J. A. ANSLEY.

BAND SAW GUIDE.

APPLICATION FILED MAR. 16, 1908.

916,248. Patented Mar. 23, 1909.

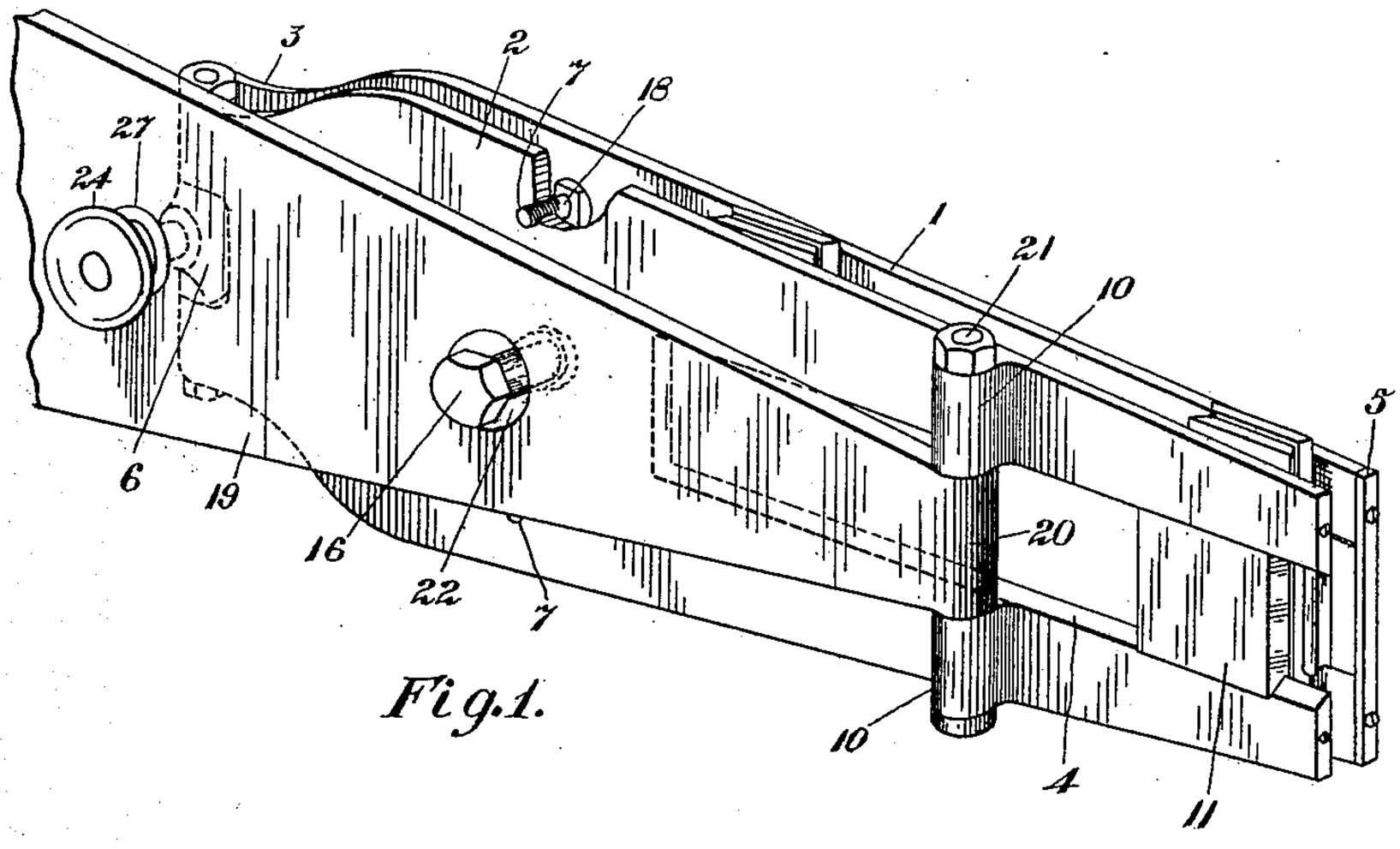

Fig. 1.

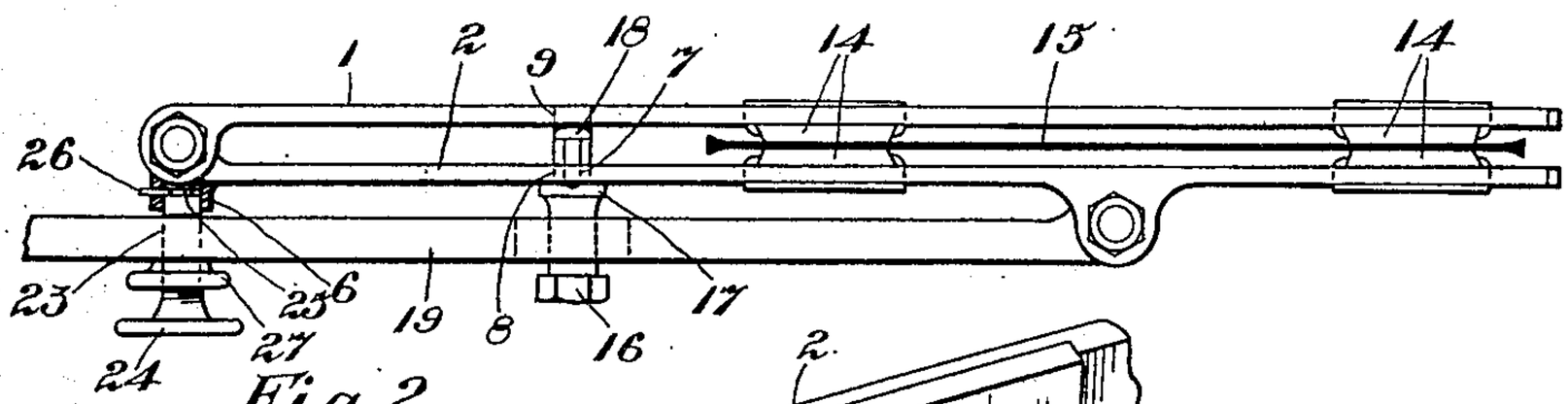

Fig. 2.

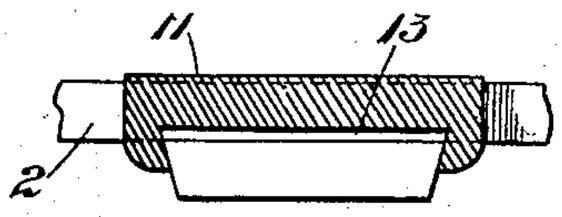

Fig. 4.

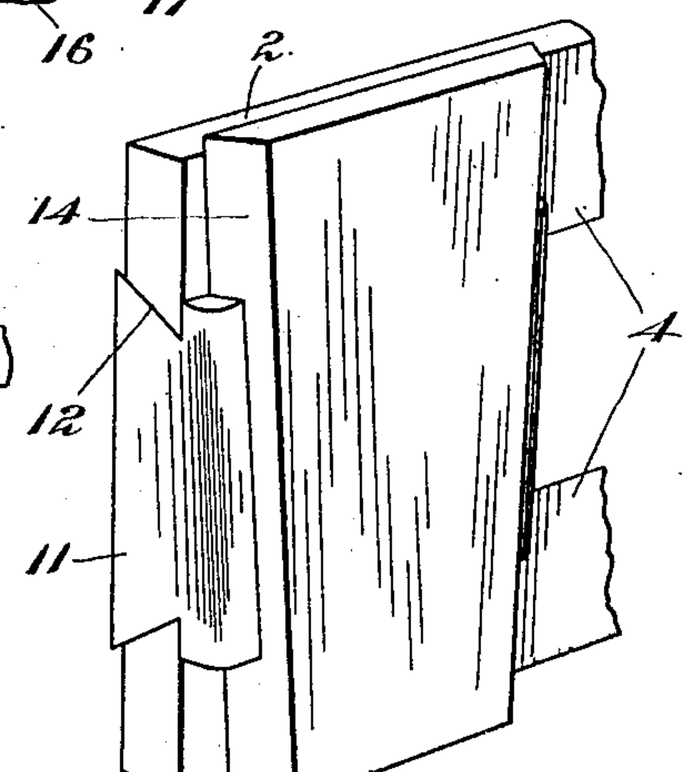

Fig. 3.

Witnesses
Wm. B. Muir
H. T. Carter

Inventor
John A. Ansley.
by E. J. Fetherstonhaugh
Atty.

UNITED STATES PATENT OFFICE.

JOHN ALBERT ANSLEY, OF THESSALON, ONTARIO, CANADA.

BAND-SAW GUIDE.

No. 916,248. Specification of Letters Patent. Patented March 23, 1909.

Application filed March 16, 1908. Serial No. 421,399.

To all whom it may concern:

Be it known that I, JOHN ALBERT ANSLEY, a subject of the King of Great Britain, resident of the town of Thessalon, in the district of Algoma, in the Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Band-Saw Guides, of which the following is a specification.

The invention relates to improvements in band saw guides, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel construction and arrangement of parts, whereby adjusting devices are attached to the guide and the latter supported in such a manner as to permit the adjustment of the said guide during the operation of the saw.

The objects of the invention are to retain the saw in perfect alinement during operation, to provide a guide free from projecting bolts or other obstacles in the way of the work, and to generally devise a simple, cheap and durable construction.

In the drawings, Figure 1 is a perspective view of the guide apart from the saw. Fig. 2 is a plan view of the parts to the invention showing the saw in section between the guiding blocks. Fig. 3 is an enlarged perspective detail of the arrangement of the guide block. Fig. 4 is an enlarged sectional view of the arrangement of the guide block.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 and 2 are plates joined at one end by the hinge 3 and having the longitudinal slots 4 extending inwardly from the other end, the said slots having their edge faces beveled outwardly and their open ends closed by the bars 5, suitably secured to the end edge faces of the plates 1 and 2.

6 is a lug centrally recessed and extending laterally from the knuckle of the hinge 3.

7 are threaded orifices in the plate 2, arranged vertically one above the other and equi-distant from the center.

8 is a plain orifice in the plate 2, centrally arranged between the orifices 7 and vertically in line therewith and 9 is a threaded orifice in the plate 1 opposite the orifice 8.

10 are vertically arranged projections from the outer face of the plate 2 central in relation to the length of the slots 4 and forming the barrel portion of a hinge.

11 are slidably arranged brackets having their upper and lower edge faces 12 formed to dove-tail on the beveled edge faces of the longitudinal slots 4, the said brackets being arranged in pairs opposite one to the other, the present description being confined to two pairs, though it must be understood that any number of pairs, necessary may be used. The faces of said brackets 11 are formed with a dove-tailed socket 13 slightly converging toward their lower ends.

14 are guide blocks preferably of babbitt and having correspondingly formed vertical edge faces to the sockets 13 and introduced into said sockets, the said blocks wedging tightly against the inner faces of the plates 1 and 2 so as to draw the dove-tail arrangement of the brackets tightly in place, insuring perfect rigidity to both brackets and blocks.

It will now be seen that the main portion of the saw guide is formed, that is to say, the plates and guide blocks through which the saw 15 passes in operation, the said blocks 14 being spaced by sliding the brackets 11 in the slots 4 according to the width of the band saw passing through the guide.

16 is a bolt having the end of its pin threaded and the shoulder 17 formed intermediate of the length of said pin, said bolt extending through the plain orifice 8 in the plate 2 into the threaded orifice 9 in the plate 1, thus the plates 1 and 2 may be drawn together by turning the head of the said bolt 16.

18 are set screws threaded into the threaded orifices 7 in the plate 2 with their heads abutting the inner face of the plate 1. The screws 18 may be accurately adjusted to regulate the space between the plates 1 and 2 and the said plates then drawn together by the bolt 16, the plate 1 being drawn tightly against heads of said set screws and locking them securely.

19 is an arm secured at its wider end to a suitable support, probably forming part of the saw mill structure and rigid with said support, the said arm gradually converging, and at the outer end thereof being formed into a knuckle 20 between the barrel portion 10 of a hinge. The said barrel and knuckle portions are secured together by the pin 21, thus connecting the guide formed of the plates 1 and 2 with its rigid support, namely, the arm 19.

22 is a plain orifice through the arm 19, the said orifice permitting the head of the bolt 16 to pass freely therethrough.

23 is a threaded orifice through the arm 19 opposite to the lug 6.

24 is an adjusting screw having an annular groove 25 adjacent to the end thereof, the said screw being inserted in the threaded orifice 23 and extending into the central recess in the lug 6, being held therein by the pin 26 extending through the wall of said recess into the annular groove 25.

27 is a lock nut on the adjusting screw 24.

In operation, the saw, as before stated, passes between the guide blocks 14, each one of a pair gently abutting the flat faces of the saw. The hinge formed at the joint of the arm 19 and the plate 2 being central in relation to the width of the band saw, thus the guide proper may be stated to be supported centrally in relation to said saw. This is quite an important feature, as the most delicate adjustment may be made, the guide always working from a central pivot point. The actual adjustment is made by the adjusting screw 24 which, with a single turn, changes the angular position of the guide plates 1 and 2 in relation to the arm 19, and as the said arm 19 is a rigid support, the direction of the saw teeth must be changed at each turn of said screw.

The adjustment of the space between the plates is for the purpose of receiving the saw, and this has already been explained in a detailed description of parts, for it will be readily understood that the bolt 16 having the shoulder 17 abutting the plate 2 on being turned in the threaded orifice in the plate 1, draws the said plates 1 and 2 together, the set screws regulating the distance between them and the said plates will be held firmly with the guide blocks held in proper contact with the saw. If it is necessary during the operation to adjust the width of the said space between the guide blocks, it can, of course, be done without stopping the saw, but as already mentioned, the principal adjustment under such circumstances is by the screw 24.

The device is easily and quickly adjusted and in the event of the guide blocks becoming worn or torn out, they can be replaced very quickly.

Not only is this guide simple and efficient in adjustment, but on account of the plate 1 being very thin and having no projections of any kind, the guide may be run close to the timber on all but a last cut. This cannot be done with any of the guides at present in use.

What I claim as my invention is:

1. In a band saw guide, a pair of plates adjustably secured together and pivotally supported centrally in relation to the saw receiving portion thereof, each of said plates having a longitudinal slot centrally arranged therein, brackets slidably held in said longitudinal slots, and guide blocks removably secured in said brackets, and contacting with said plates and holding said brackets securely in position.

2. In a band saw guide, the combination with a rigid supporting arm having a barrel portion of a hinge formed at its outer end, and a plain orifice therethrough intermediate of its length and a threaded orifice therethrough adjacent to said plain orifice, of a pair of plates hinged together at one end and having longitudinal slots therein, one of said plates having projections therefrom forming the barrel portion of a hinge and pivotally secured to the hinge portion of said rigid arm and a plain orifice in said rigid arm and threaded orifices arranged vertically above and below said plain orifice, and the other plate having a threaded orifice arranged opposite said plain orifice in the aforesaid plate and a socket in the barrel portion of its hinged member, guide blocks adjustably supported in the longitudinal slots in said plates, a shoulder bolt extending through the plain orifice in the one plate and threaded into the orifice in the other plate and having its shoulder abutting the first mentioned plate and its head portion extending through the plain orifice in said rigid supporting arm, set screws threaded into the threaded orifice in said plate and having their heads abutting the inner side of the other plate, a threaded spindle turning in the threaded orifice in said rigid supporting arm and extending into and revolubly held in the socket in the barrel portion of the hinged member of the said plates and swinging said plates.

3. In a band saw guide, a pair of plates adjustably secured together and having longitudinal slots therein, said slots having outwardly sloping beveled edges, brackets having dove-tail portions fitting in and sliding in said slots and vertical tapered dove-tail grooves in their inner faces, tapering guide blocks having beveled edges fitting in said tapered dove-tail grooves and wedging therein and drawing the dove-tail portions tightly against the beveled edges of said longitudinal slots.

4. In a device of the class described, in combination, a rigid arm secured to a suitable support and converging to a hinge knuckle at the outer end and having a plain orifice and a threaded orifice intermediate of its length, a pair of plates hinged together at one end and having longitudinal slots extending inwardly from the other end, said slots having beveled edge faces and being suitably closed at their outer and open ends, said plates having a central recessed lug extending laterally from the hinge joint end and the barrel portions of a hinge projecting from one of said plates laterally and centrally in relation to the length of the said longitudinal slots, a hinge pin joining said barrel portions and the knuckle portion of said rigid arm, a

plurality of brackets dove-tailed in said slots and sliding therein, guide blocks secured in said brackets, a tightening bolt threaded in one of said plates and extending through the other plate and the plain orifice in said rigid arm, spacing screws threaded in one of said plates, and an adjusting screw extending through the threaded orifice in said rigid arm and into the recess in the lug on said hinged plates and turning freely in said lug and held therein.

5. In a band saw guide, a pair of plates adjustably secured together and having longitudinal slots therein, guide brackets slidably held in said slots and having dove-tailed sockets formed in their front faces, and taper-ing guide blocks having beveled edges and introduced in said sockets and tightening therein and rigidly securing said brackets in said plates, said plates being pivotally supported centrally between the pairs of guide blocks from a rigid arm and adjustable on said pivot.

Signed at the city of Toronto, in the county of York, Province of Ontario, in the Dominion of Canada, this 21st day of February, 1908.

JOHN ALBERT ANSLEY.

Witnesses:
H. DENNISON,
E. WILKIN.