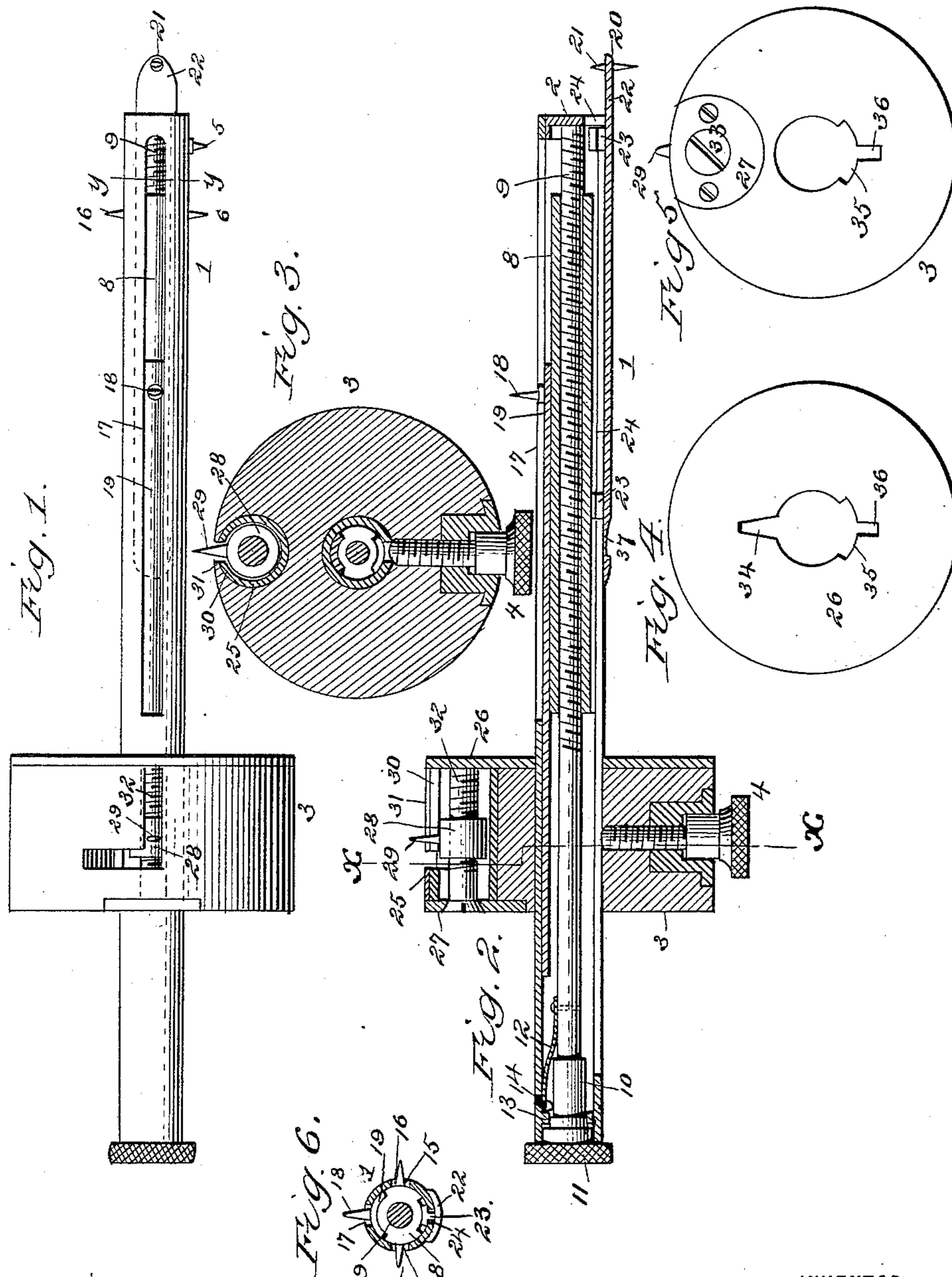


(No Model.)

W. B. LITTLE.
COMBINATION GAGE.

No. 424,681.

Patented Apr. 1, 1890.



WITNESSES:

W. R. Davis.
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WILLIAM B. LITTLE, OF NEW YORK, N. Y.

COMBINATION-GAGE.

SPECIFICATION forming part of Letters Patent No. 424,681, dated April 1, 1890.

Application filed July 2, 1889. Serial No. 316,330. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. LITTLE, of New York, in the county and State of New York, have invented a new and Improved
5 Combination-Gage, of which the following is a full, clear, and exact description.

The invention consists in an improvement on the combination-gage for which United States Letters Patent were granted to me Oc-
10 tober 9, 1888, No. 390,789, and has for its object to provide a combination-gage having additional parts to those in the gage covered by said Letters Patent, whereby a complete
15 combination-gage will be furnished which may be used for all the measurements required by wood-workers.

The invention consists in a wood-worker's combination-gage constructed and arranged as hereinafter described and claimed.

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

Figure 1 is a side view of the invention.
25 Fig. 2 is a longitudinal section thereof. Fig. 3 is a cross-section on line *xx* of Fig. 2. Fig. 4 is a plan view of the front of the fence. Fig. 5 is a plan view of the back of the fence, and Fig. 6 is a transverse section of the stock
30 on the line *yy* of Fig. 1.

1 indicates the tubular metallic stock of the combination-gage, having its outer end closed by a plug or disk 2, and 3 the cylindrical fence mounted to slide on the stock 1 and
35 clamped or adjusted thereon by means of the set-screw 4. On one side of the stock 1, near its outer end, is located a fixed marking-point 5, and in line with the marking-point 5 is arranged a longitudinally-movable mortise-
40 marking point 6, riding in a longitudinal slot 7 in the stock and projecting from an extended cylindrical nut 8, which is mounted to slide endwise within the stock, but is prevented from turning therein by the engage-
45 ment of the point 6 with the slot 7. The nut 8 is threaded to work on a threaded spindle 9, the outer end of which has a neck 10 fitted to turn in the inner end of the hollow stock, and a milled head 11, projecting outside of
50 the stock for turning the spindle and thus adjusting the point carried on the nut 8. The spindle-neck 10 is provided with a spring-

catch 12, which engages a rib 13 on the interior of the stock 1, so that the spindle will be held from longitudinal movement while
55 permitted to turn freely for adjusting the point 6 with reference to the point 5 in measuring the width of a mortise. The spring-catch 12 may be released from the rib 13 to withdraw the spindle 9 by pushing a tool
60 against the spring-catch through a hole 14 in the stock 1 and thereby permitting the spindle to be drawn out by its head. The stock is also formed with a longitudinal slot 15, diametrically opposite the slot 7, through and
65 in which slot 15 projects and rides a marking-point 16, also carried by the nut 8 and adjustable therewith, as in the case of point 6. Through a third longitudinal slot 17 in the stock 1, extending nearly to its outer end, pro-
70 jects and rides an adjustable cutting-point 18, mounted on a strip 19, movable on the nut 8 between the latter and the inner wall of the stock 1.

By means of the foregoing-described con-
75 struction the cutting-point 18 and the marking-points 6 and 16 can be adjusted with reference to the fixed point 5 and the fence 3 adjusted on the stock 1, so that the gage can be used to mark or cut different widths at the
80 same time. Additional measurements may also be obtained by means of an external point 20 and an internal point 21 on the end of a plate or strip 22, movable longitudinally on the stock 1 on the opposite side thereof from
85 the sliding strip 19, the plate 22 being held in place by retaining-lugs 23, projecting through a longitudinal slot 24 in the stock 1, the outer end of the slot 24 opening through the disk or plug 2. The plate 22 is limited in its out-
90 ward movement by the inner lug 23, abutting against the disk 2. The plate 22 may be moved by a notch 37 therein. By projecting the end of plate 22 beyond the end of stock 1 measurements may be taken between the internal
95 point 21 and the end of the stock, and by drawing in the plate 22, the point 21 moving in the slot 24, measurements may be taken from the external point 20 at whatever point
100 it may be adjusted to.

The fence 3 is formed mostly of wood, with a longitudinal tubular metallic guid 25 at one side, is closed at its front by a metallic face-plate 26, secured to the fence, and at its

back by a detachable metallic bearing-plate 27, mortised in and attached to the fence, as shown. In the guide 25 is mounted to move lengthwise a cylindrical nut 28, carrying a marking-point 29, which projects through and rides in a longitudinal slot 30 in the guide and a slot 31 in the side of the fence 3. The nut 28 works on a screw 32, which has a screw-head 33 for turning it by means of a screw-driver and adjusting the point 29. The point 29 can thus be readily adjusted to any desired distance from the front of the fence 3 in marking a line inside of a checked piece of wood.

The fence 3 is formed with a slot or recess 34, to permit the cutting-point 18 to be covered by the fence 3, either by drawing it into the slot or moving the fence over the point, and with a longitudinal slot 35 for the passage of the sliding plate 22, and a recess 36, opening into the slot 35, to admit the conical point 20.

By means of this invention a complete combination-gage for wood-workers is provided, including six gages in one, comprising a mortise-gage, a cutting-gage, two marking-gages, a gage for any ogee or half-round molding, and a gage to go around the inside of a circle from five-eighths of an inch upward. Any three of the gages may be used at the same time.

The invention may be used as a gage for any rabbeted or checked piece of wood, and, in fact, for any and every kind of measurement required by wood-workers.

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

1. In a wood-worker's gage, the combination, with a tubular longitudinally-slotted stock having fixed and adjustable marking-points and a fence adjustable on the stock, of an external slide having an internal and an external point at its outer end, movable beyond the end of the stock, the internal point being adapted to move within the longitudinal slot in the stock, substantially as shown and described.

2. In a wood-worker's gage, the combination, with a tubular longitudinally-slotted stock having fixed and adjustable marking-points and a fence adjustable on the stock, of an adjustable slide carrying a cutting-point, the said slide being adapted to be projected beyond the end of the stock, substantially as shown and described.

3. In a wood-worker's gage, a tubular longitudinally-slotted stock having an adjust-

able fence, an extended cylindrical nut within the stock having marking-points projecting through longitudinal slots in the stock, a threaded spindle working through the nut having a catch for holding the spindle against endwise movement, and a milled head for operating the spindle, in combination with an internal slide bearing against the nut and having a cutting-point projecting through a longitudinal slot in the stock, and an external slide having an external marking-point and an internal marking-point at its outer end extensible beyond the end of the stock, the inner marking-point being movable within a longitudinal slot in the tubular stock, substantially as shown and described.

4. In a wood-worker's gage, a tubular longitudinally-slotted stock having fixed and adjustable marking-points, the adjustable marking-points being mounted on slides adjustable lengthwise on the stock, in combination with a fence adjustable on the stock and having slots or recesses in its front, into which the adjustable points are movable, substantially as shown and described.

5. A wood-worker's combination-gage consisting of a longitudinally-slotted stock having one or more fixed marking-points, a threaded spindle mounted in the stock having a head at its inner end for operating the spindle and an adjustable catch for holding the spindle from endwise movement, an extended nut working in the stock on the spindle and having marking-points projecting through longitudinal slots in opposite sides of the stock, an adjustable slide movable endwise on the nut within the stock and having a cutting-point projecting through a longitudinal slot in the stock, and an adjustable slide movable endwise on the stock and having an external and internal marking-point at its outer end extensible beyond the end of the stock, the inner marking-point being movable within a longitudinal slot in the stock, in combination with a fence adjustable on the stock having recesses in its front to receive and conceal the adjustable cutting and marking points, and an internal longitudinally-slotted guide, a nut working in said guide and carrying a point projecting from the guide and fence, and means for adjusting the nut, substantially as shown and described.

WILLIAM B. LITTLE.

Witnesses:

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EDGAR TATE.