

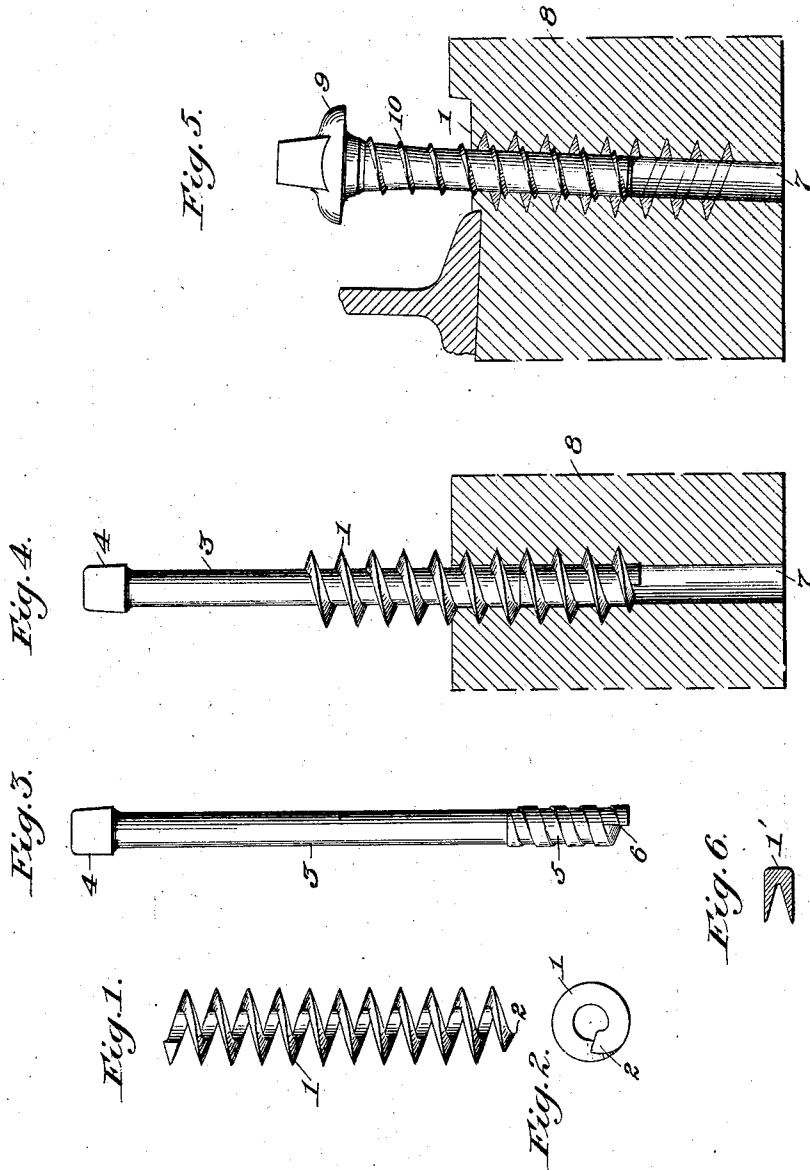
J. V. E. THIOLLIER.

PROCESS OF AND MEANS FOR SECURING THREADED BOLTS IN WOOD AND THE LIKE.

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1,011,392.

Patented Dec. 12, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

JEAN VINCENT EMMANUEL THIOLLIER, OF PARIS, FRANCE.

PROCESS OF AND MEANS FOR SECURING THREADED BOLTS IN WOOD AND THE LIKE.

1,011,392.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed September 10, 1908. Serial No. 452,496.

To all whom it may concern:

Be it known that I, JEAN VINCENT EMMANUEL THIOLLIER, a citizen of the French Republic, and resident of Paris, France, have invented a certain new and useful Process of and Means for Securing Threaded Bolts in Wood and the Like, of which the following is a specification.

The bolt-armatures of the Thiollier system consist of a steel helix, having a suitable cross section and the same pitch as the threads of the bolt or screw-spike to be secured, this armature being seated in a helical groove cut by a tap in the wall of a hole bored in the wood.

The present invention dispenses with the previous tapping of the hole, the armature being screwed directly into place and forming its own seat in the wood. For this purpose, a helix is used having a sharp edge. This armature is rigidly and non-revolubly supported on a special tool and it then suffices to simply screw the armature into the cylindrical bored hole, the sharp threads of the armature forcing their way into the wood and displacing and compressing its fibers.

Referring to the accompanying drawings: Figure 1 is a side elevation of the preferred armature; Fig. 2 is a bottom end view of this armature; Fig. 3 is a side elevation of the tool used to insert the armature; Fig. 4 is a sectional side elevation, showing the armature on the tool and partially screwed into the cylindrical hole in the wood; Fig. 5 is a sectional side elevation showing the armature in place in the wood and a bolt partially inserted; and Fig. 6 is a transverse section of a portion of a modified armature.

The armature 1 shown in Fig. 1 is a helix of triangular steel wire, constituting a sharp thread. The lower end 2 of the armature is slightly bent inward, as shown in Fig. 2.

The tool for inserting the armature shown in Fig. 3 comprises a cylindrical shank 3, a polygonal head 4, and a lower end having a groove 5 to guide the armature onto the tool and a terminal shoulder 6.

To insert the armature, it is screwed onto

the tool until its inturned end 2 engages the shoulder 6, preventing further clockwise rotation. A cylindrical hole 7 is bored in the wood 8 and the armature, rigidly and non-revolubly carried by the tool, is screwed directly into the hole by a wrench applied to the head 4. The armature thereby forms its own seat, displacing the fibers of the wood and causing them to bear tightly and elastically against the faces of the armature, providing a firm seat therefor. The tool is then screwed out and the bolt 9 to be secured in the wood is screwed in, its thread 10 engaging the lower helical wall of the armature.

Fig. 6 is a cross section of a modified armature having two integral parallel sharp edges.

I claim:

1. The process of securing threaded bolts in wood or the like, which consists in boring a hole into the wood, rigidly supporting on a suitable tool a helical armature having a sharp cutting outer edge, inserting the end of the armature and tool into said hole, rotating the tool and armature and thereby causing the armature to force its way into the wood, those portions of the wood displaced by the armature bearing tightly and elastically against its adjacent faces, withdrawing the tool and leaving the armature in engagement with the wood, and screwing the bolt into the hole with its threads in engagement with the armature.

2. In combination, a piece of wood or the like having therein a substantially cylindrical hole, and a helical elastic armature having a sharp outer edge, seated in the wall of said hole, all of the wood of those portions of the wall occupied by the armature being displaced and bearing against the adjacent faces of the armature, and the armature being held in contact therewith by its own elasticity.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

JEAN VINCENT EMMANUEL THIOLLIER.

Witnesses:

ADOLPH STURM,
H. C. COXE.