

(No Model.)

2 Sheets—Sheet 1.

W. R. FOX.
WOOD TRIMMER.

No. 504,209.

Patented Aug. 29, 1893.

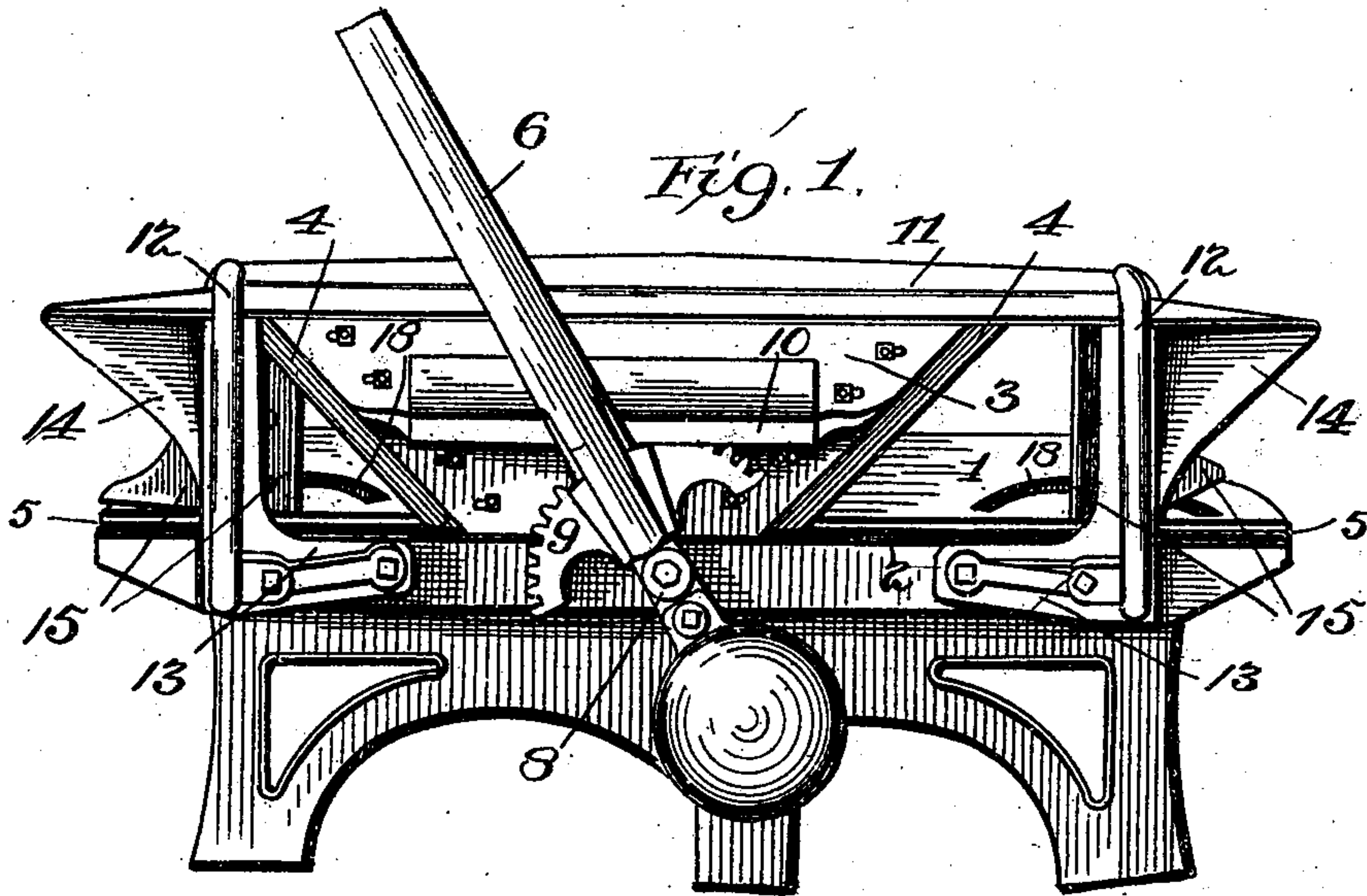
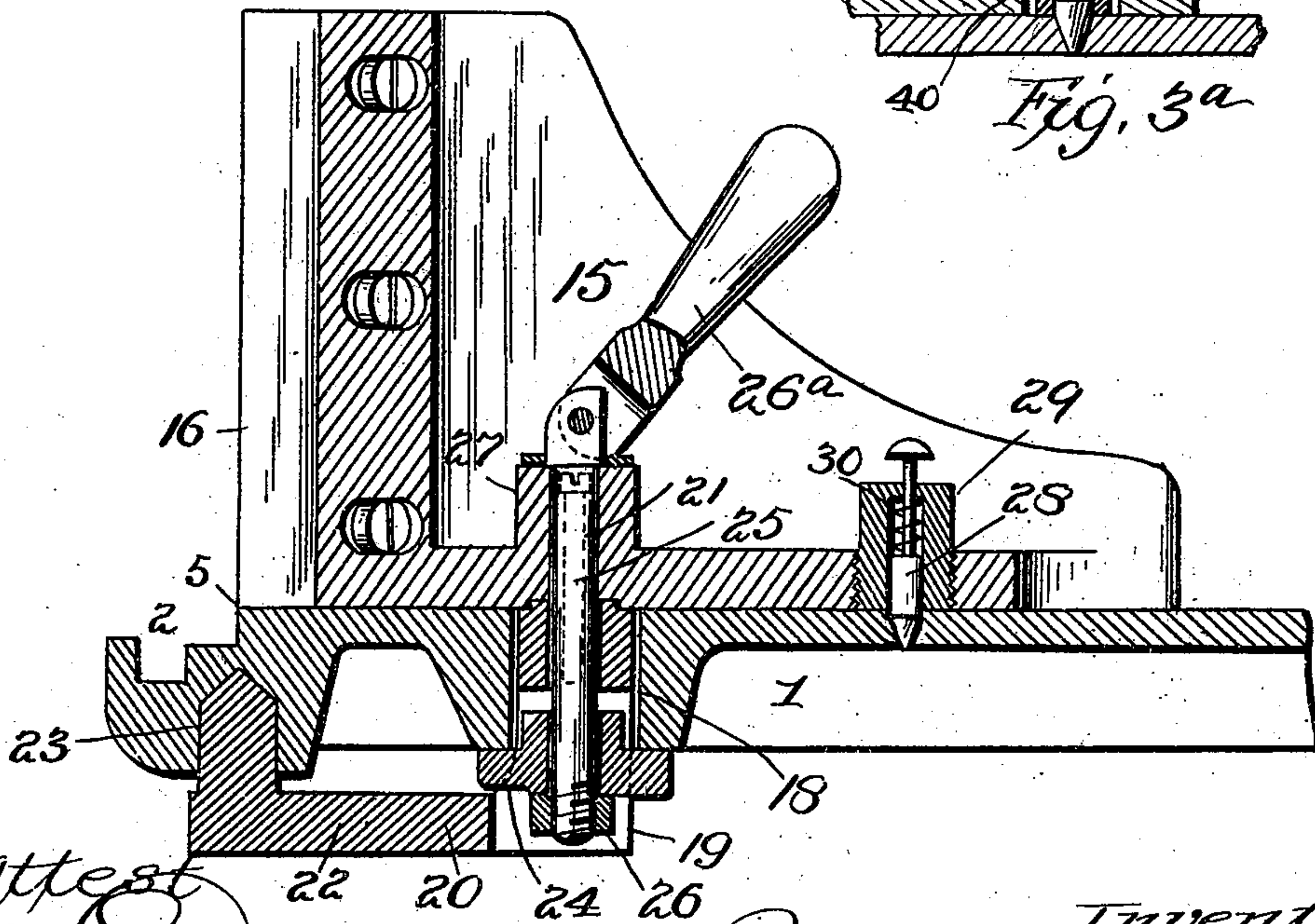
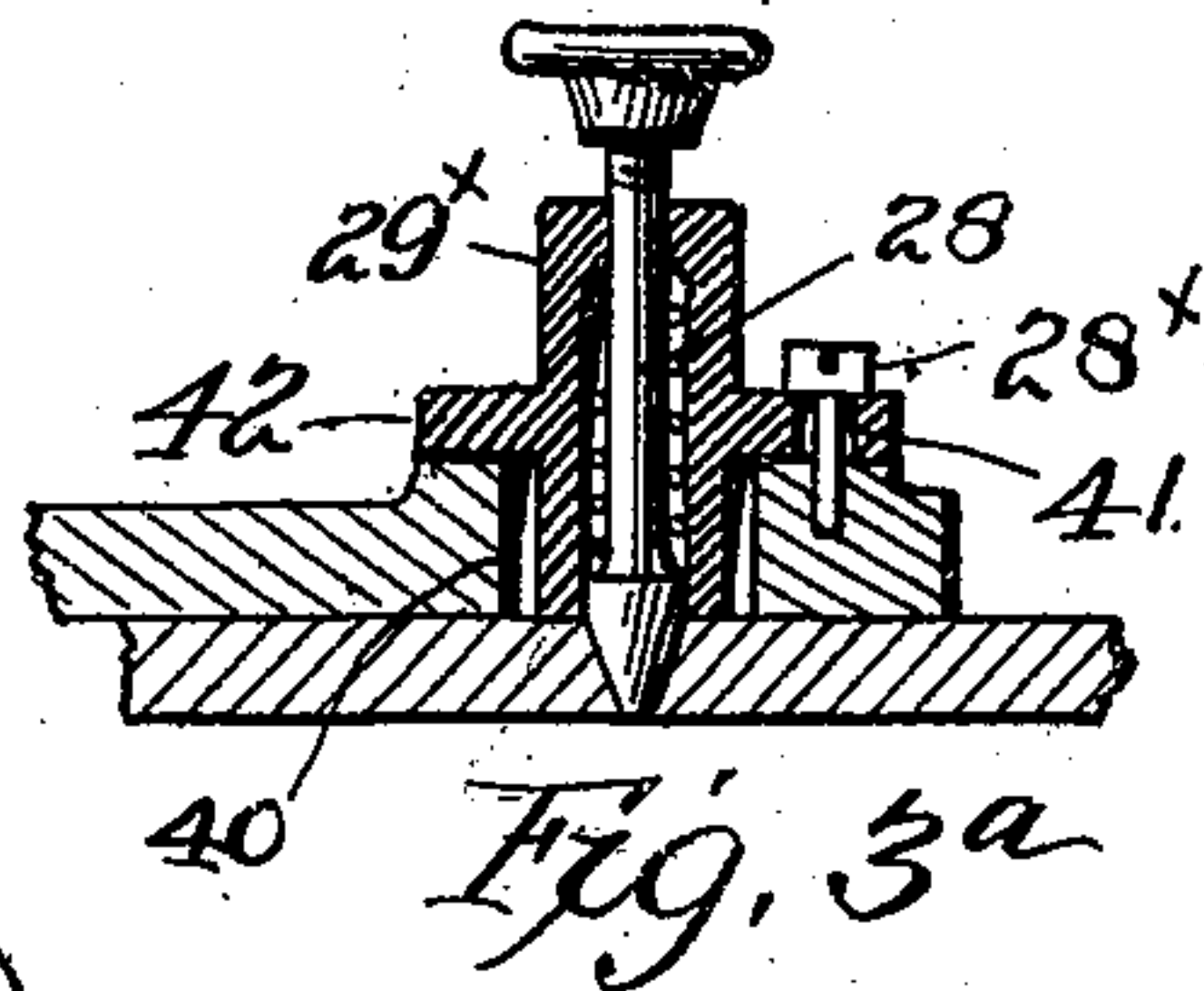


Fig. 3.



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F. L. Middleton

Inventor
Wm R. Fox
by S. L. Spear.
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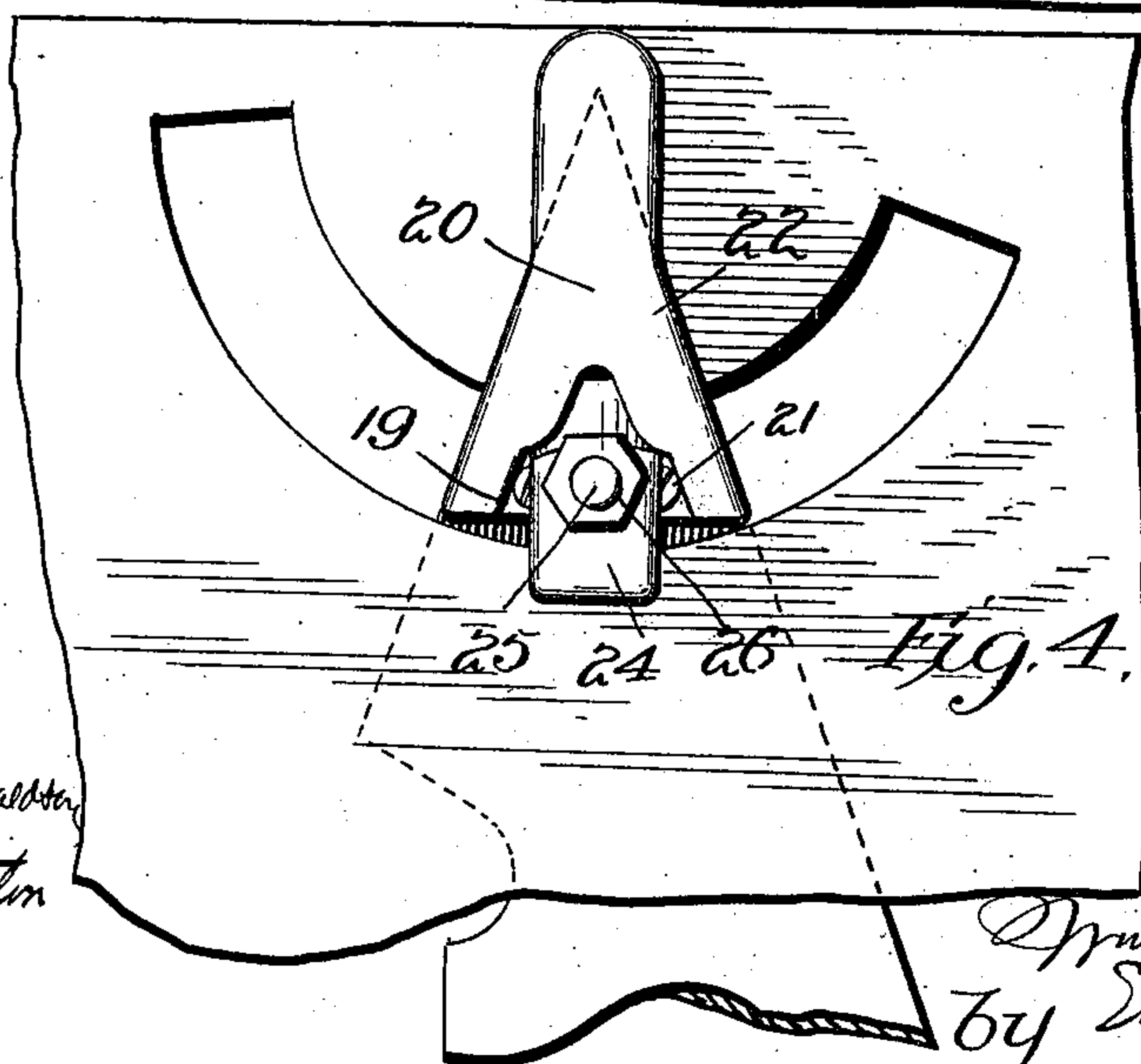
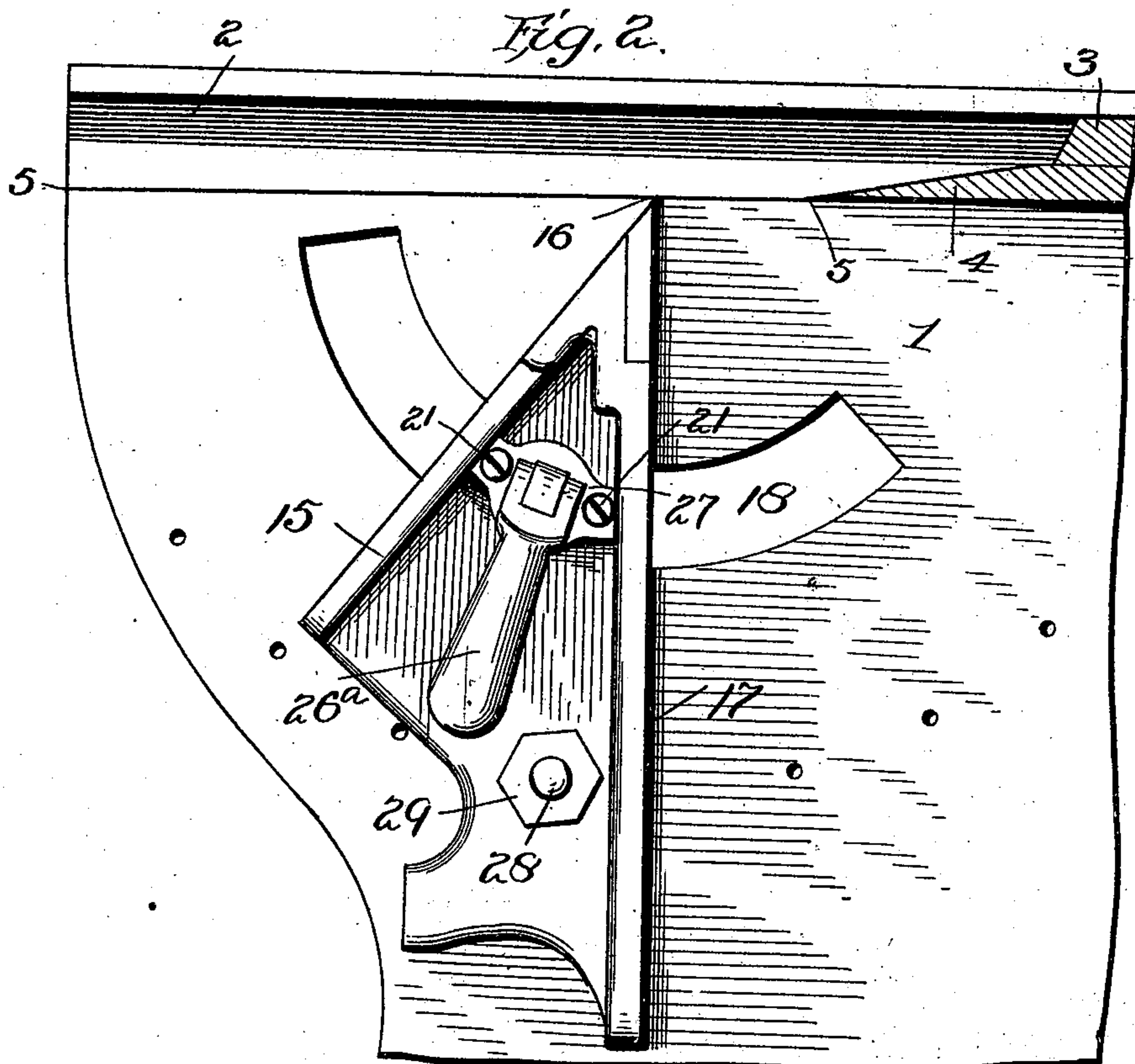
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2 Sheets—Sheet 2.

W. R. FOX.
WOOD TRIMMER.

No. 504,209.

Patented Aug. 29, 1893.



Attest
F. L. Middleton

Inventor
Wm R. Fox
by Ellis Dean
Jitty

UNITED STATES PATENT OFFICE.

WILLIAM R. FOX, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE FOX MACHINE COMPANY, OF SAME PLACE.

WOOD-TRIMMER.

SPECIFICATION forming part of Letters Patent No. 504,209, dated August 29, 1893.

Application filed December 21, 1892. Serial No. 455,896. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. FOX, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Wood-Trim-
5 mers, of which the following is a specification.

My invention has for its object to provide
10 a gage having a wide range of adjustment and to provide means for controlling the same in order to maintain its shearing edge accurately at the line of cut.

It relates also to the particular arrangement
15 of the frame with relation to the gage and knife in order that the gages may be adjusted through a wide range and whereby the frame may be provided with shields without interfering with the movement of the gages.

The invention includes a pivotal connection
20 between the gage and the bed or frame located below and in the same plane with the line of cut; the special form of the connection extending through a slot in the bed and combined with a clamp also operating through
25 the said slot, and means for quickly and accurately setting the gage to any angle determined upon.

In the drawings:—Figure 1, is a rear perspective view of the machine. Fig. 2, is a
30 plan, and Fig. 3, a vertical section from front to rear through one of the gages. Fig. 3^a is a detail view of the preferred gage stop. Fig. 4 is a detail bottom plan view of the pivotal connection for the gage.

35 The machine frame includes a bed 1, having a way 2, extending across near the rear face by which the knife carriage 3, is directed so that the knives 4, carried thereby will move along the cutting line 5—5. The carriage is moved by a weighted lever 6, pivoted
40 to the frame at 8, and having a segment 9, meshing with a rack 10, on the carriage. The upper edge of the carriage moves in a way formed in the cross bar 11, extending between
45 two posts or brackets 12, the lower right angular arms 13, of which are bolted to the rear face of the bed or frame and in rear of the plane of the knife carriage and knives. To these brackets the angular wings or shields
50 14, are secured or cast extending laterally of the machine and directly adjacent to the plane

of the rear face of the knives so that as the carriage is moved aside the knife will move in front of the angular wing and be shielded thereby. This construction of frame leaves
55 the bed and the space in front of the knife carriage entirely free for the adjustment and arrangement of the gages 15, which as shown are of angular or wedge shape with the point of the wedge at the cutting line forming a
60 shearing edge 16. The gage is adapted to swing so that its bearing face 17, against which the work is placed will in one position be at an angle of forty-five degrees with relation to the line of cut and in the other extreme position at an angle of thirty degrees
65 the shearing edge being always maintained at the cutting line. For this purpose a curved slot 18, is formed in the bed plate and into this the arm 19, of a forked bracket 20, extends to connect with the bottom of the gage
70 by means of two screws 21, the end of the bracket arm having a broad bearing and being seated in a recess on the under side of the gage. The arm 22, of the bracket extends
75 horizontally to the rear and at its rear end an upturned pintle or pivot is formed which fits a bearing socket 23, on the under side of the bed, the center of which is directly under the line of cut and of the shearing gage edge 16.
80 By this construction the shearing edge will be held at the cutting line in all the adjustments of the gage and the gage may be fixed in any position by the clamp consisting of the cap 24, bearing on the under side of the
85 bed along the edges of the slot between the forked arms of the brackets 20, and a clamp rod 25, having a head 26, at its lower end and an eccentric lever 26^a, pivoted at its upper end. By this construction both the clamping means
90 and the pivotal connection extend through the slot from the gage. The eccentric lever is arranged over a boss or enlargement 27, between the two wings of the gage.

In order that the gage may be set quickly
95 and accurately in any position I provide a pin 28, in the boss 29, on the gage which pin is preferably forced down by a spring 30, to engage with the table thus serving as a stop preferably by entering any one of a series of holes
100 in the table corresponding to the different angles to which it is necessary to shift the gage.

The lower end of the pin is conical. As before stated the frame work of the machine is in rear of the knife carriage so as to leave the bed free in front of the carriage for the adjustment of the gages. The shields or wings are also in rear of the carriage and by reason of this arrangement they can be made to extend completely over the side of the knives so as to shield the entire edge thereof when the knife is shifted to one side. This would not be the case were the wings in front of the plane of the knives as it would be necessary then to cut away a part of the shield to allow the gage to swing its full distance or the adjustment of the gage would have to be more limited.

In Fig. 3^a is shown the preferred manner of supporting the spring stop for the gage in which the boss 29^x is fitted to an enlarged opening 40, in the gage which will permit adjustment of the boss laterally, such adjustment being allowed also by the enlarged openings 41, in the flange 42, through which the holding screws 28^x pass into the gage.

I claim—

1. In combination, the bed or frame, the knife and carriage with operating means therefor, the swinging gage, having a shearing edge at the line of cut and the pivotal connection between the gage and the frame, the center of which is in the plane of the shearing edge and cutting line and below the same, said gage having its bearing face radiating from the center of the gage pivot, substantially as described.

2. In combination the bed or frame, the knife and carriage with operating means therefor, the swinging gage having a shearing edge at the line of cut and the pivoted connection between the gage and frame comprising the arm extending from the gage through a slot in the frame and pivoted at its end thereto, the center of the pivot being in the plane of the cutting line and below the same, said gage having a bearing face radiating from the pivot center, substantially as described.

3. In combination, the bed or frame, the knife and carriage with operating means therefor, the swinging gage having a shearing edge in the plane of the cutting line and the pivotal connection between the gage and the bed comprising the arm connected to the gage

extending under the frame and having an up-turned pivot at its end fitted to a socket in the plane of the cutting line and shearing edge of the gage, substantially as described.

4. In combination, the slotted frame, the knife carriage and knife, the gage, the pivotal connection extending therefrom through the slot to the under side of the frame and the clamp for the gage extending through the slot and bearing on the edges of the slotted frame independent of the pivot connection, substantially as described.

5. In combination, the slotted frame, the knife, and knife carriage, the gage, the forked bracket extending from its under side through the slot to the lower side of the frame to which it is pivoted and the clamp for the gage extending between the forks of the bracket, substantially as described.

6. In combination the frame, the knife, the gage having a shearing edge at the line of cut and the setting stop for the gage consisting of the vertically movable pin on the gage adapted to enter holes in the bed, said stop being adjustable laterally of the gage and longitudinally thereof toward and from the shearing edge, substantially as described.

7. In combination, the gage having the opening, the boss of smaller diameter adapted to said opening and adapted to be moved laterally therein in any direction, and having a flange with openings, the screws passing through said openings and of smaller diameters than said openings, and the stop passing through the boss to engage the table or bed, substantially as described.

8. In combination, the frame having the bed, with the holes therein, the knife, the gage having a shearing edge at the line of cut and the setting stop arranged on the gage consisting of the conically pointed, vertically movable pin, said pin being adjustable laterally and longitudinally of the gage and operating to set the gage at the proper angle and also to set it in relation to the line of cut, substantially as described.

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

WILLIAM R. FOX.

Witnesses:

JNO. DUFFY,
PETER DOSCH.

Correction in Letters Patent No. 504,209.

It is hereby certified that in Letters Patent No. 504,209, granted August 29, 1893, upon the application of William R. Fox, of Grand Rapids, Michigan, for an improvement in "Wood-Trimmers," an error appears in the printed specification requiring correction, as follows: Page 2, after line 24, the paragraph "*It will be noticed that the stop may be adjusted not only laterally of the gage but longitudinally thereof or toward or from the shearing edge. This latter adjustment is important as the stop is thus made to act as an adjustable setting device by which the shearing edge may be maintained at the line of cut even should there be looseness at the pivot bearing due to wear.*" should be inserted at the end of the line; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 23d day of April, A. D., 1901.

[SEAL.]

F. L. CAMPBELL,
Assistant Secretary of the Interior.

Countersigned:

F. I. ALLEN,
Commissioner of Patents.