

G. Freeman.

Wood Screws.

N^o 29,963.

Patented Sept. 11, 1860.

Fig: 2

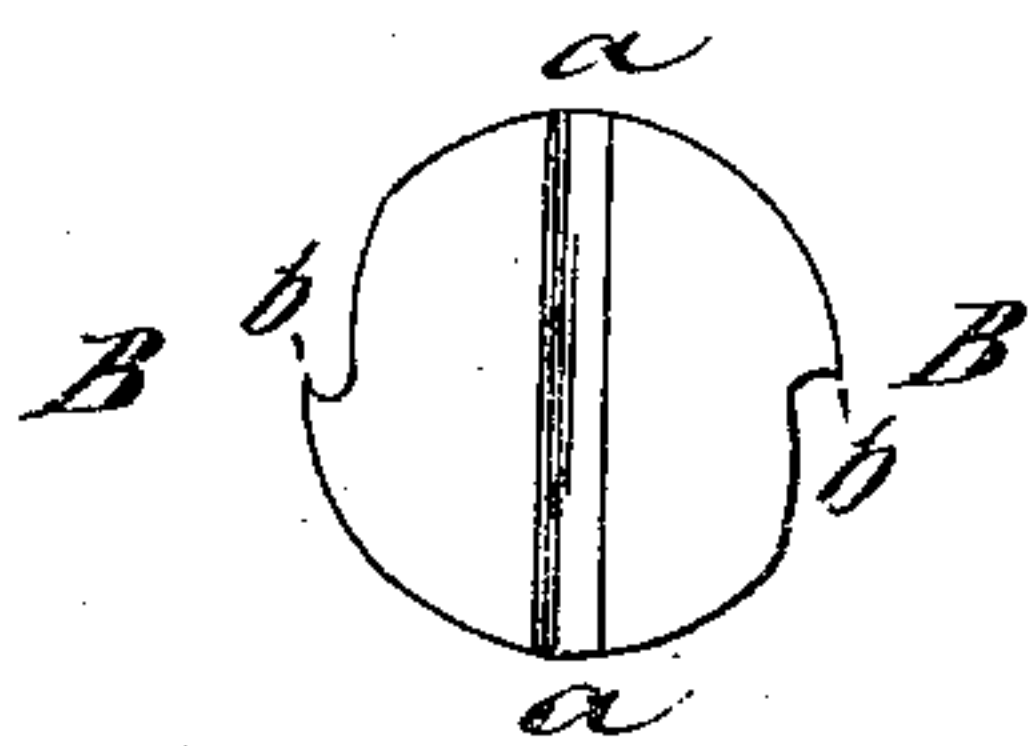
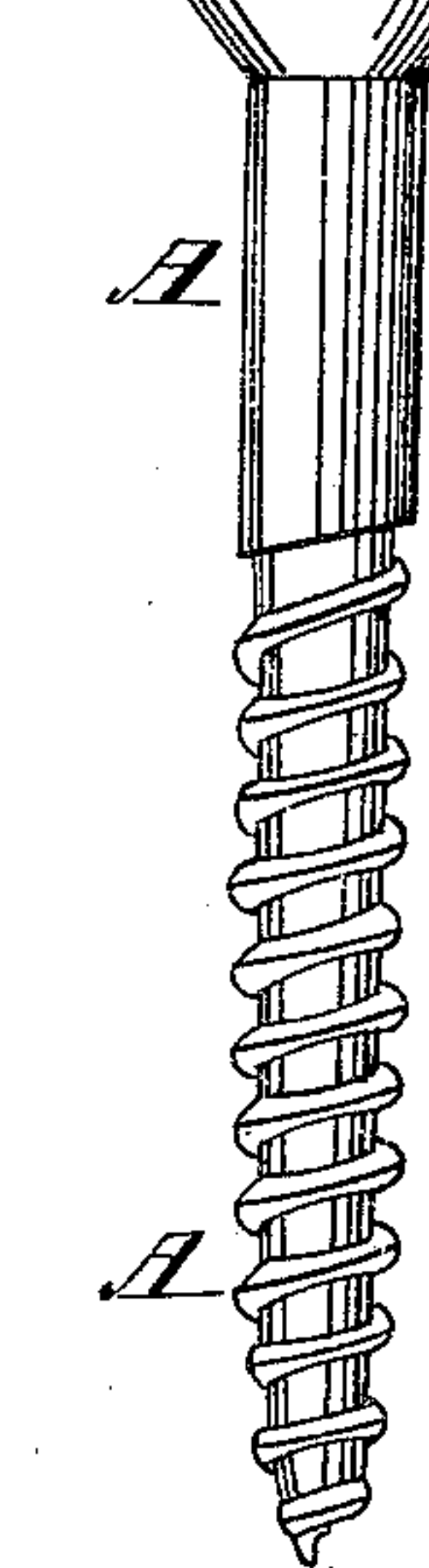


Fig: 1



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE FREEMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN WOOD-SCREWS.

Specification forming part of Letters Patent No. 29,963, dated September 11, 1860.

To all whom it may concern:

Be it known that I, GEORGE FREEMAN, of the city, county, and State of New York, have invented a certain new and useful Improvement in Wood-Screws; and I do hereby declare that the following, taken in connection with the accompanying drawings, which form part of this specification, is such a full and clear description thereof as to enable others skilled in the manufacture and use of wood-screws to make and use this my invention.

In the use of wood-screws for various kinds of work, especially where the wood is hard or the screws are what may be termed "large size," it generally is desirable and commonly necessary, as wood-screws have been previously constructed, not merely to bore a hole for the reception and bite of the body and threaded portion of the screw in the wood or pieces of wood, as the case may be, but also to form a countersink or larger aperture by rimming out the orifice, as above, at its mouth or entry end to receive the usually taper-shaped head of the screw, in order that said head may be embedded in the wood or be flush with the surface of the latter, as required. This is not only desirable for appearance's sake to do away with an unsightly projection of the screw-head, but to secure to the screw a firmer grip, hug, or drawing action by establishing for the screw-head a proper seat or bearing. To countersink the head of the screw, however, usually requires a separate bit or rimming-tool to be used before the screw is inserted and after the hole has been drilled or bored for the body of the screw. This not only involves additional labor and loss of time, and that to a serious extent, in a piece of work where many screws have to be inserted, but it is seldom that the countersinking or tool corresponds with the precise angle or shape of the head of the screw, so that but an imperfect seat or bearing is often formed for the head and an unsightly gap left in the surface of the wood. All these objections—and there are or may be others, which it is not necessary here to name—are removed by my invention, which consists in combining with a wood-screw a cutter or cutters connected with or projecting from the head of the screw at its side or sides in such manner as that in turning the screw "home" said cutter or cutters shall countersink the neces-

sary aperture in the wood for the reception of the head of the screw, as before mentioned.

In the accompanying drawings, Figure 1 represents a longitudinal view of a wood-screw with my invention in one of its forms applied thereto, and Fig. 2 an outer or end view of the screw-head as improved.

In the figures, A represents the body of the screw, which may have any kind of thread cut upon it and be made taper at its inner end or otherwise.

B is the head of the screw, (here shown of the usual taper shape,) with a channel *a* in it to receive the end of a screw-driver to turn the screw, but said or other suitable head being formed or provided with the novel addition of a cutter or cutters *b*, arranged down or along the sides of the head and preferably of a graduating form, so as to cut easy at first and gradually heavier or wider as the head of the screw enters the wood. These cutters may be made by reducing certain portions of the head of the screw, so as to cause them to project from the sides of the head, or, what is equivalent thereto, extending certain portions of the head to produce a like effect, and this may either be accomplished by an after operation in the manufacture of the screw or when forming the "blank." As before observed, there may be any number—one or more—of these cutters formed around the head of the screw. Thus they may be sufficiently thick or numerous to make of the screw-head a rose-head-rimming tool. Said cutter or cutters, too, may be situated at different points around the head of the screw, relatively, say, to its channel *a*. Thus they may be intermediate to the ends of the channel, or they may be situated at the ends of it—say one at the one end of the channel on the one side thereof and another at the other end of the channel on the opposite side of the same and so as to face in opposite directions. Such cutter or cutters also may either be made straight-edged or beveled or scalloped, and sharp or blunt, as desired, likewise may be set running down the sides of the head in a plane parallel with the axis of the screw, as here shown, or in an oblique direction thereto, as, for instance, inclining backwardly, so as to facilitate the removal of or "work out" the cuttings or shavings they make in countersinking the aperture for the reception of the

screw-head. In some cases it may not be desirable that they should cut very "free," so as to increase the "hug" of the screw in turning it home.

This my invention is applicable to different kinds of wood-screws irrespective of the material or metal they are made of, and whether the same be cast or wrought. It makes of the wood-screw both a wood-screw proper and rimming or countersinking tool.

Having described my improvement in wood-screws, I claim as new, useful, and my invention—

The combination, with a wood-screw, of a countersinking tool or cutter, by providing or forming the head of the screw with a cutter or cutters for operation substantially in the manner described.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

GEO. FREEMAN.

Witnesses:

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WM. D. JUDSON.