(No Model.) 2 Sheets—Sheet 1.

W. A. DELMAGE.

COMBINED CARPENTER'S RULE, CALIPERS, DIVIDERS, &c.

No. 409,934. Patented Aug. 27, 1889.

Fig. 1.

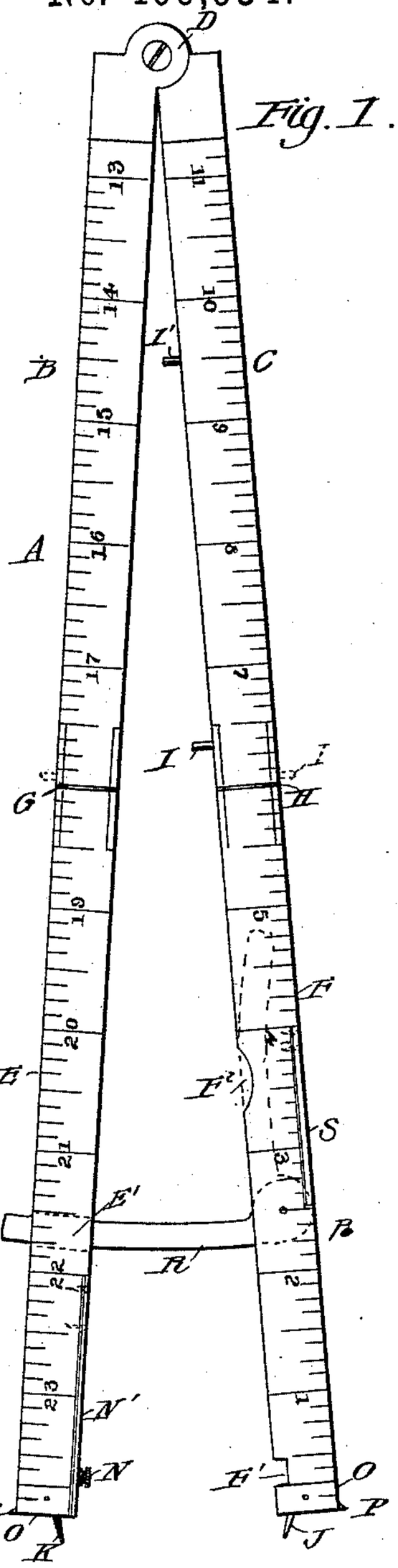


Fig. 2.

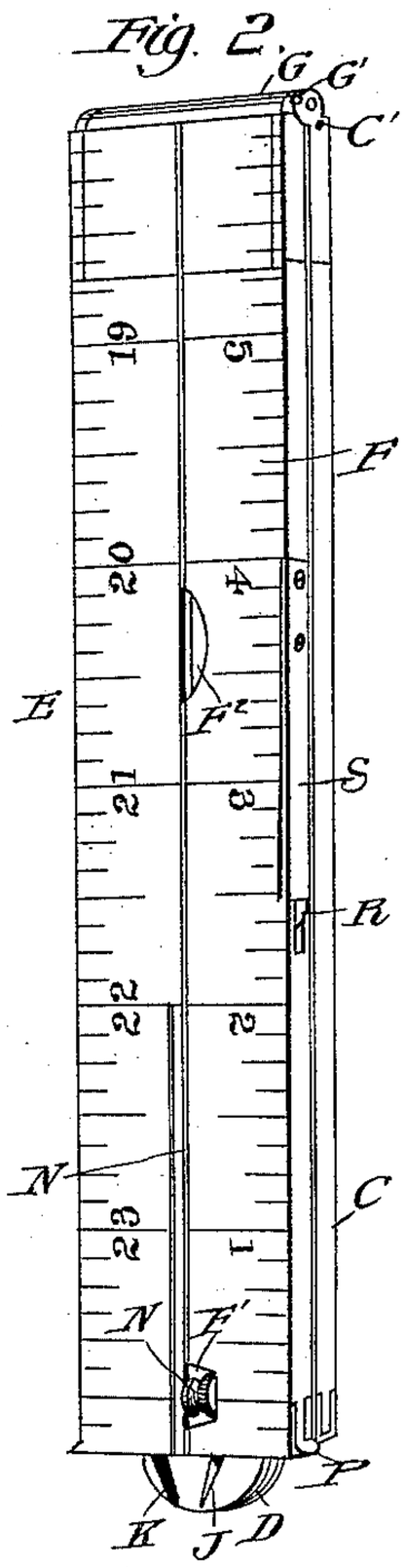


Fig. 3.

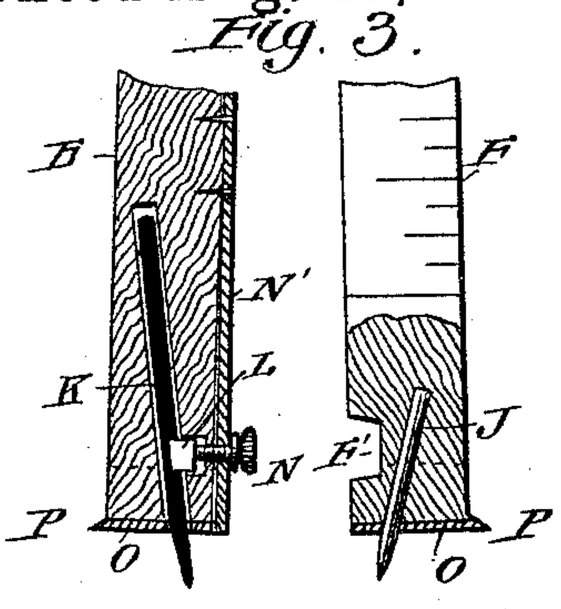


Fig. 4.

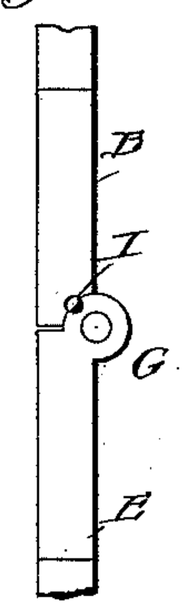


Fig. 5.

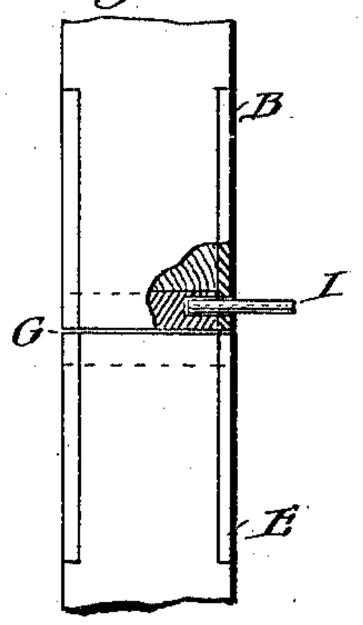


Fig. 6.

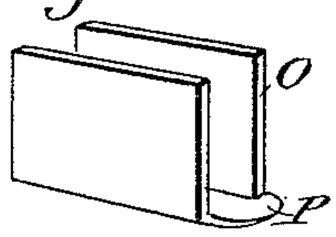
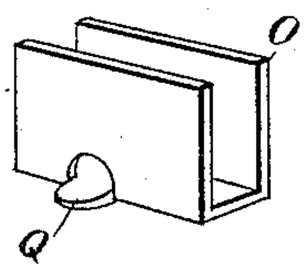


Fig. 7.



WITNESSES:

J. E. Clark.

C. Sedgwick

INVENTOR

W. A. Delmage

BY Munn & Co

ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

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Fig. 8.

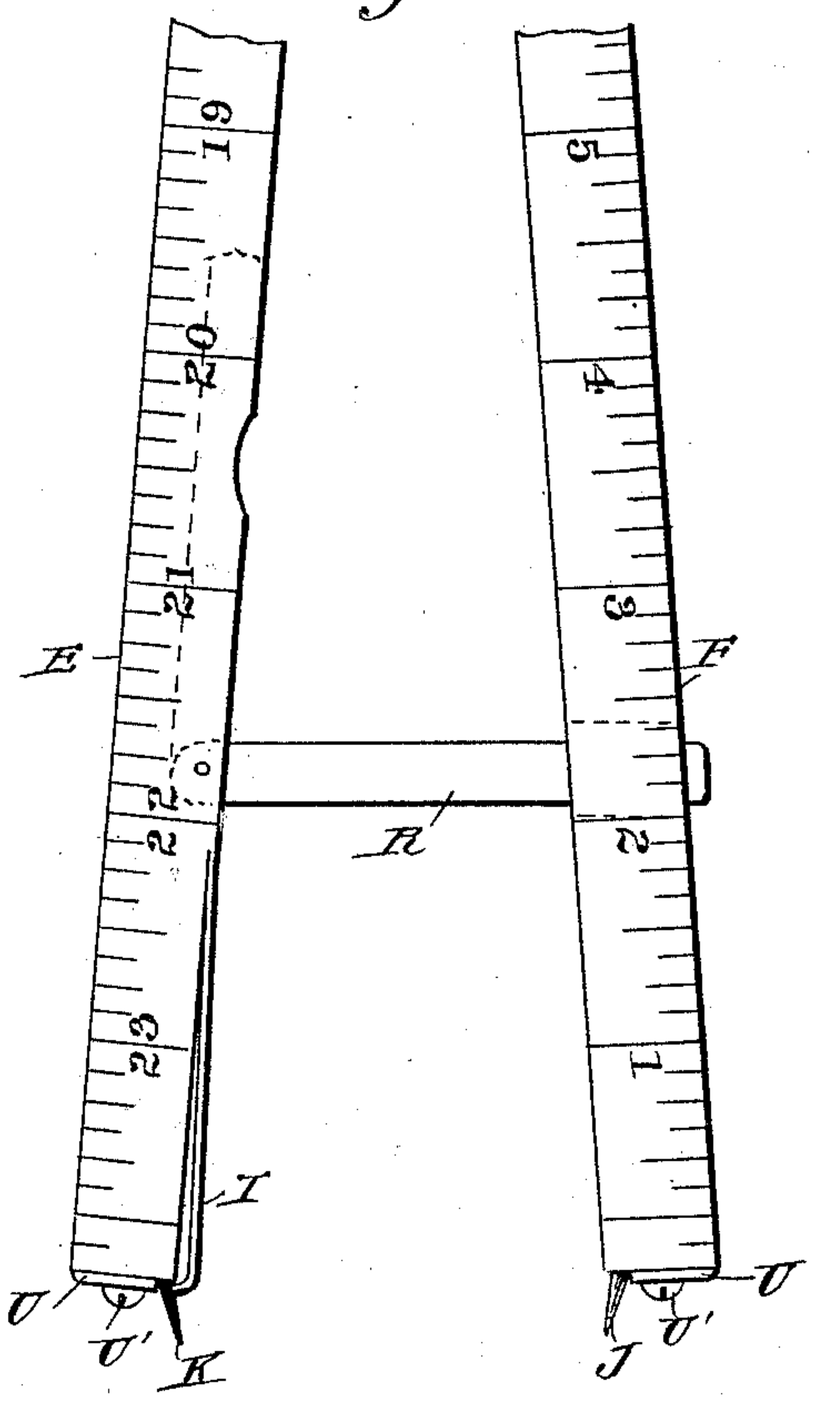


Fig. 9.

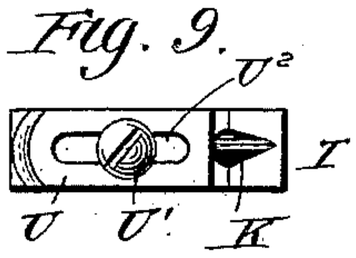


Fig. 10.

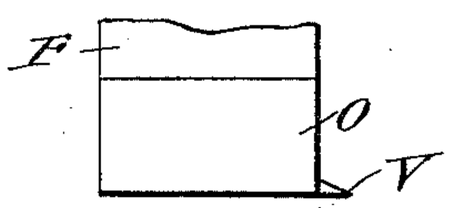
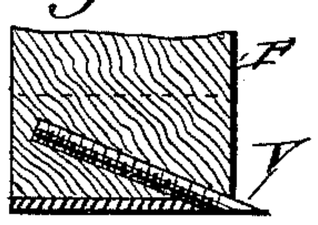


Fig. 11.



WITNESSES:

H. C. Clark.

C. Sedgwick

INVENTOR

W. A. Delmage

BY Munn & Co

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM A. DELMAGE, OF LOWELL, MASSACHUSETTS.

COMBINED CARPENTER'S RULE, CALIPERS, DIVIDERS, &c.

SPECIFICATION forming part of Letters Patent No. 409,934, dated August 27, 1889.

Application filed March 18, 1889. Serial No. 303,686. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. DELMAGE, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Combined Drawing and Measuring Instrument, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved combination drawing and measuring instrument which is very simple and durable in construction and comprises a rule, a compass, a marker, and calipers, and is specially designed for the use of carpenters and other artisans.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as adapted for a compass. Fig. 2 is a perspective view of the improvement as folded up. Fig. 3 is an enlarged sectional side elevation of the outer ends of the rule containing the compass-points. Fig. 4 is an enlarged side elevation of one of the rule-points locked in place. Fig. 5 is a face view of the same with parts in section. Fig. 6 is a perspective view of one of the ferrules of the rule. Fig. 7 is a like view of the same from another side. Fig. 8 is an enlarged side elevation of a modified form of the improvement. Fig. 9 is an end elevation of the same. Fig. 10 is an enlarged side elevation of a ferrule of modified form; and Fig. 11 is a sectional side elevation of the same.

The two-foot rule A is provided with the middle members B and C, pivotally connected with each other by the hinge D, and on the members B and C are pivoted the end members E and F by means of the hinges G and H. Each of the latter can be locked in place by means of a pin I or I′, held removably in the member C, projecting a short distance beyond the same and fitting in corresponding apertures in the member B when the rule is closed up. The pins I and I′ are adapted to fit in corresponding apertures formed half-way in the corresponding hinge G or H and half-way in the corresponding member B or C. When the members B E and C F are opened, as illustrated in Fig. 1, then the half-apertures in the hinges G and H and the members B and C register with each other, and the respective pin I or I′ can be inserted in the same, as is plainly shown in Figs. 4 and 5, locking the hinge G or H and preventing the members E and F from being folded onto the members B and C. In the outer end of the member F is secured in an inclined position a compass-point J, extending a suitable distance beyond the end of the same, as is plainly shown in the drawings. In the opposite member E is formed a recess slightly inclined, and into which fits a pencil K, adapted to project at the outer end of the member E toward the point of the compass-point J. The pencil K is held in place by a clamp L pressing against the said pencil and held in a suitable recess formed in the member E. A screw N screws against the said clamp L, so as to press the latter against the pencil with more or less force, as desired. The screw N screws into the plate N′, secured to the inner end of the member E, as is plainly shown in Fig. 3. The outer ends of the members E and F are each provided with a ferrule O, of metal, and of the U-shape shown in Figs. 6 and 7. From the middle part of each ferrule O extends outward a knife or marker P, and a similar knife or marker Q extends from one side of the said ferrule. The knives P and Q serve to mark boards or other lumber. When the several members are closed, the screw N passes into a slot F′, formed on the inside of the member F, as plainly shown in the drawings, so that the head of the screw N does not present any obstruction when closing the several members.

On one of the members E or F is pivoted an arm R, extending at its free end through a slot formed transversely in the opposite member E or F. As shown in Fig. 1, the arm R is pivoted on the member F and passes through an aperture E′ in the member E. As illustrated in Fig. 8, the arm R is fulcrumed on the member E and passes through a corresponding aperture in the member F. This arm R serves to prevent a sidewise motion of

the two members when using the instrument as a compass. The arm R is preferably held in place by a spring S, secured to the member F and pressing at its free end against the pivot end R′ of the said arm R. The latter is adapted, when disconnected from the other member, to fold into a recess formed in the member F or E, as is plainly shown in dotted lines in Figs. 1 and 8. A segmental recess F^2 extends transversely in the member F for conveniently getting at the arm R when the latter is closed in the recess in the member F.

Instead of forming the markers or knives P and Q directly on the ferrule O, I may employ a knife or marker U, fastened by a set-screw U′ to the ends of the members E and F, said screw passing through a slot U^2 in the said marker to permit of moving the marker inward or outward in order to have the cutting-edge project as desired beyond the respective member. Instead of forming the knives in this manner, I may employ a screw-rod V, having a sharpened point and screwing at an angle into the respective member E or F, as is plainly illustrated in Figs. 10 and 11.

It will be seen that the device can be used as an ordinary two-foot rule for measuring and for other purposes in the usual manner, or it can be used as a pair of compasses for drawing circles and other figures, or it can be used as a pair of calipers, the point of the compass-point J and the point of the leg K forming the touching points.

It will further be seen that the device can be used for marking boards and other lumber by the use of the markers or knives P and Q.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a rule having two middle and two outer members jointed to fold at three points, of a fixed compass-point secured in an inclined position in one outer member, a lead-pencil held loosely in an inclined position in the other outer member, a clamp engaging the said lead-pencil, a set-screw screwing against the said clamp to lock the said pencil in place, and an arm pivoted on one outer member and adapted to extend through an opening in the opposite outer member, substantially as shown and described.

2. The combination, with a rule having two middle and two outer members jointed to fold at three points, of a fixed compass-point secured in an inclined position in one outer member, a lead-pencil held loosely in an inclined position in the other outer member, a clamp engaging the said lead-pencil, a set-screw screwing against the said clamp to lock the said pencil in place, an arm pivoted on one outer member and passing through an opening in the opposite outer member, and a spring for holding the said pivoted arm in place, substantially as shown and described.

3. A combined drawing and measuring instrument comprising a jointed rule having its outer members connected to the middle members by lock-hinges and adjustably connected together, one of the said outer members being provided with a point and the other with a pencil, substantially as described.

4. A combined drawing and measuring instrument comprising a rule having two middle and two outer members, the outer members being connected to the middle members by lock-hinges and adjustably connected together, one of the said outer members being provided with a point and cutter and the other with a pencil and cutter, substantially as herein shown and described.

5. A combined drawing and measuring instrument consisting of a jointed rule A, provided with the arm R, hinged to one member of the rule and engaging the other member, the point J in the end of one member, the pencil K in the end of the other member, and the cutters P Q, projecting laterally from the ends of the said members, substantially as described.

WILLIAM A. DELMAGE.

Witnesses:
CHAS. A. DELMAGE,
CHARLES H. MITCHELL.