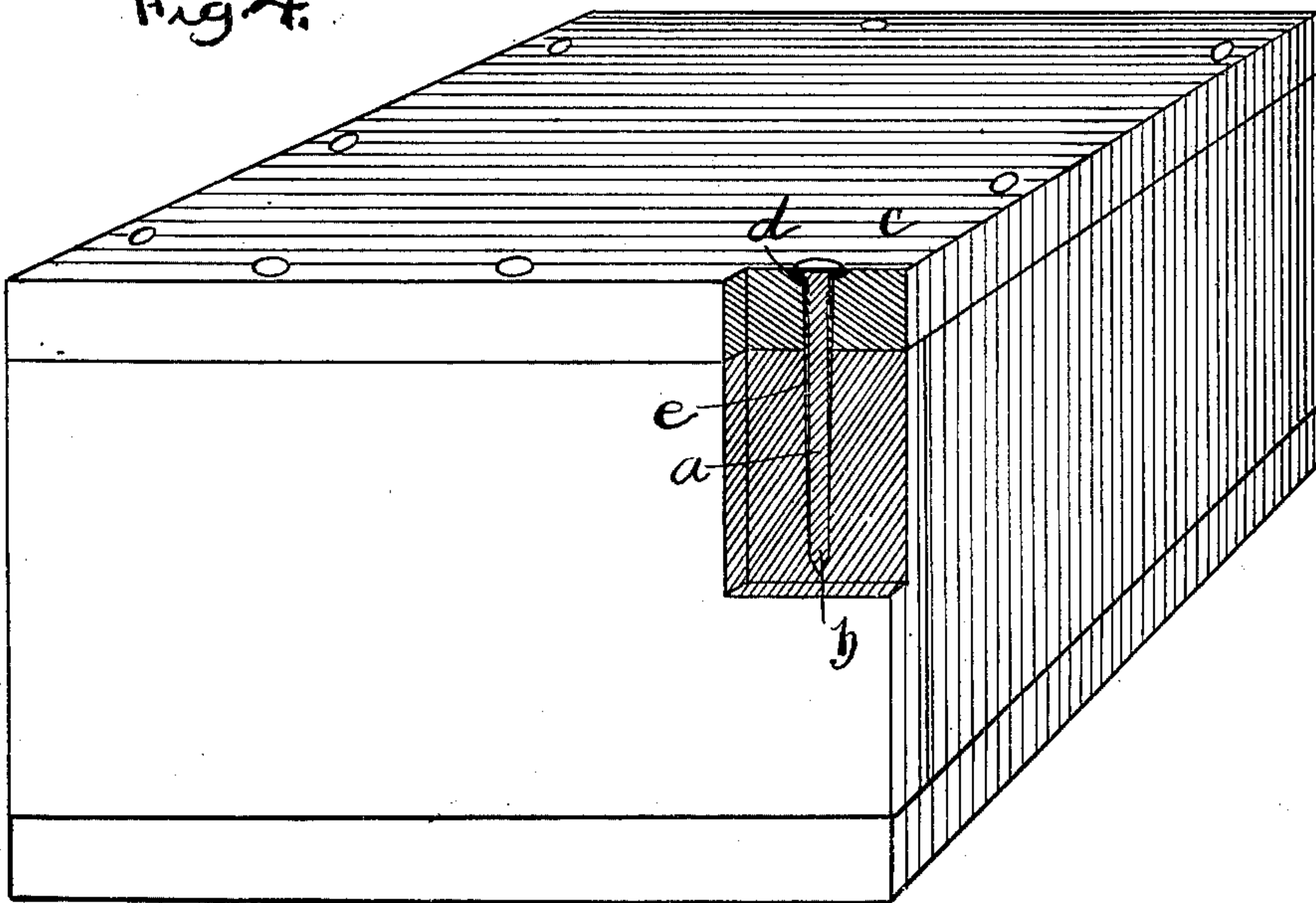


Fig. 4.



Witnesses  
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Att'y



# UNITED STATES PATENT OFFICE.

ROYAL MATTICE, OF DETROIT, MICHIGAN.

## NAIL AND COATING THEREFOR.

SPECIFICATION forming part of Letters Patent No. 731,928, dated June 23, 1903.

Application filed January 19, 1903. Serial No. 139,689. (No model.)

*To all whom it may concern:*

Be it known that I, ROYAL MATTICE, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a certain new and useful Improvement in Nails and Coating Therefor, of which the following is a specification.

It is desirable for many uses and purposes to employ a nail which will be protected against the effects of moisture and dampness and which when driven into the wood will act as a preservative of the wood around the nail.

The objects of the present invention are to furnish a nail closed in a coating, which coating is of a nature to form a preservative for the nail and the wood and which will also add materially to the retention of the nail when driven in the wood without materially affecting the driving of the nail, and to compound a coating the ingredients composing which shall be of a nature forming a preservative and furnishing a resistance against the ready and easy withdrawal of the nail.

The invention consists in the closed nail and the coating therefor hereinafter more particularly described, and pointed out in the claim.

In the drawings, Figure 1 is an elevation of a nail in its natural condition; Fig. 2, an elevation of the same nail with the closure or coating therefor; Fig. 3, a sectional elevation of the nail of Fig. 2, and Fig. 4 a perspective view of a box with one corner in section, showing the nail of the invention in sectional elevation driven into the wood of the box.

The nail shown is a type of the ordinary wire nail; but it is to be understood that the invention is applicable to other types of wire nails and to cut and other styles of nails generally. The nail shown has a stem *a*, with a point *b* and head *c* and niches or notches *d* in the stem below the head, as usual, and the nail as an entirety is coated or closed with a covering or coating *e* of a nature to form a preservative and to increase the tenacity of the nail against being easily withdrawn.

The coating for closing or covering the nail consists of resin, castor-oil, and whiting, and these ingredients are compounded or mixed in the proportions of ninety per cent. resin,

one per cent. castor-oil, and nine per cent. whiting, which will give a coating applicable for general use; but the proportions can be varied somewhat without materially affecting the nature of the coating, and especially where it is desirable to have the coating with greater or less adhesive or tenacious properties, for which purpose the per cent. of resin can be increased or decreased and the other ingredients varied accordingly. The coating is compounded or mixed by first melting the resin, then adding thereto while still in a hot condition the castor-oil and thoroughly combining the oil with the melted resin, and then adding the whiting while the mixture of resin and oil is still hot and thoroughly embodying the whiting in the mixture of resin and oil, producing as a resultant a flux of the required nature to run onto and adhere to the nail as a whole when the nail is dipped thereinto, forming, in effect, what may be termed a "flux" for the exterior surface of the nail. The nails are to be dipped into the flux or coating of resin, oil, and whiting in any suitable manner, so as to be covered or closed by the coating or flux. The resin furnishes the requisite adhesive and enduring qualities, and when tempered with the castor-oil the mixture becomes an emulsion or flux which will adhere closely to the nail when dipped thereinto, and the whiting adds to the emulsion or flux the required tenacity for the covering or closure to resist against the ready and easy withdrawal of the nail, and the whiting also tends to give a lighter or white appearance to the nail and removes the objection common to an ordinary nail of forming a dark stain around the head of the nail in use, and the whiting also adds somewhat to the adhesiveness of the nail when driven.

The covered or closed nail of the invention will drive somewhat harder than an ordinary nail, but not to an extent to interfere with its use, and owing to the adhesiveness of the closure or covering derived from the resin and whiting the nail will draw harder than an ordinary nail, which is very desirable for many purposes. The castor-oil renders the nail moisture-proof and makes the covering or closure a preservative one against moisture or dampness affecting the nail or the



wood, thereby adding to the life of the nail in use. The coating of resin, oil, and whitening when applied hot to the nail by dipping the nail therein or otherwise is sufficiently  
5 flaccid to cover the exterior surface of the nail and become affixed thereto, and the nature of the covering is also one which by cooling becomes hard, so as to remain on the nail when handled and packed without being de-  
10 stroyed by handling in packing, and the covering will be retained on the nail while being handled for driving. The heat produced in driving the nail will be sufficient to render the covering of a flaccid nature, so as not to  
15 interfere with the ready driving of the nail, and by reason of the heat produced in driving the covering will be forced in the direction of the head of the nail, a sufficient body thereof being retained around the nail for  
20 preservative purposes, and the portion forced toward the head of the nail forms a packing under the nail-head and between the head and the wood, which will prevent access of moisture around the head. The light color

given to the nail as a whole by the whitening, in  
25 connection with the protection furnished to the nail as a whole by the closure or covering, prevents streaking from the action of the atmosphere and from moisture, with the result  
30 that the wood adjacent to the head of the nail will not present a dark or discolored appearance after a time, as is the case with an ordinary non-closed or non-covered nail. These  
benefits and advantages found in the nail of  
35 the present invention arise from the covering or closure of the invention and add greatly to the utility of the nail in actual use.

What I regard as new, and desire to secure by Letters Patent, is—

A nail having a covering or closure consisting of resin, castor-oil and whitening, the castor-oil imparting pliability and toughness to the resin and the whitening serving to prevent discoloration, substantially as described.

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Witnesses:

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