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L. MÜHLIG

1,872,166

SCREW

Filed Oct. 14, 1931

FIG. 1.

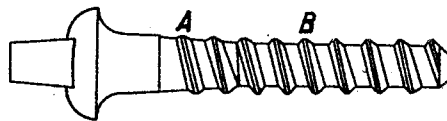
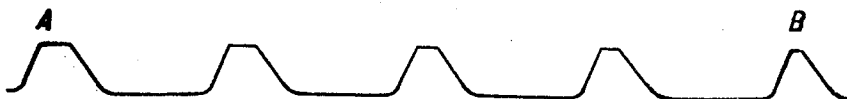


FIG. 2.



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UNITED STATES PATENT OFFICE

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SCREW

Application filed October 14, 1931, Serial No. 568,768, and in Germany November 6, 1930.

I have filed an application in Germany on the 6th November, 1930; in Poland on the 22nd January, 1931; and in Czechoslovakia on the 25th March, 1931.

5 The present invention relates to screws, particularly for use on railway sleepers.

Wood screws are already known in which the thread is provided in proximity to the point of the screw with a groove of gradually
10 diminishing cross section, which groove causes a reduction of the triangular cross section of the thread towards the point of the screw by dividing the section into two triangular cross sections of smaller area. The triangular cross
15 section of the thread proper, however, still retains the same length of base line from its starting point up to its termination, and it is only the height of the thread which diminishes towards the point of the screw.

20 The known wood screws are unsuitable for use on railway sleepers, inasmuch as when they are employed the compressing or forcing away of the wood only takes place at the tips of the threads. In consequence of its particular shape the thread of the known wood screw is operative principally at the point of the screw or screw bolt, whereas the head portion of the screw which does not exert a wedging action is less operative, although it is just in
25 proximity to the surface of the sleeper that the greatest effects of the rain or snow, such as contamination, decaying the wood, etc., arise so that the maximum compression effect exerted by the thread is required at that point.

35 It is the principal object of the present invention to provide a screw, particularly for use on railway sleepers the cross section of the thread of which likewise decreases towards the point of the screw but which is
40 free from the above-mentioned drawbacks. According to the invention the base line of the cross section of the thread, which may be of triangular, trapezoidal or other suitable shape, increases in length continuously from
45 the point of the screw towards the head thereof, whilst the pitch of the thread and the angle of inclination of the sides of the thread to the base line remain the same.

50 By this novel construction the result is obtained that in consequence of the wedging ef-

fect arising when the screw is screwed into the wooden sleeper, the screw becomes more firmly seated in the wood, particularly at the base lines of the thread, and there is no possibility of the screw working loose. As the
55 maximum wedging action takes place in proximity to that part of the thread, the cross section of which has the longest base line of the thread, i. e. at the end of the thread adjacent to the head, the maximum action of the weather and atmosphere on the wood and on
60 the screw which takes place at the surface of the sleeper is most efficiently reduced.

A preferred constructional form according to the invention is illustrated by way of example in the accompanying drawing, in
65 which:

Fig. 1 is a front elevation of a screw according to the invention, and

Fig. 2 is a view of the profile of the screw
70 thread to a larger scale.

As can be seen from the drawing the base line of the screw thread, which is shown by way of example as being of trapezoidal cross section, increases in length continuously from
75 B towards A, i. e. in the direction running from the point of the screw towards the head thereof, whilst the pitch of the thread and also the inclination of the sides of the latter remain unaltered.

80 The novel screws according to the invention can be manufactured in the hitherto customary manner by hot rolling methods.

I claim:

1. A screw, particularly for use on railway
85 sleepers comprising in combination: a shank member; a head on said shank member; and a screw thread on said shank member of such form that the base line of the cross section of the thread increases continuously in length
90 from the point of the screw towards the head thereof whilst the pitch of the thread and the angle of inclination of the sides of the thread to the base line remain the same.

2. A screw, particularly for use on railway
95 sleepers, comprising in combination: a shank member; a head on said shank member; and a screw thread of substantially triangular cross section on said shank member, the base line of the cross section of which thread in-
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creases continuously in length from the point of the screw towards the head thereof, whilst the pitch of the thread and the angle of inclination of the sides of the thread to the base line remain the same.

Signed at Warsaw, Republic of Poland,
this thirtieth day of September, 1931.

LUDWIK MÜHLIG.

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