

No. 667,555.

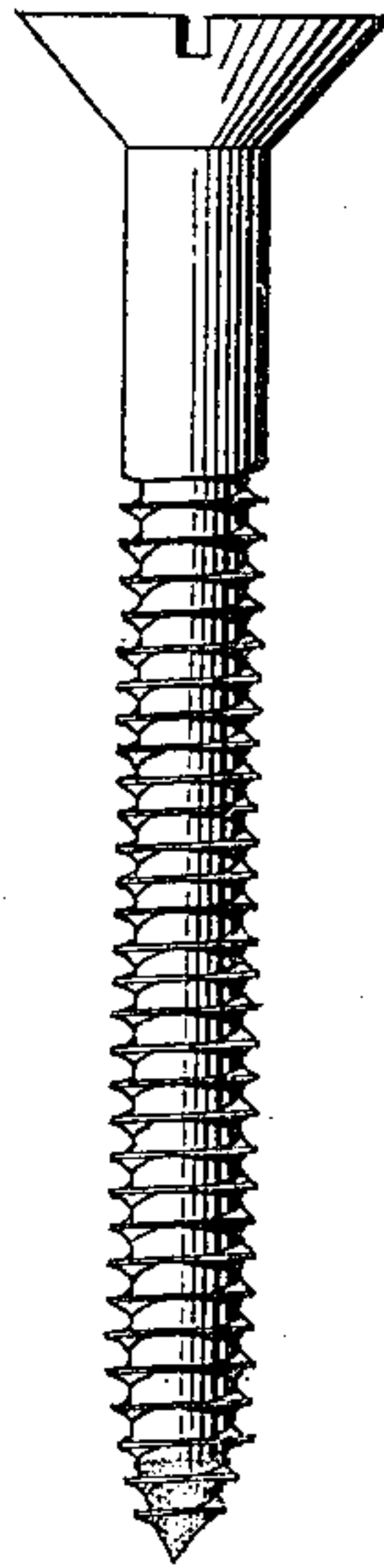
Patented Feb. 5, 1901.

A. W. McGAHAN.  
COATED SCREW.

(Application filed Aug. 10, 1899. Renewed Oct. 23, 1900.)

(No Model.)

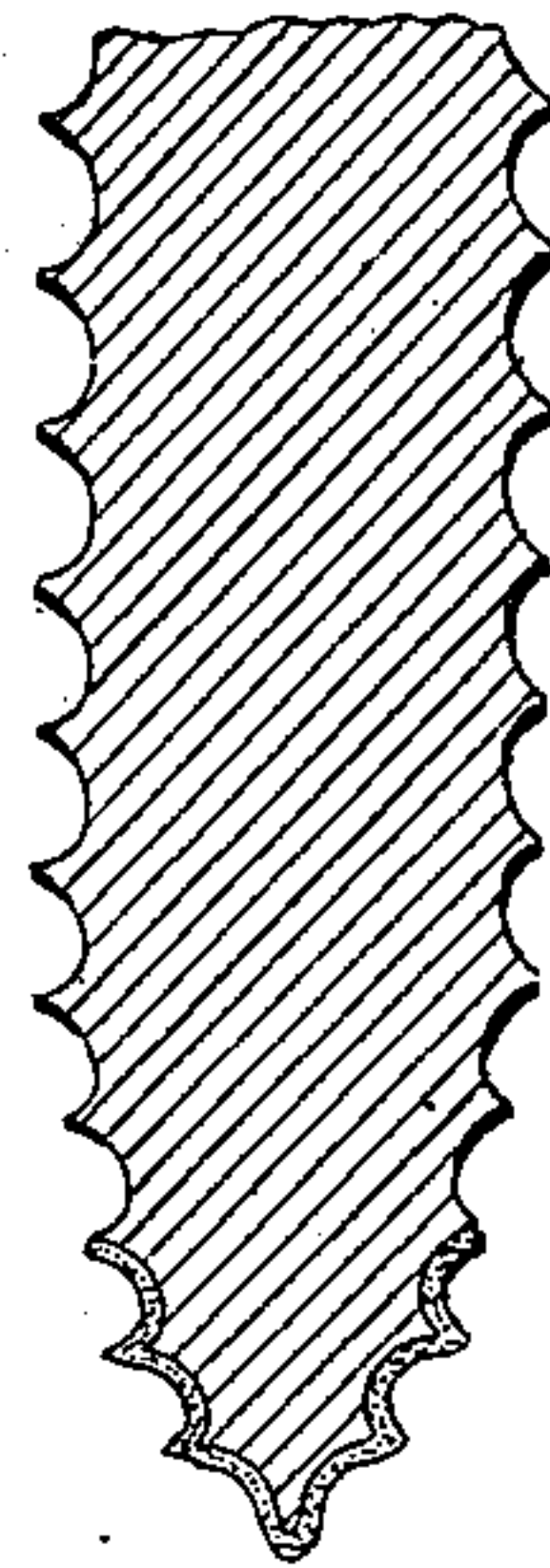
*Fig. 1.*



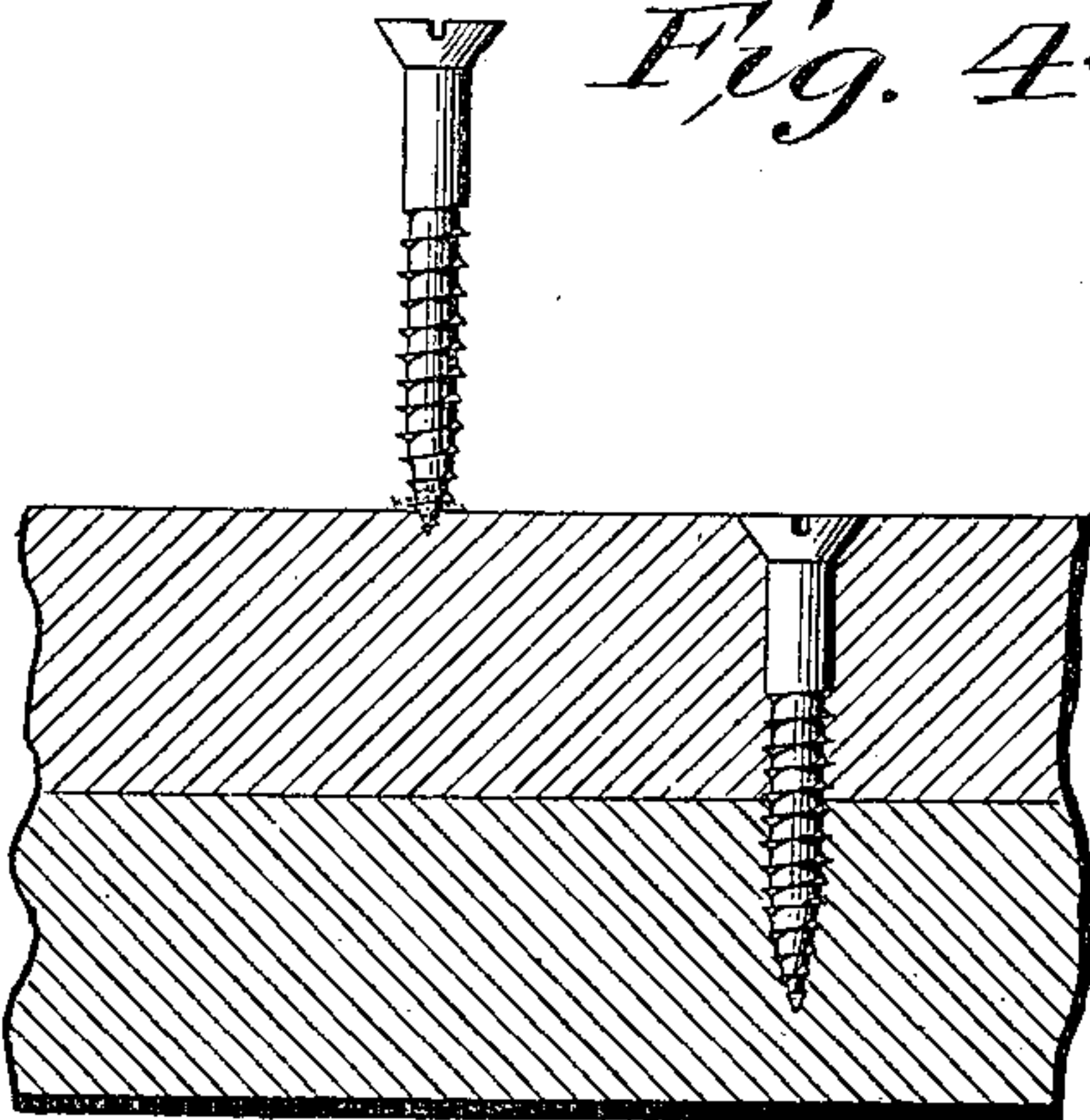
*Fig. 2.*



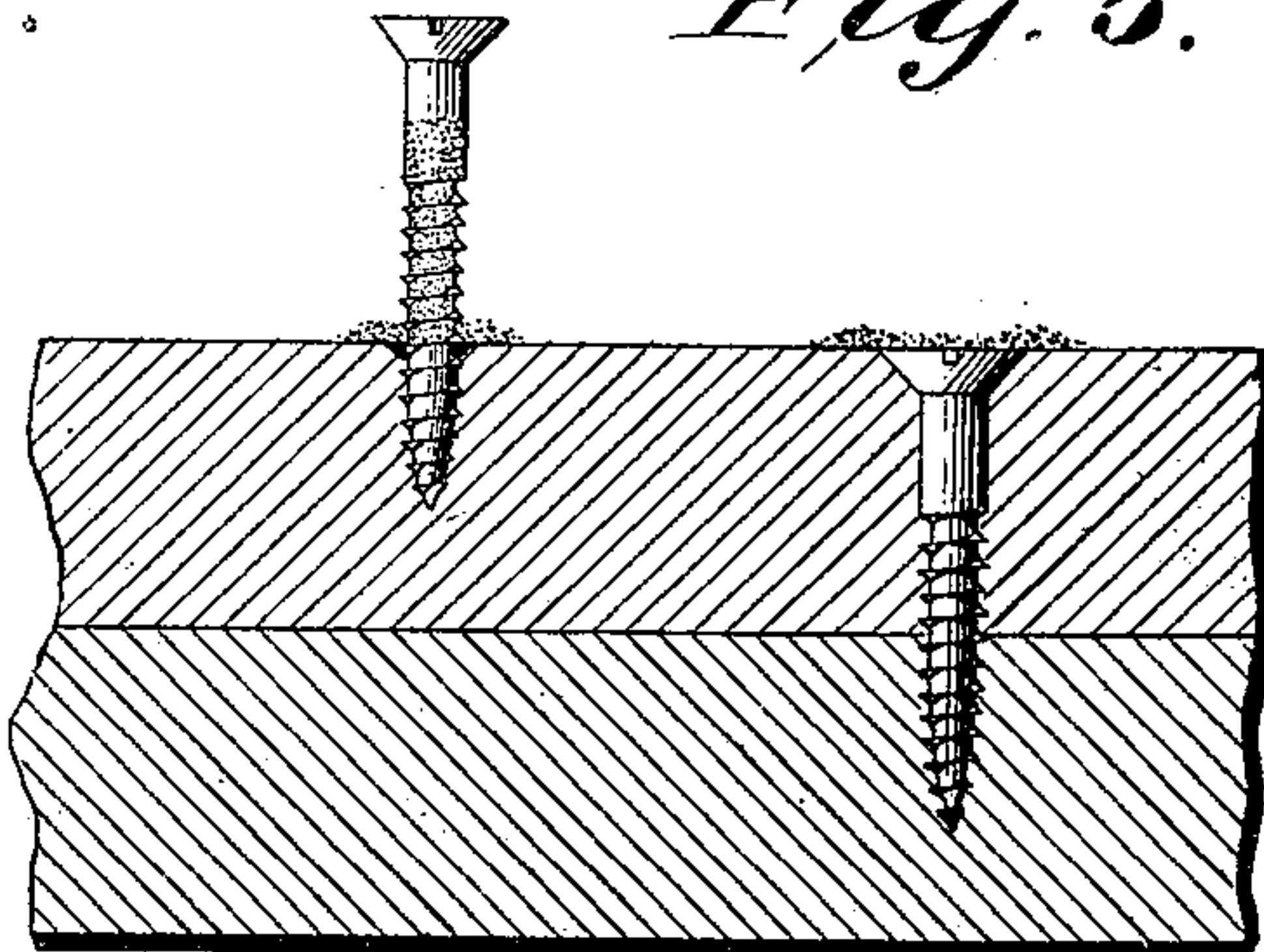
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses

*L. C. Hills,*  
*N. L. Hogan*

Inventor

*A. W. McGahan.*

By

*H. C. Overton*  
Attorney



# UNITED STATES PATENT OFFICE.

ALEXANDER W. MCGAHAN, OF LOS GATOS, CALIFORNIA.

## COATED SCREW.

SPECIFICATION forming part of Letters Patent No. 667,555, dated February 5, 1901.

Application filed August 10, 1899. Renewed October 23, 1900. Serial No. 34,061. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER WILSON MCGAHAN, a citizen of the United States of America, residing at Los Gatos, in the county of Santa Clara and State of California, have invented certain new and useful Improvements in Coated Screws, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in coated screws, and has for one object to coat the extreme point of wood-screws and the like with beeswax in order to facilitate the insertion of the screw into  
15 the material.

A further object of the invention is to assist in the insertion of the screw into the wood or other material, and thus effect a considerable saving of time and labor employed.

20 I accomplish the objects of my invention through the process of dipping the extreme points of the screws in melted beeswax, which immediately hardens upon the screw, when it is removed from the molten mass and remains  
25 intact thereon until the screw is used unless subjected to an excessive heat.

Briefly described, my invention consists of dipping the extreme point of the screw into melted beeswax, and this may be accomplished by hand, or various methods may be employed, such as mechanical means, for dipping the screw at the time of finishing the same upon the screw-machine. The screw is coated or dipped in the beeswax for but a  
30 slight distance at its insertion or pointed end in order that as the same is inserted the beeswax lubricates the passage of the screw during its entire travel, and as the greater diameter of the screw passes into the passage  
35 all the beeswax is removed from around the mouth of the passage in order that no accumulation of the beeswax will be left at this point when the screw is fully inserted.

In order to clearly describe my invention and illustrate the objects and usefulness of the same, reference will be had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference will be employed to designate similar  
45 parts throughout the several views, in which—

50 Figure 1 is an enlarged side view of an ordinary wood-screw, showing the extreme point

of same tipped or coated in accordance with my invention. Fig. 2 is a similar view of an ordinary wire nail coated or tipped in the same  
55 manner. Fig. 3 is an enlarged vertical sectional view of a portion of an ordinary wood-screw, showing the coating of beeswax on the tip or insertion end thereof. Fig. 4 is a sectional view of a portion of two blocks of wood,  
60 shown for diagrammatical purpose with the screw coated in accordance with my invention shown in the position for insertion and also fully inserted in the wood. Fig. 5 is a like view showing a screw coated throughout  
65 its length to illustrate the manner in which the material used for coating would be removed as screw was fully inserted in the wood.

Referring now to the drawings by reference-numerals, 1 indicates the screw, which in the  
70 drawings is shown enlarged and of the ordinary wood-screw type. By any suitable means, such as dipping or the like, I apply to the point of this screw a coating of beeswax 2, which is applied in the molten form,  
75 the point of the screw being inserted in the molten mass and upon its removal therefrom immediately hardens thereon. This beeswax is intended to lubricate the point of the screw and assist the passage of the same into the  
80 wood or other material into which it is being inserted. This coating 2 is only applied to the extreme point of the screw, or, in other words, to a portion of the tapering insertion end, the coating or beeswax lubricant ending  
85 below the point where the taper of the screw commences. This is desirable in order that when the screw is inserted, the point only being lubricated, it is carried by the screw during its entire travel, and as the larger diameter of the screw enters the passage any portion of the lubricant or beeswax that has been removed from the screw during the insertion thereof is engaged by the threads of the screw upon the larger diameter and carried into the  
90 passage, so that no surplus or accumulation of the beeswax around the mouth of the passage is permitted.

In Fig. 2 I have shown an ordinary wire nail 3 with the beeswax coating 2 applied to  
10 the extreme or insertion point thereof, showing how my process may be made applicable to nails as well as screws.

I am aware that heretofore nails have been



coated with a composition or substance to facilitate their driving, with the composition or substance forming the coating adapted to act as a preventative to dampness or wet around the nail, the latter being the main object; but in this construction the shank of the nail is largely coated throughout and could not accomplish the objects of my invention as the coating would be removed from the shank during the driving process and accumulate around the head of the nail.

To illustrate my invention over the above, I have shown in Fig. 4 the screw 1 tipped with beeswax in accordance with my invention in position for insertion and also the screw when fully inserted. In Fig. 5 the results of the screw 1 when coated throughout its shank is shown, wherein the beeswax 2, when the screw is fully driven or inserted, has been removed during the driving process and is left adhering to the wood around the mouth of the passage. This coating of the entire shank besides being largely removed during the driving process is also compressed within the threads of the screw and is carried around thereby as the screw is driven, serving no lubricating purpose.

By tipping the ends of wood-screws, as herein described, with beeswax the screws may be inserted readily into hard woods and the like with a much greater ease than an untipped or unlubricated screw, and no surplusage of the lubricant being left at the mouth of the passage no oil or grease spots are made

which will prevent the paint or varnish from adhering thereto. 35

The specific form of lubricant used I have found the only one to accomplish the results desired, and as it is of a naturally heat-resisting nature will not melt when the screws are packed for shipping unless subjected to an excessive heat. 40

I do not claim, broadly, the process of coating a screw or nail with any substance to facilitate the insertion of the same; but 45

What I do claim, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a metallic wood-screw having its end coated with beeswax, substantially as described. 50

2. As a new article of manufacture, a metallic wood-screw having its pointed end coated with a lubricant, substantially as described.

3. As a new article of manufacture, a metallic wood-screw having its pointed end coated with beeswax which is applied in the molten state, substantially as described. 55

4. As a new article of manufacture, a metallic wood-screw having a coating of wax applied to its pointed end, substantially as described. 60

In testimony whereof I affix my signature in the presence of two witnesses.

ALEXANDER W. MCGAHAN.

Witnesses:

J. W. RIDDLE,

GEORGE W. KELLUM.