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I. C. WOODWARD

SCREW THREAD

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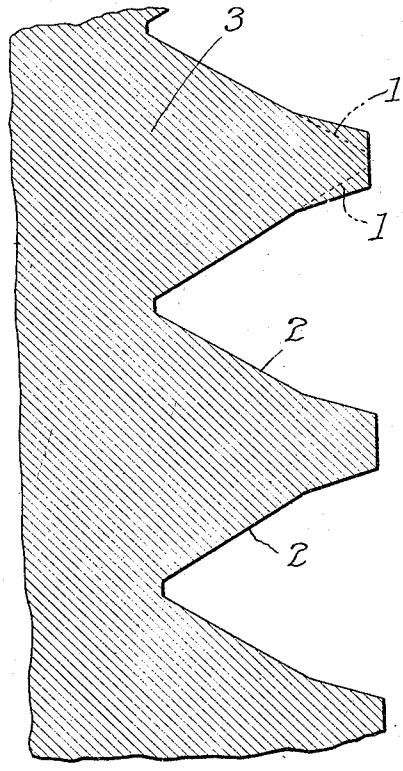

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UNITED STATES PATENT OFFICE.

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SCREW THREAD.

Application filed March 25, 1922. Serial No. 546,653.

To all whom it may concern:

Be it known that I, IRVING C. WOODWARD, a citizen of the United States of America, and a resident of Syracuse, county of Onondaga, and State of New York, have invented a new and useful Improvement in Screw Threads, of which the following is a specification.

This invention relates to screw threads of the general class designed for the purpose of resisting accidental motion of one of a pair of coacting threaded members. Several different types of threads have been proposed for this purpose, but usually depart from the normal design to such an extent as to be impractical. It is the object of the present invention to produce a reliable locking screw thread with a minimum of departure from the standard design.

The object of the invention is accomplished by the thread as illustrated in the drawing, which shows a fragmentary view in section of a member provided with the improved thread.

Briefly stated the invention consists in any one of the standard forms of thread, for example, one having a sixty degree included angle, but with this angle decreased from normal near the apex of the thread. Thus the somewhat enlarged apex of the thread serves to produce the desired frictional resistance with a coacting thread. The coacting thread may be standard throughout. To cut this type of thread requires taps or dies only slightly altered from those which are employed for cutting the standard thread of the same size and pitch but without the enlarged apex.

The drawing shows the enlargement at the apex of the thread somewhat exaggerated. The dotted lines 1 represent the form of the thread at its apex as it would appear if cut with the standard tools for this type of thread, that is, the angle is uniform from the base to the crest of the thread. In the present form of thread this angle of the sides 2 is uniform from the base 3 to about two-thirds more or less of the distance between the base and the crest. The remainder of the thread near the crest has a less included angle. A nut having this screw thread will lock tightly on a bolt having a standard thread, the enlarged crest of the tread wearing off sufficiently to allow the passage of the thread between the threads of the bolt.

It may be seen from the foregoing that the thread is not weakened by the present improvement, but is in fact made slightly stronger by having more body, and that the cutting tools required differ only slightly from normal taps and dies. The pitch of the thread is not affected by this improvement since it may remain normal throughout the threaded portion of the member in which the thread is cut.

I claim:

1. A member having a thread cut therein, the angle formed by the sides of the thread being uniform from the base outwardly to a point near the crest of the thread, from which point the angle decreases to the apex of the thread.

2. A member having a standard V form of thread, but having an enlargement near the apex of the thread.

3. A member provided with a thread, the included angle of which is less near the apex of the thread than throughout the main body portion thereof.

Signed at Syracuse, N. Y., this twenty-first day of March, 1922.

IRVING C. WOODWARD.