No. 877,131. PATENTED JAN. 21, 1908.

L. SEARELLE.

SCREW.

APPLICATION FILED NOV. 20, 1906.

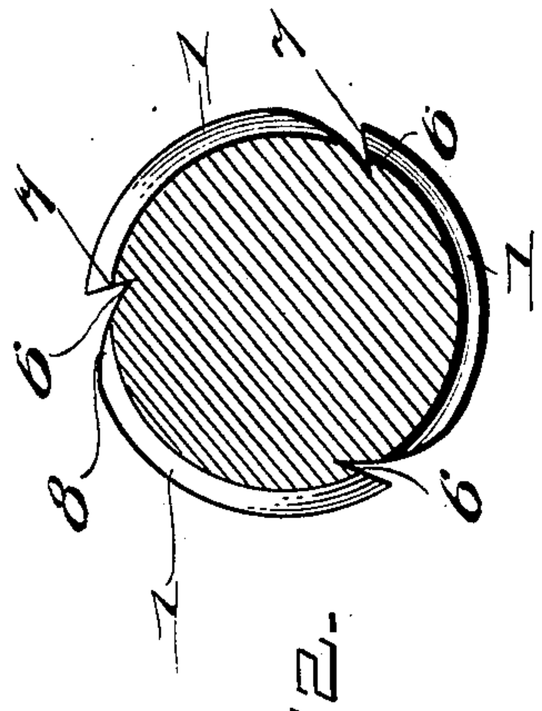

Fig. 2.

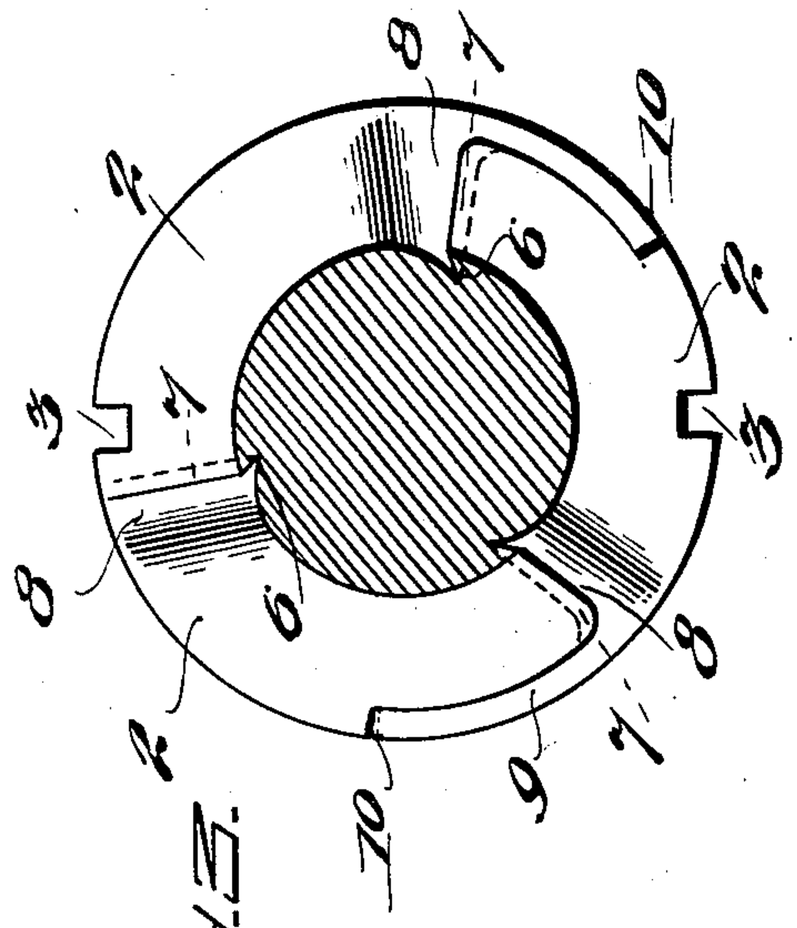

Fig. 3.

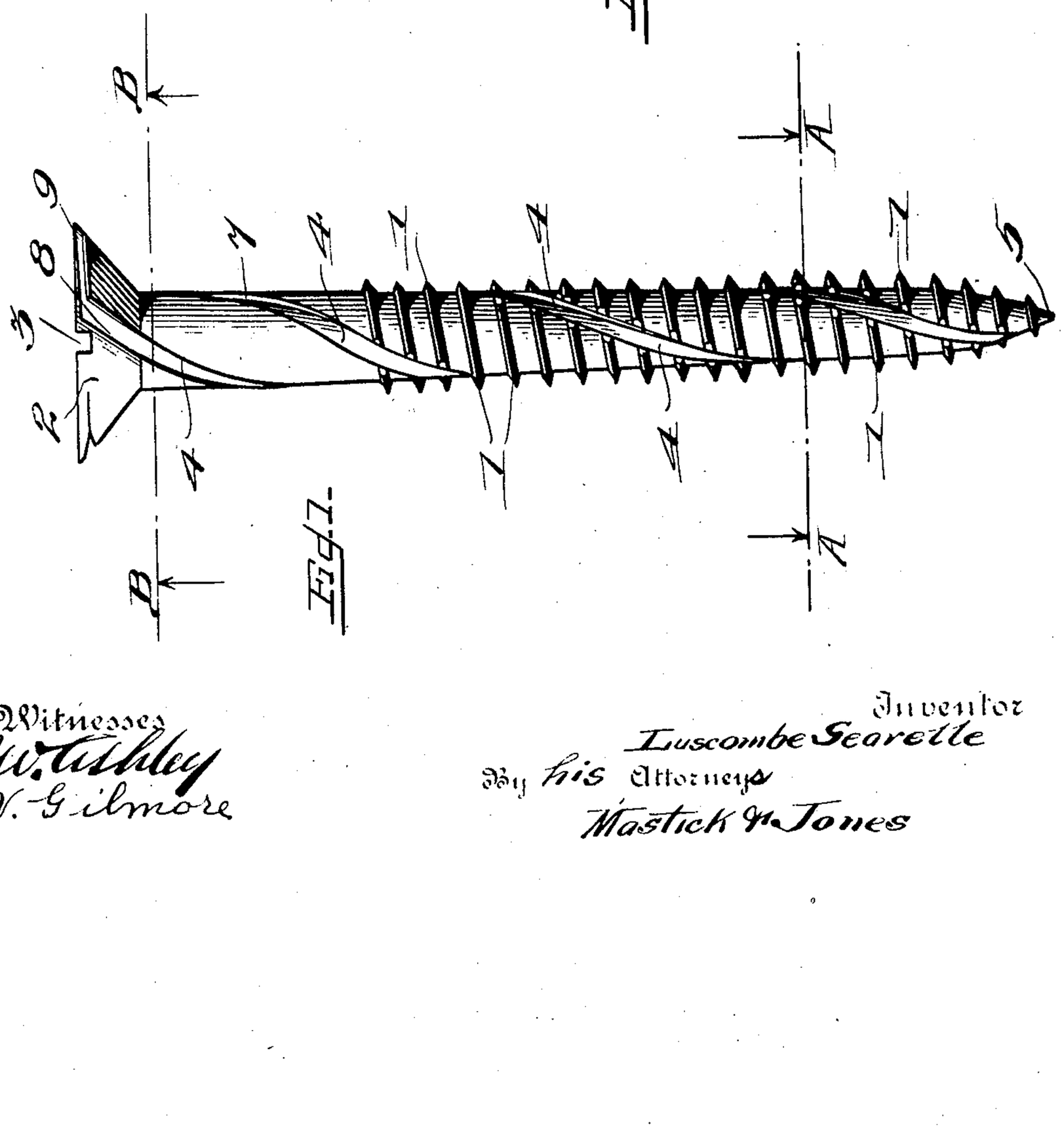

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

LUSCOMBE SEARELLE, OF LONDON, ENGLAND, ASSIGNOR TO WALTER C. JORDAN, OF NEW YORK, N. Y.

SCREW.

No. 877,131. Specification of Letters Patent. Patented Jan. 21, 1908.

Application filed November 20, 1906. Serial No. 344,300.

To all whom it may concern:

Be it known that I, LUSCOMBE SEARELLE, a subject of the King of England, residing at London, England, have invented a certain new and useful Improvement in Screws, of which the following is a specification.

My invention relates to an improvement in screws and has as its object the production of a screw which bores its own hole and countersinks its own head when driven in with an ordinary screw driver. It can be driven into the hardest of wood without the necessity of first making a hole with a gimlet or otherwise and will countersink itself without the necessity of making special provision for the countersinking as heretofore.

In the following, in connection with the accompanying drawing, I have described one form of screw embodying my invention, the features thereof being more particularly pointed out hereinafter in the claims.

In the drawing Figure 1 is a side elevation of a screw embodying my invention. Fig. 2 is a sectional view of the same on an enlarged scale along the line A—A of Fig. 1 and Fig. 3 is a sectional view on an enlarged scale along the line B—B of Fig. 1.

Similar numerals indicate similar parts throughout the several views.

Fig. 1 represents an ordinary screw in which 1, 1, are the screw threads, 2 the head and 3 the groove in the head for the reception of the screw driver. 4, 4, 4, 4, are grooves cut spirally across the threads 1, 1, and extending parallel to each other from the point 5, of the screw to the head 2. The grooves 4 are preferably under cut as at 6 and beveled as at 7 to provide a sharp cutting edge. The grooves are extended up onto the underside of the head as at 8 and as they approach the top of the head turn along just under the head as at 9, parallel with the top surface of the head and adjacent to it, both edges of the portion 9 preferably being sharp cutting edges. The upper edge of the portion 9 may be coincident with the edge of the head 2 but in order to properly countersink the screw, the portion 9 should not extend over or through the edge of head 2 as in that case the screw could be driven in to a point where the head would not be flush with the wood into which it was driven. Furthermore the portion 9 should preferably terminate bluntly as at 10 in order to stop the screw from being driven further after it is properly seated.

The object of the grooves 9 along the lower edge of the head is to provide means for countersinking the head in the wood into which the screw is driven. These grooves permit the head of the screw to seat itself flush with the surface of the wood, the blunt points 10 acting to check the further inward movement of the screw by crowding against the wood fibers with which they contact.

It is obvious that the number of spiral grooves on the screw may be varied according to the size of the screw, a large screw requiring more spirals than a small one. I have found that for a medium sized screw three grooves are sufficient. It is not necessary to turn all of the grooves along the edge of the head as if only two grooves are so turned the countersinking can be done satisfactorily. The grooves may not be under cut but may extend only the depth of the threads.

The form of screw as described cuts its own way into the wood the grooves filling up with the saw dust and every thread of the screw embedding itself in the wood. A gimlet or other means may be used to expedite operation but is not necessary and would be advisable under any circumstances only to start the hole.

Whether the screw is tapering or of the same diameter throughout is immaterial as the invention is applicable to either. I do not restrict myself to the details as shown and described as the same are intended to be illustrative of my invention only.

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

1. A countersinking screw having a groove cut spirally across the threads, extending the length of the screw up onto the under side of the head and along the lower edge of the head.

2. A countersinking screw having a series of grooves cut parallel with each other spirally across the threads, extending up onto the under side of the head and turned along the edge of the head, each of said grooves being provided with a cutting edge.

3. A countersinking screw having means for countersinking the head comprising angled grooves parallel with the top surface of the head and adjacent to it and located on the under side of the screw head.

4. A countersinking screw having a groove cut spirally across the threads, extending the

length of the screw up onto the under side of the head and along the lower edge of the head and terminating bluntly.

5. A countersinking screw having means for countersinking the head comprising angled grooves parallel with the top surface of the head and adjacent to it, said grooves terminating bluntly.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LUSCOMBE SEARELLE.

Witnesses:
SEABURY C. MASTICK,
WALTER C. JORDAN.