

Sept. 27, 1932.

J. J. DRILL

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MITER GAUGE FOR SLIDING T-BEVELS

Filed March 24, 1930

3 Sheets-Sheet 1

Fig. 1.

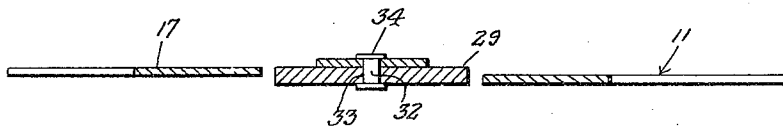
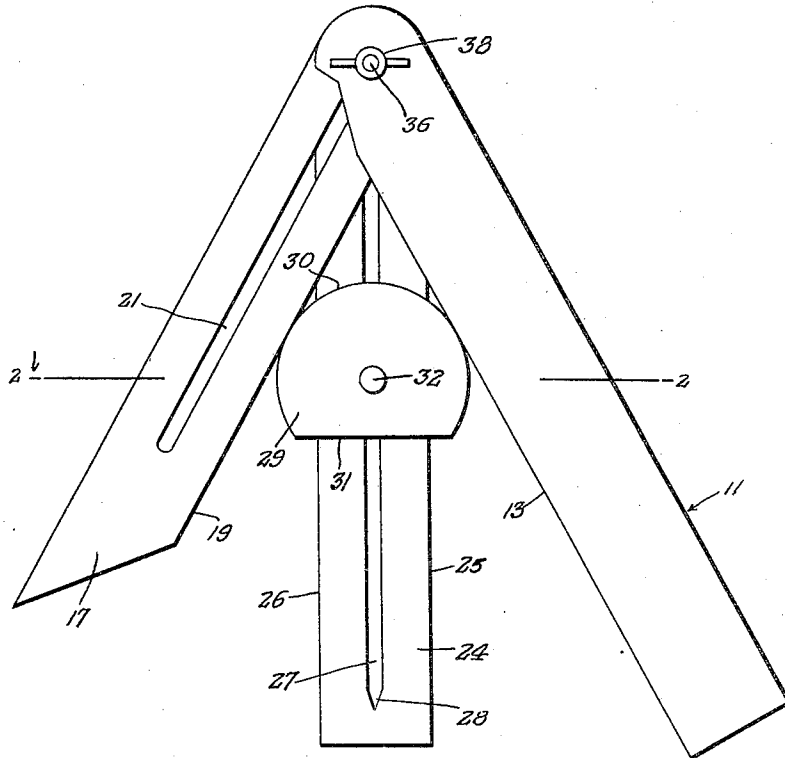


Fig. 2.

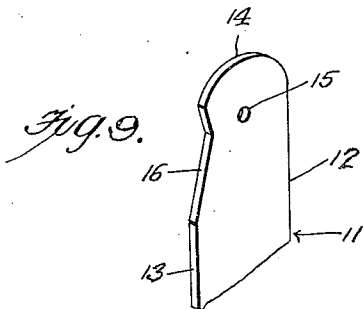


Fig. 9.

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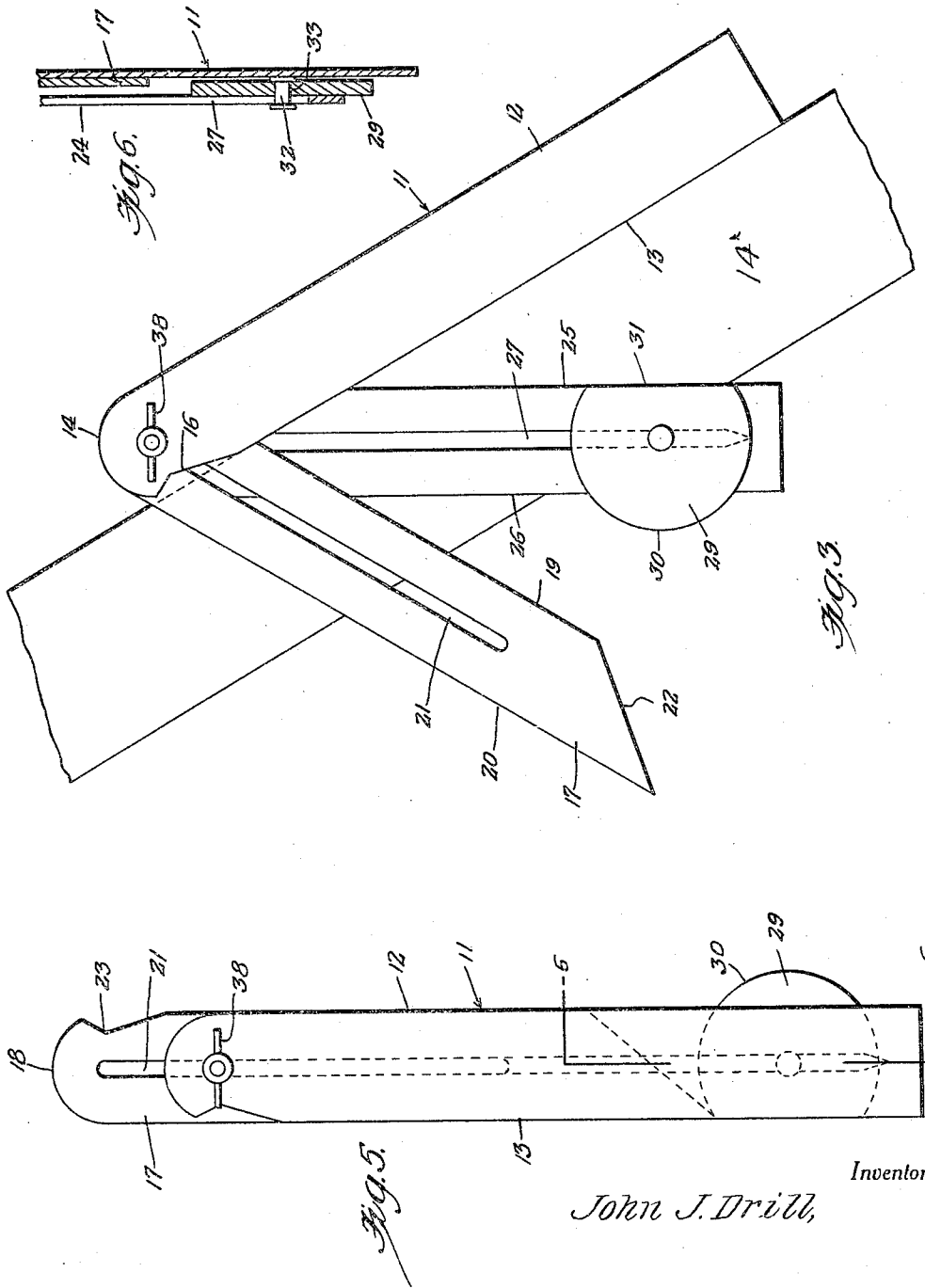
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3 Sheets-Sheet 2



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Sept. 27, 1932.

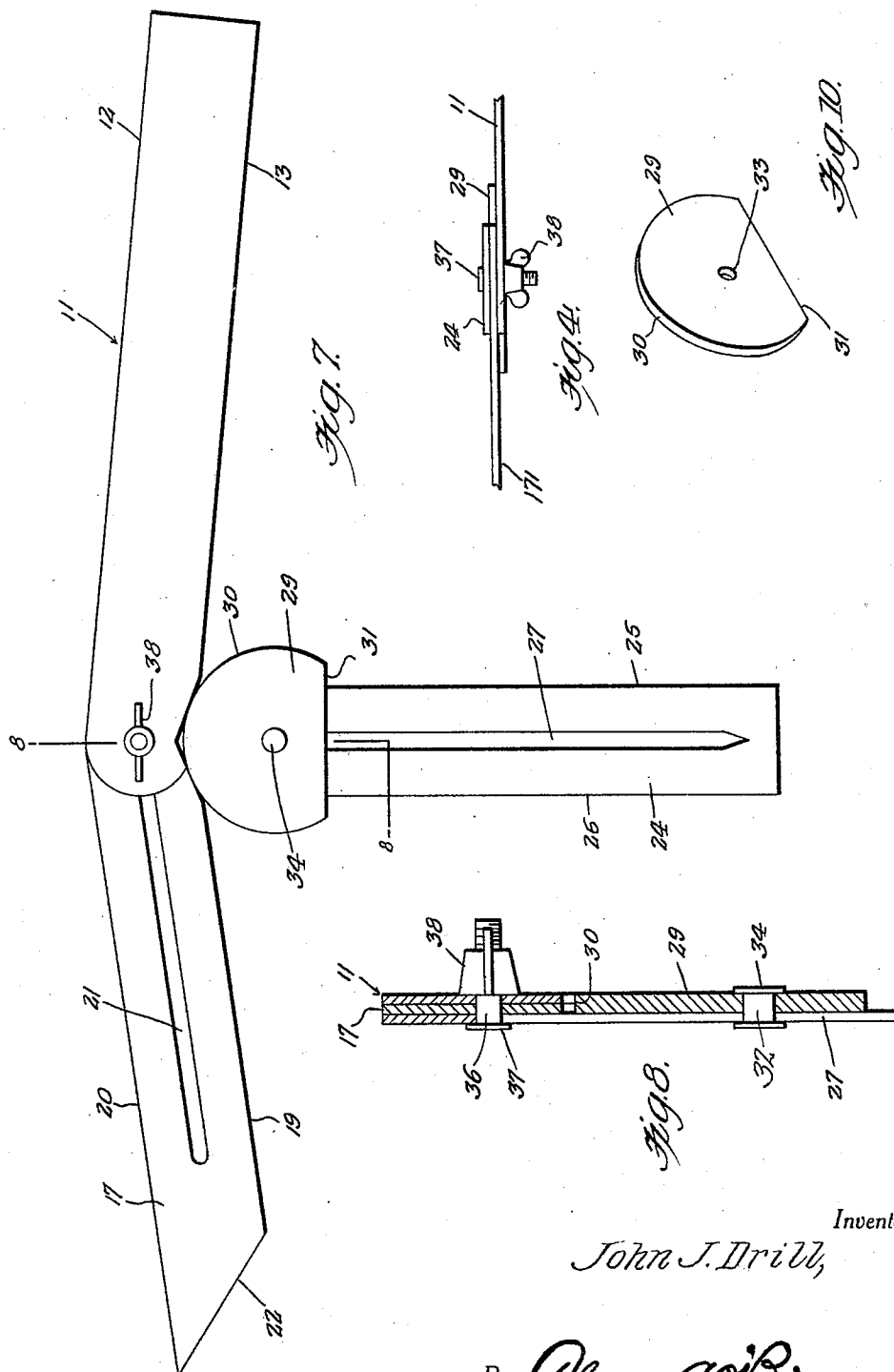
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MITER GAUGE FOR SLIDING T-BEVELS

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3 Sheets-Sheet 3



UNITED STATES PATENT OFFICE

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MITER GAUGE FOR SLIDING T-BEVELS

Application filed March 24, 1930. Serial No. 438,430.

This invention relates to sliding T-bevels and an object of the invention is to provide a miter gauge to locate the miter of any angle desired.

Another object of the invention is to provide a miter gauge for sliding T bevels so that a miter can be gauged outside of an angle, the same as the inside of an angle without the use of any other tools.

Further objects of the invention are to provide a device of the character referred to that is strong and durable, thoroughly reliable for its intended purpose, arranged to fold compactly in a unit requiring the minimum of storage space, that there may be formed of metal parts of a non-corrosive character, that is very simple in its method of assembly, and comparatively inexpensive to manufacture and use.

With the foregoing and other objects in view, the invention consists of a novel construction, and arrangement of parts as may be hereinafter more specifically described and illustrated in the accompanying drawings, wherein is disclosed an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to without departing from the spirit of the claims hereto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a plan view of the assembled device in accordance with the present invention,

Fig. 2 is a horizontal section taken substantially on the line 2—2 of Fig. 1.

Fig. 3 is a plan view of a board showing in top plan view the device being used to mark off a miter.

Fig. 4 is a fragmentary outer edge view of the device in the extended position shown in Fig. 7 of the drawings,

Fig. 5 is a plan view of the device in folded relation,

Fig. 6 is a section taken substantially on lines 6—6 of Fig. 5,

Fig. 7 is a plan view of the device showing the relation of the parts with the handle extended to an obtuse angle,

Fig. 8 is a section taken substantially on the line 8—8 of Fig. 7,

Fig. 9 is a fragmentary perspective view of the hinged end of the handle illustrating the notch for the sliding head, and

Fig. 10 is a perspective view of the sliding head.

Referring to the drawings in detail, 11 indicates generally the handle of a sliding T-bevel, which is an elongated thin bar having straight, parallel longitudinal edges 12, 13. The pivoted end 14 of the handle is round and is provided at its rounded end with an opening 15 to receive the pivot bolt to be described.

Adjacent the rounded end there is an angular recess 16 extending inwardly from the inner edge 13 of the handle.

The leg of the sliding T-bevel indicated at 17, is a relatively flat bar shorter than the handle, and is of about the same thickness. The pivoted end of this leg 17 is rounded as at 18 and has parallel longitudinal edges 19, 20. The leg is formed with a slot 21 along its longitudinal median intermediate its ends, which extends throughout the major portion of the length of the leg. The edge 22 of the free end of the leg inclines outwardly from the inner to the outer edge. This leg 17 is also formed with an angular recess 23, corresponding to the recess 16 on the handle.

The handle and leg are positioned next to one another in the assembled relation.

The blade of the miter gauge is indicated at 24, and is formed of a flat bar of substantially the same thickness as the handle and leg, and has parallel opposite side edges 25, 26. A slot 27 is formed in the blade along its longitudinal median, parallel to the side edges 25, 26. This slot 27 is substantially co-extensive with the length of the blade, but terminates inwardly from the end of the blade in points 28.

In the assembling, the blade is mounted next to the leg 17. A head 29 is slidably mounted on the inner face of the blade and is adapted to slide between the confronting edges 19 and 13 of the leg and handle respectively, with the arcuate edge 30 thereof bearing against the said confronting edges to

force the leg and handle apart. This head is in the shape of a disk having a minor part cut away to form a flat edge 31. A pivot pin 32 extends through an opening 33 in the head 29 and also through the slot 27 for pivotally and slidably connecting the head to the blade. The pin is formed with the head 34 for holding the pin in position.

The leg 17, the handle 11, and the blade 24 are pivoted together by the bolt 36 which has a head 37 thereon that bears against the outer face of the blade. The shank of the bolt extends through the slot 27 in the blade, the slot 21 in the leg and the opening 15 in the handle. The upper end of the bolt 36 is threaded to receive the wing nut 38.

The wing nut 38 when tight will form a tight pivot for the parts, or may even lock them in fixed relation if desired.

Furthermore, by loosening the nut, the parts may be folded as shown in Fig. 5 of the drawings, in a compact bar which can be easily carried in a tool kit.

In the application of the invention, the edge 13 of the handle is disposed along one edge of a board 14'. Then the head 29 with its arcuate edge 30 bearing against the leg 17 and the handle, is moved inwardly in the slot 27 until leg 17 gives the proper bevel angle.

Thereafter, the head 29 is turned on its pivot until the flat edge 31 is parallel with the edge 25 of the blade. A line drawn along the edge 25 will give the proper miter for the angles between the blade 24 and the handle 11.

The recesses 16 and 23 act to hold the handle and leg in the position they occupy in Figure 7 when the head is raised to engage the walls of said recesses, as one side of the angle of each recess bears on the arcuate edge 30 of the head 29. Thus the head and the walls of the recesses act to provide additional supporting means for the parts in this extreme angle.

It is thought that the present embodiment of the invention has been disclosed in considerable detail merely for the purpose of exemplification, since in actual practice it attains the features of advantage enumerated as desirable in the statement of the invention and the above description.

It is to be understood that by describing in detail herein any particular form, structure, or arrangement, it is not intended to limit the invention beyond the terms of the several claims, or the requirements of the prior art.

Having thus described my invention, what I claim as new is:—

1. A bevel gauge comprising a handle, a leg having a longitudinally extending slot therein, a blade having a longitudinally extending slot therein, a pivot member passing through the two slots and an end of the handle to pivotally and slidably connect the

blade and leg with the handle, a head having an arcuate edge, means extending through the head and the slot in the blade for rotatably and slidably mounting the head on the blade so that the arcuate edge will bear evenly against the adjacent edges of the leg and handle to force them apart when said head is moved on the blade toward said pivot member.

2. A bevel gauge comprising a handle, a leg having a longitudinally extending slot therein, a blade having a longitudinally extending slot therein, a pivot member passing through the two slots and an end of the handle to pivotally and slidably connect the blade and leg with the handle, a head having an arcuate edge, means extending through the head and the slot in the blade for rotatably and slidably mounting the head on the blade so that the arcuate edge will bear evenly against the adjacent edges of the leg and handle to force them apart when said head is moved on the blade toward said pivot member, said head having a flat edge whereby the head can be positioned to place said flat edge flush with a longitudinal edge of the blade to permit drawing of a line alongside the edge.

3. A bevel gauge comprising a handle, a leg having a longitudinally extending slot therein, a blade having a longitudinally extending slot therein, a pivot member passing through the two slots and an end of the handle to pivotally and slidably connect the blade and leg with the handle, a head having an arcuate edge, means extending through the head and the slot in the blade for rotatably and slidably mounting the head on the blade so that the arcuate edge will bear evenly against the adjacent edges of the leg and handle to force them apart when said head is moved on the blade toward said pivot member, said head having a flat edge whereby the head can be positioned to place said flat edge flush with a longitudinal edge of the blade to permit drawing of a line alongside the edge, said blade being assembled next to the leg of the gauge.

4. A bevel gauge comprising a handle, a leg having a longitudinally extending slot therein, a blade having a longitudinally extending slot therein, a bolt passing through the two slots and an end of the handle, a nut on the bolt, a head of substantially circular shape, and having a part cut away to form a flat edge, a pivot passing through the head and the slot in the blade whereby the arcuate edge of the head will bear evenly against the adjacent edges of the leg and handle to force them apart when the head is moved toward the bolt, said head adapted to be positioned to place its flat edge flush with a longitudinal edge of the blade to permit drawing of a line along said edge, said blade being assembled next to the leg, the

confronting edges of the handle and the leg
being recessed adjacent the pivoted ends to
form supporting shoulders engaging the
head, when the head is raised to engage the
5 shoulders to support the leg and handle.

In testimony whereof I affix my signature.

JOHN J. DRILL.

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