No. 883,778. PATENTED APR. 7, 1908.

J. M. BOYLE.

METHOD OF IDENTIFYING ARTICLES AND SUCH IDENTIFIED ARTICLE.

APPLICATION FILED MAR. 14, 1907.

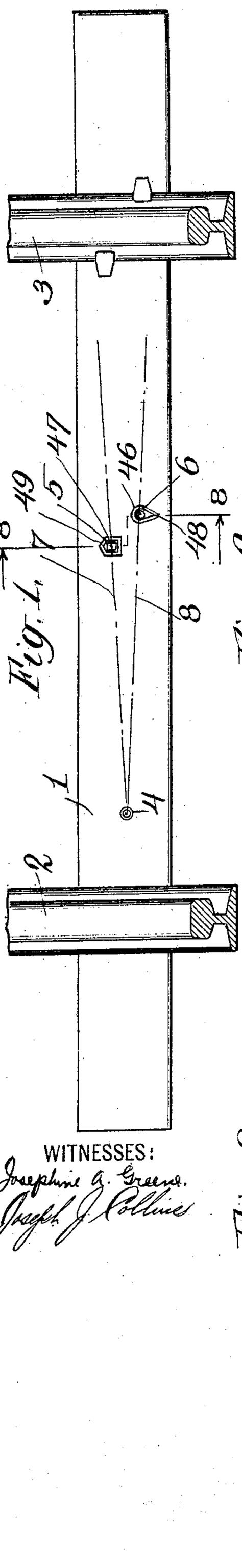

Fig. 1.

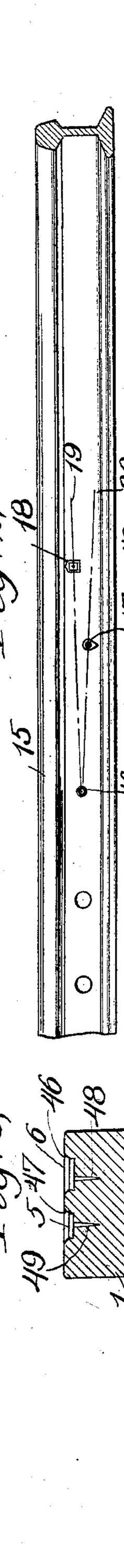

Fig. 2.

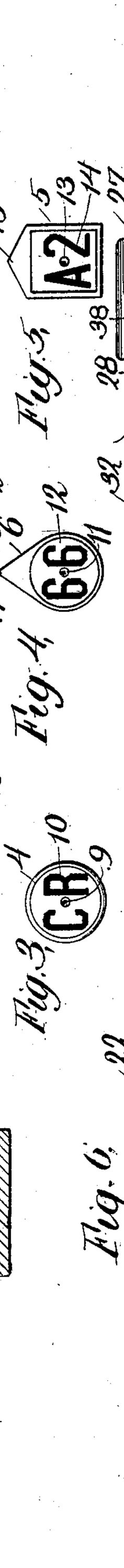

Fig. 3.

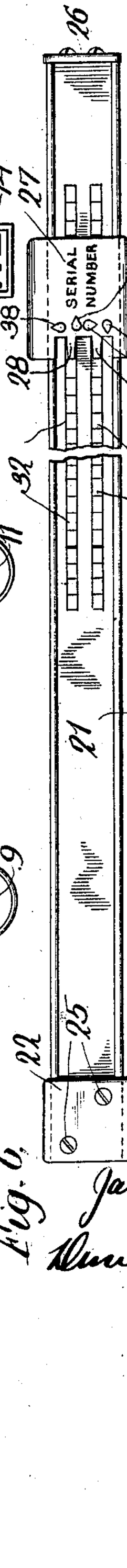

Fig. 4.

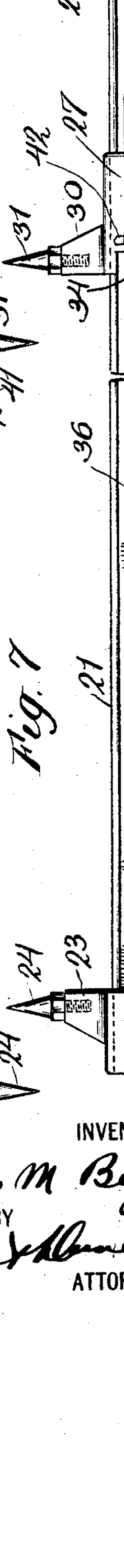

Fig. 7.

Fig. 8.

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METHOD OF IDENTIFYING ARTICLES AND SUCH IDENTIFIED ARTICLE.

No. 883,778. Specification of Letters Patent. Patented April 7, 1908.

Application filed March 14, 1907. Serial No. 362,288.

To all whom it may concern:

Be it known that I, JAMES M. BOYLE, a citizen of the United States, and resident of the city, county, and State of New York, have invented certain new and useful Improvements in Methods of Identifying Articles and Such Identified Articles, of which the following is a specification, taken in connection with the accompanying drawings, which form a part of the same.

This invention relates to a method of identifying articles, such for instance as railroad ties or rails by secret or code indications, these indications being preferably lines of definite length or angular position determined by terminal marks so arranged as to give certain code indications involving a definite linear or angular distance. The position of the marks with respect to the lines may also give further code indications in connection with the absolute linear or angular distances. These terminal marks may comprise other distinguishing indications and in the case of railroad ties for instance, such terminal marks may be in the form of metallic headed nails or the like suitably countersunk if desired.

In the accompanying drawing diagrammatically showing illustrative embodiments of this invention, Figure 1 is a top view of an identified railroad tie; Fig. 2 is a side view of an identified rail section; Fig. 3 is an enlarged view of an origin mark used for this purpose; Fig. 4 a similar view of a corresponding secondary or serial mark; Fig. 5 a similar view of a similar primary or batch mark; Fig. 6 is a side view of a suitable trammel scale for identifying these marked articles; Fig. 7 is a similar view of the reverse side of the scale, and Fig. 8 is a section substantially along the line 8—8 of Fig. 1, showing the method of applying the identifying marks to a tie.

As is seen in Figs. 1 and 2, the identifying lines 7—8 have their length accurately indicated by the terminal marks employed, these marks preferably having a center indication which allows the exact determination of the length of the corresponding identification line. Of course any desired number of these identification lines may be used in connection with a single article to give the desired number of indications in connection therewith, and of course many kinds of articles may be identified in this manner, the rail road tie and rail shown in the drawings being merely thus chosen for illustration. In a similar way only two identification lines are indicated in connection with each article and it is easy in this manner to employ a common terminal mark for each of these lines, such as the origin mark 4, which as indicated in detail in Fig. 3 may have a suitable center or origin indication 9 upon it to determine the exact length and position of the lines. The primary mark 5 may also be provided with a similar center 13 in the form of a depression or otherwise, for the same purpose. This mark is also preferably provided with a suitable projection or nose 49 which is turned in such direction with respect to the primary line 7 as to give certain indications in addition to the length of the line. The secondary mark 6 may also be provided with a suitable projection or nose 48 whose angular position with respect to the secondary line 8 may be used for identification, this mark being also provided with a suitable center 11 as indicated in Fig. 4. These marks may of course be applied to an article in any desired way, such as by stamping or impressing them into an article which is a suitable method in the case of a metallic article such as a railroad rail or beam, or the marks may be in the form of separate metallic marks or indicators that may be securely affixed to the article in any desired way, such as by providing the marks with a suitable nail to be driven into the article into which the marks themselves may be embedded to the desired extent, where this will be of assistance.

In Figs. 1 and 8, separate marks or indicators are shown as applied to a railroad tie the marks being in the form of a flat headed tack or nail which may be formed of copper or any other suitable material, the primary mark 5 having its shank 49 driven into the tie 1 to the desired extent, and the mark itself embedded or countersunk into the body of the tie to the desired extent so as to effectually prevent the withdrawal of the mark or its accidental obliteration. In this instance, a slight depression 47 is indicated which has proved effective. The mark 6 is in a similar

way formed with one or more attaching shanks 48 and may be countersunk so as to be located within a suitable depression 46. These marks can of course be readily driven into a tie by any desired means, the distance of the primary mark from the origin mark being accurately determined and the nose of the primary mark being also turned in the proper direction to give the code indication desired. One or more of these marks may of course be located at such absolute distance from any one of the edges or angles of the tie or other article, as to give a code indication by such absolute distance, and the absolute angular distance between the identification lines or between one of such lines and any of the lines of the article may also be used as a code indication. The length of this primary line 7 may be used to indicate the batch number of the article, such as the number which is common to the total daily or weekly batch of articles produced from a certain plant, this batch number being preferably indicated by the length of the primary or batch line 7 and by the angular position of the primary or batch mark, with respect to that line; that is the way in which the nose of this mark is turned. In a similar way the secondary line may be used for the indication of the serial number of the article in its batch, this being readily indicated in a similar manner by the length of this secondary or serial line, and the angular position of the secondary or serial mark with respect thereto. Other indications may be used in connection with these marks, such for instance as the designation of the railroad owning the article, on the center mark, as indicated in Fig. 3. Suitable code designation for the plant where the articles were produced, which may as indicated be added to the secondary or serial mark shown in Fig. 4, and also the year of production, may be similarly indicated in code on the primary or batch mark as shown in Fig. 5. These marks when applied as described to the tie are not undesirably prominent and are furthermore not likely to be removed or obliterated, since this cannot readily be done, and the marks or indicators where headed nails are used are so small as to be of practically no intrinsic value. The article, such as a railroad tie or rail with these code indications is not of course injured in any way for its intended use, since as indicated in Fig. 1 the marks are preferably located between the rails 2—3. Furthermore, these indications may be entirely secret and while not decipherable by the public may readily be decoded by the proper person.

A proper inspector can of course accurately measure the length of the batch and serial lines and also the angular distance between them, and in connection with the proper code can translate these indications as well as the other indications or marks upon the article.

The trammel scale indicated in Figs. 6 and 7 is of considerable assistance in decoding these marks and is shown as provided with the beam or scale rod 21 to which is affixed the head 22 by means of suitable screws 25. This head carries the projection 23 upon which the removable trammel point 24 may be mounted. The runner 27 is slidably mounted upon the rod and held permanently thereon by the end plate 26 and carries in a similar way the projection 30 and trammel point 31. This runner is provided with suitable indicators 34 and 35, shown in Fig. 7, which coöperate with the scales 36—37 on the rod, the graduations on these scales not being numerically indicated in this drawing. By placing the two trammel points at either end of the batch line 7 of the tie, that is, by placing one of these points in the origin and the other in the center of the batch mark the length of the batch line is accurately determined and the scales are so graduated that the batch number can be immediately read off, the proper scale for such reading being marked in correspondence with the position of the batch mark on the tie. This is readily done by the marks 42, 43, 44 and 45 on the scale runner which correspond with the positions of the batch mark with respect to the primary line which may be used. In a similar way the exact length of the secondary or serial line may be determined by setting the trammel points and the corresponding serial number can then be instantly read off the proper scales 32—33 on the rod shown in Fig. 6 in connection with the indicators 28—29. This scale in a similar way is the one which is marked by the representation 38—39—40 and 41, which correspond with the position of the secondary or serial mark on the tie itself. Of course such a scale could be used in a similar manner in decoding similar indications stamped upon the web or other part of a rail or similar metallic article, as indicated in Fig. 2.

Having described this invention in connection with several illustrative examples or embodiments thereof, to the details of which it is not limited, what is claimed as new and what it is desired to be secured by Letters-Patent is set forth in the appended claims.

1. The method of identifying railroad ties which consists in permanently embedding therein a metallic origin mark, in similarly embedding therein a primary mark located at such distance from said origin mark and in such position with relation to the line between said marks as to give a code indication, and in similarly embedding therein a secondary mark located at such distance from said origin mark and in such position with respect to the line between said secondary and origin marks as to give a code indication and in providing said marks with other code indications.

2. The method of identifying railroad ties which consists in permanently embedding therein metallic marks located at such distances apart as to form identifying lines of definite length to give code indications, said marks being in such position with respect to said lines as to give code indications.

3. The method of identifying railroad ties which consists in affixing marks thereto at such distance apart as to form an identifying line, giving a code indication by its length, said marks being in such position with respect to said line as to give a code indication.

4. The method of identifying railroad ties which consists in providing marks thereon located at such distances apart as to form an identifying line, giving a code indication by its length.

5. The method of identifying articles which consists in providing marks thereon located at such distances apart as to form identifying lines whose lengths give code indications, said marks being in such position with respect to such lines as to give code indications in connection therewith.

6. The method of identifying articles which consists in providing marks thereon at such distances apart as to form identifying lines whose lengths give code indications in connection with the position of said marks with respect to said lines.

7. The method of identifying articles which consists in providing marks thereon forming identifying lines giving code indications.

8. The method of identifying articles which consists in providing marks thereon forming a plurality of identifying lines on each article giving code indications.

9. The method of identifying articles which consists in providing marks thereon whose position give code indications involving an absolute distance.

10. The method of identifying articles which consists in providing marks thereon forming an identifying line whose length gives a code indication.

11. The identified railroad tie provided with permanently embedded metallic origin and primary and secondary marks, having indications thereon and having such relative locations as to form primary and secondary lines whose length give code indications in connection with said marks.

12. The identified railroad tie having affixed thereto a plurality of marks forming lines giving code indications.

13. The identified railroad tie provided with marks thereon whose relative position gives code indications, involving an absolute length.

14. The identified article provided with marks thereon whose distances apart forms an identifying line and whose length gives a code indication.

15. The article provided with marks thereon forming a plurality of identifying lines on said article giving code indications involving the length of one of said lines.

16. The article provided with identifying marks thereon giving a code indication by their relative position which involves an absolute distance.

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