

W. L. NEELD.

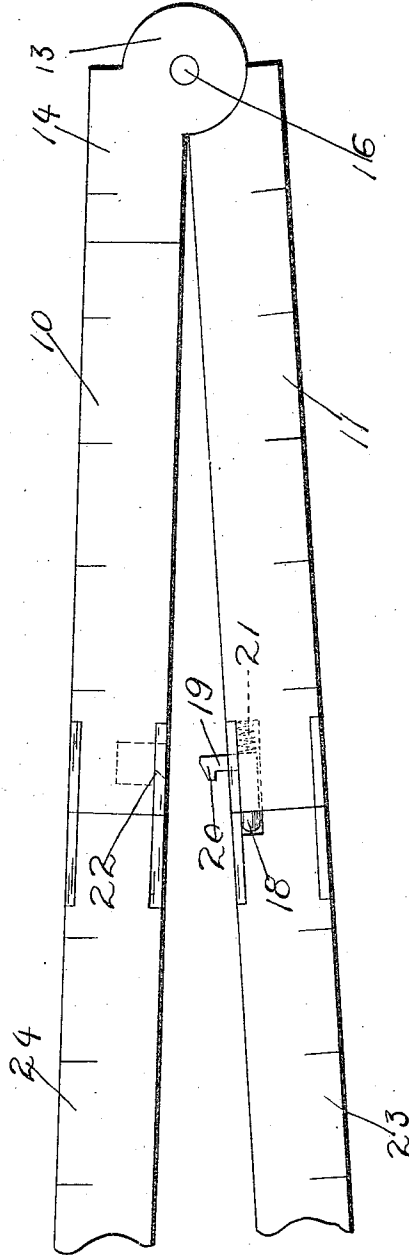
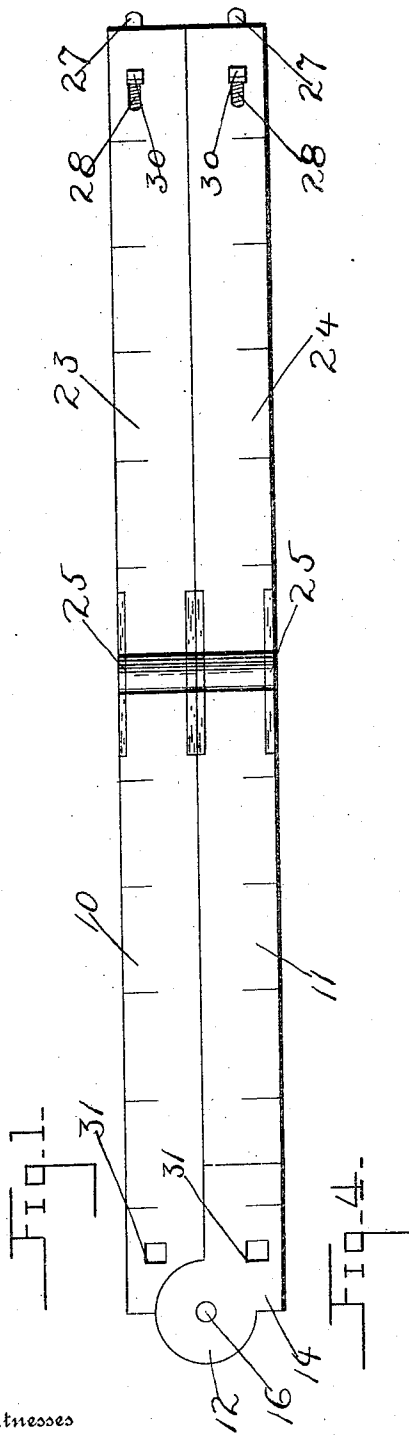
RULE.

APPLICATION FILED SEPT. 2, 1908.

Patented Dec. 7, 1909.

2 SHEETS—SHEET 1.

942,583.



Witnesses

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2 SHEETS—SHEET 2.

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Fig. 2.

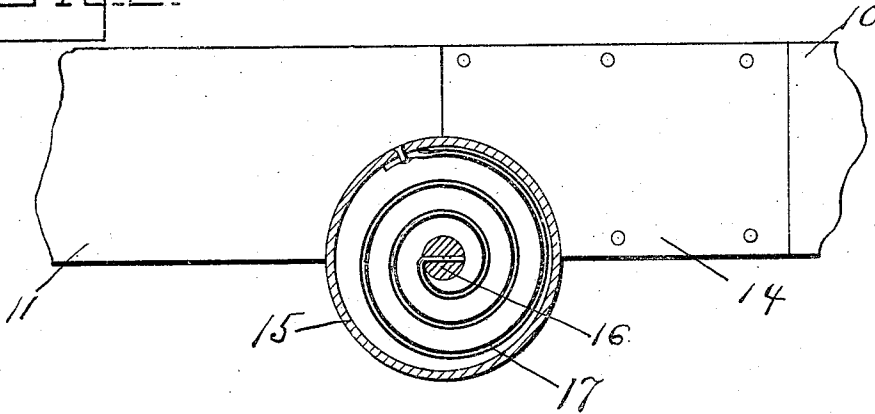


Fig. 7.

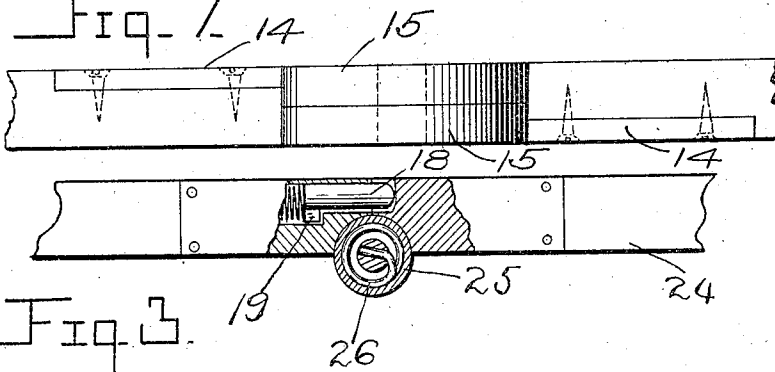
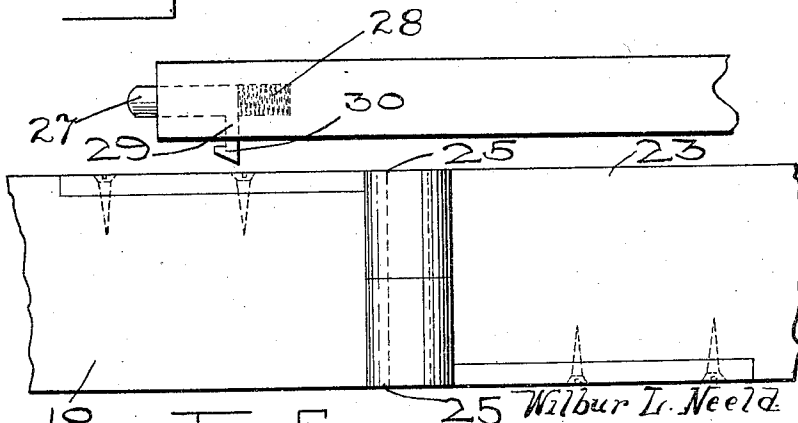


Fig. 3.

Fig. 5.



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Fig. 6.

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UNITED STATES PATENT OFFICE.

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RULE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILBUR L. NEELD, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Rules, of which the following is a specification.

This invention relates to measuring instruments and refers especially to rules of that class which are employed by carpenters and the like.

An object of this invention is to produce a rule which can be folded and secured positively in such position for the purpose of conveniently carrying and handling the same.

Another object of this invention is to produce a folding rule that may be automatically opened upon the release of fastening means therefor.

The invention further designs a rule of this character that will be strong, durable, and economical of manufacture.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims, and that any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the complete rule, Fig. 2 is a detailed and enlarged section of the main hinged joint of the rule, Fig. 3 is a view in section of one of the rule joints, Fig. 4 is a fragmentary view of the rule showing the main fastening means, Fig. 5 is a view of one of the leg fastening means showing a fragmentary view of the rule, Fig. 6 is an edge view of the main hinge joint, Fig. 7 is a side view of one of the rule joints.

Referring now particularly to the drawings, 10 and 11 designate the main sections of the rule which are hinged together by means of hinged members 12 and 13 which are supported in the extremities of the sections 10 and 11 toward the inner edges thereof. The hinged members 12 and 13 each comprise a metallic plate 14 which carries a circular hollow member 15, the open sides of which are disposed against each other, and are held in such position by a suitable

pivot pin 16. The edges of the members 15 are thus frictionally held against each other while a coil spring 17 is positioned about the pivot pin 16 in the hollow portions of the members 15. The outer extremity of the spring 17 is secured to the inner wall of one of the casings 15 while the inner end of the same is rigidly engaged to the pivot pin 16 which is carried by the opposite member 15. The casings 15 are each of one-half the thickness of the sections 10 and 11 and it will thus be seen that their outer surfaces, when in position, are flushed with the opposite edges of the sections 10 and 11. The metal plates 14 are laterally positioned in the ends of the sections 10 and 11 so that the casings 15 lie in the same plane as the sections 10 and 11. This position of the hinged members 12 and 13 and the operation of the spring 17 will cause the sections 10 and 11 to automatically swing apart from each other causing their inner ends to abut and to be held in a straight line. As the edges of the sections 10 and 11 engage each other when the rule is in a closed position, and tend to swing apart under the action of spring 17, the following fastening means is employed to hold the same closed.

The outer extremities of the sections 10 and 11 are recessed in their adjoining edges, one section of which carries a longitudinally sliding bolt 18 which carries a laterally extending arm 19 which is provided at its outer extremity with a shoulder 20, the bolt 18 being normally held outwardly by the tension of the spring 21 which is embedded in the inner extremity of the recess for the purpose of holding the bolt 18 in a locked position. The shoulder 20 is so formed upon one edge of the arm 19 as to form a beveled edge at the extremity of the arm 19 for the engagement of a shoulder 22 which is formed in the edge of the opposite section and adapted to engage against the shoulder 20 after passing said beveled edge. It will be seen from this construction that when the sections 10 and 11 are forced together against the tension of the spring 17 they will be held in the closed position until the operator presses the outer extremity of the bolt 18 and disengages the shoulders 20 and 22.

The outer extremities of the sections 10 and 11 carry the legs 23 and 24 which are secured thereto by the hinges 25 which are provided with suitable springs 26 for the purpose of normally holding the legs 23 and

24 in an extended position. The hinges 25 each comprise hollow cylindrical sections which are disposed upon the opposite sides of the sections 10 and 11 and of the legs 23 and 24 and which frictionally engage each other and are held in such position by means of a bolt secured therethrough which is rigidly carried by one of the cylindrical sections and about which is positioned a spring 26 having its opposite extremities secured to the bolt and to one of the cylindrical casings respectively. The hinges 25 are so positioned in the extremities of the sections 10 and 11 and the legs 23 and 24 that the legs 23 and 24 may be folded back upon the upper surfaces of the sections 10 and 11 respectively. The outer extremities of the legs 23 and 24 are each provided with longitudinally sliding bolts 27 which are normally extended under the action of springs 28 and which carry upwardly extending arms 29 which are provided with beveled extremities and shoulders 30 to engage against shoulders 31 formed in the upper faces at the inner extremities of the sections 10 and 11 for the purpose of locking the legs 23 and 24 in a closed position. The rule is provided with any suitable scale which may be found desirable to use.

30 From the foregoing description, the operation of the device is apparent as when it is desired to open the rule for use the bolts 18 and 27 are depressed and the several members will assume operative positions under the tension of the springs 17 and 26 and be held in such position during the use of the ruler. When it is desired to close the same, all that is necessary is to force the several members against the tensions of the springs 17 and 26 into a closed position, when they will be held in the closed position by the action of the bolts 18 and 27.

What is claimed is:

1. A rule comprising two sections, a hinge disposed between said sections, legs carried upon the extremities of said sections, hinges disposed between said sections and said legs, said sections being movable to lie at times in a line with each other and at times against

each other, a spring arranged to hold said sections normally in alinement, one of said sections having a recess therein, and the other of said sections having a chamber opening through its outer end and having a passage in its edge communicating with the chamber, a bolt slidably engaged in the chamber, an arm carried by the bolt and extending outwardly through the passage and arranged for engagement in the recess to hold said sections against each other, said bolt extending beyond the end of the section in which it is engaged, the leg which is attached to said last named section having a recess therein for the reception of the bolt when the leg is in alinement with the said section, and springs arranged to hold the legs in alinement with their respective sections.

2. In a rule, the combination with a member, of a second member pivoted to the first named member for movement into and out of position to lie thereagainst, means for holding the second named member out of such position, said second named member having a recess therein, said first named member having a chamber therein and having a passage communicating with the chamber and lying in position for registration with the recess, a bolt slidably engaged in the chamber, an arm carried by the bolt, and arranged for engagement in the recess of the second named member to hold the two members against separation, a spring arranged to hold the bolt with its arm normally in operative position, said bolt extending normally beyond the end of the first named member, and a leg hinged to the end of the first named member for movement into and out of position to form an extension of the first named member, said leg having a recess therein for the reception of the outer end of the bolt.

In testimony whereof I affix my signature, in presence of two witnesses.

WILBUR L. NEELD.

Witnesses:

Mrs. WM. MÜLLER,

Mrs. C. M. NEELD.