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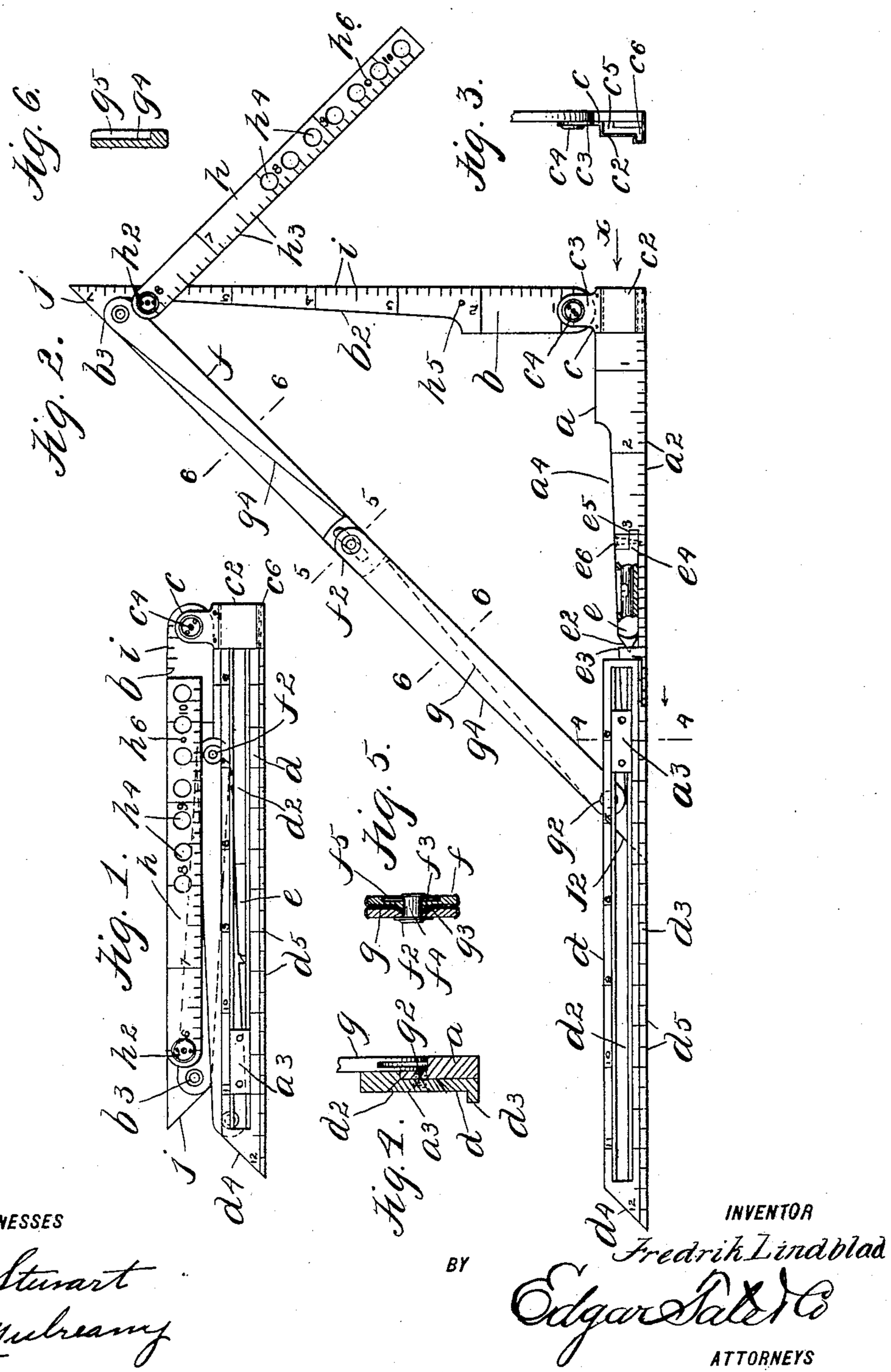
F. LINDBLAD.

CARPENTER'S TOOL.

APPLICATION FILED OCT. 31, 1903.

NO MODEL.



WITNESSES

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No. 750,866. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

FREDRIK LINDBLAD, OF NEW YORK, N. Y.

CARPENTER'S TOOL.

SPECIFICATION forming part of Letters Patent No. 750,866, dated February 2, 1904.

Application filed October 31, 1903. Serial No. 179,324. (No model.)

To all whom it may concern:

Be it known that I, FREDRIK LINDBLAD, a subject of the King of Sweden and Norway, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Carpenters' Tools, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to carpenters' tools, particularly to what are known as "squares;" and the object thereof is to provide a tool of this class which may be used as an ordinary square, a spirit-level, a miter-square, a circle-inscriber, and for various other purposes; and with this and other objects in view the invention consists in a tool of the class specified constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a side view of a tool made according to my invention, the parts thereof being folded together; Fig. 2, a similar view showing all the parts extended; Fig. 3, an end view looking in the direction of the arrow x of Fig. 2; Fig. 4, a section on the line 4 4 of Fig. 2; Fig. 5, a section on the line 5 5 of Fig. 2, and Fig. 6 a section on either of the lines 6 6 of Fig. 2.

In the practice of my invention I provide a tool of the class specified which comprises two arms a and b, hinged together, as shown at c. The connection at c is made by means of a metal cross-piece c^2, secured to one of the arms, preferably the arm a, and having a projecting portion c^3, through which is passed a pivot-pin or rivet c^4, and the metal cross-piece c^2 is raised so as to form an opening c^5, having a supplemental enlarged or raised portion c^6, and the opening c^5 is in line with the arm a and adapted to receive one end of a slide d, mounted on the arm a and provided with a longitudinal slot d^2 and a raised outer edge portion d^3, to accommodate which the part c^6 of the opening c^5 under the cross-piece c^2 is provided.

The outer end of the slide d, which forms a part of the arm a, is beveled, as shown at d^4, and the raised edge portion d^3 thereof is also provided with a scale d^5, which corresponds with a similar scale a^2 on the arm a, and secured to the arm a, near the end thereof opposite the hinged connection at c, is a block a^3, which fits in the slot d^2, and the sides of said block and of said slide are beveled in the manner shown in Fig. 4, so that the said block securely holds the slide d in connection with the arm a, while permitting said slide to move freely on said arm. The arm a is also provided in the inner edge thereof with a spirit-level device e, preferably made detachable, and in the form of construction shown the said device is provided at one end with a point e^2, adapted to enter a recess in a shoulder e^3, with which said arm is provided, and at the other end with a projecting portion e^4, adapted to be swung into the recess e^5 in the arm a and secured therein by a pin or screw e^6; but this connection of the spirit-level device with the arm a may be made in any desired manner.

The inner edge of the arm a is also cut away longitudinally, as shown at a^4, and the arm b is similarly cut away longitudinally at its inner edge, as shown at b^2, and pivoted to the outer end portion of the arm b, as shown at b^3, is a link member f, with which is connected, as shown at f^2, a supplemental link member g, and the end of the supplemental link member g is pivoted to the end of the arm a at g^2, and when the parts are folded together, as shown in Fig. 1, the link member f and supplemental link member g fit in the cut-away portions b^2 and a^4 of the arms b and a. The method of connecting the parts f and g is clearly shown in Fig. 5, in which the part g is provided with a recess g^3 and the part f with a corresponding boss f^3, adapted to enter said recess, and a pivot-pin f^4 is passed through said parts, and one end thereof is provided with

a plate-spring f^5, which bears on the other part and holds said parts securely together, while at the same time permitting them to swing freely one upon the other. The parts f and g are also cut away longitudinally, as shown at g^4, to form a longitudinal recess g^5, which enables said parts to fold compactly together, as shown in Fig. 1.

Pivotally connected with the outer end portion of the arm b is a supplemental arm h, the connection of which with the arm b is shown at h^2, and the supplemental arm h is provided with a scale h^3 and with longitudinally-arranged holes h^4, through which the pointed end of a pencil may be passed, and this arm is made of spring metal, and the arm b is provided with a pin h^5 and the supplemental arm h with a hole h^6, adapted to receive said pin and by means of which the free end of the supplementary arm h may be locked to the arm b. The arm b is also provided with a scale i, and it will be understood that the slide d forms a supplemental member for the arm a, by means of which the length of said arm may be increased or decreased, as desired. The outer end of the arm b is also preferably beveled, as shown at j, and the outer end of the arm a is similarly beveled, as shown at j^2, and when the slot d is moved back on the arm a so that one end thereof passes under the transverse member or plate c^2 and the separate arms a and b and link members f and g are extended the device will form a complete and perfect triangle, the outer edge of the link members f and g being continuous with the end portions of the arms a and b and with the outer end portion of the slide d.

The use of this device will be apparent from the foregoing description; but it will be understood that the supplemental arm h may be used for the purpose of inscribing a circle or a part thereof with the other parts of the device in either of the positions shown in Figs. 1 and 2, and changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. A tool of the class described, comprising two arms pivoted together at one end, the opposite ends of said arms being connected by links pivoted thereto and to each other so as to form when the said arms are extended a complete triangle, and a slide mounted on one of said arms, substantially as shown and described.

2. A tool of the class described, comprising two arms pivoted together at one end, the opposite ends of said arms being connected by links pivoted thereto and to each other so as to form when the said arms are extended a complete triangle and a slide mounted on one of said arms, and the other arm being also provided with a supplemental arm which is pivoted thereto and which is adapted to be held flush therewith and to turn thereon, substantially as shown and described.

3. A tool of the class described, comprising two arms pivoted together at one end, the opposite ends of said arms being connected by links pivoted thereto and to each other so as to form when the said arms are extended a triangle and a slide mounted on one of said arms, and the other arm being also provided with a supplemental arm which is pivoted thereto and which is adapted to be held flush therewith and to turn thereon, the inner edges of said arms and the adjacent sides of said link members being cut away longitudinally so as to permit the parts of the device to fold together, substantially as shown and described.

4. A tool of the class described, comprising two arms pivoted together at one end, one of said arms being provided with a raised cross-piece, a slide mounted on said last-named arm and one end of which is adapted to pass beneath said cross-piece and the other end of which is beveled or inclined, the ends of said arms opposite their hinge connection being also connected by link members pivoted thereto and to each other, substantially as shown and described.

5. A tool of the class described, comprising two arms pivoted together at one end, one of said arms being provided with a raised cross-piece, a slide mounted on said last-named arm and one end of which is adapted to pass beneath said cross-piece and the other end of which is beveled or inclined, the ends of said arms opposite their hinge connection being also connected by link members pivoted thereto and to each other, one of said arms being also provided with a spirit-level, substantially as shown and described.

6. A tool of the class described, comprising two arms pivoted together at one end, one of said arms being provided with a raised cross-piece, a slide mounted on said last-named arm and one end of which is adapted to pass beneath said cross-piece and the other end of which is beveled or inclined, the ends of said arms opposite their hinge connection being also connected by link members pivoted thereto and to each other, one of said arms being also provided with a spirit-level and the adjacent edges of said arms and the adjacent sides of said link members being cut away longitudinally so as to permit the parts to fold together, substantially as shown and described.

7. A tool of the class described, comprising two arms pivoted together at one end, the opposite ends of said arms being beveled or inclined and being also connected by links piv-

oted thereto and to each other so as to form when the said arms are extended a complete triangle, said parts being adapted to be folded together, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 30th day of October, 1903.

FREDRIK LINDBLAD.

Witnesses:
F. A. STEWART,
C. E. MULREANY.