(No Model.)

G. F. STRIEGEL.

SAW GUIDE.

No. 380,828. Patented Apr. 10, 1888.

Fig. 1.

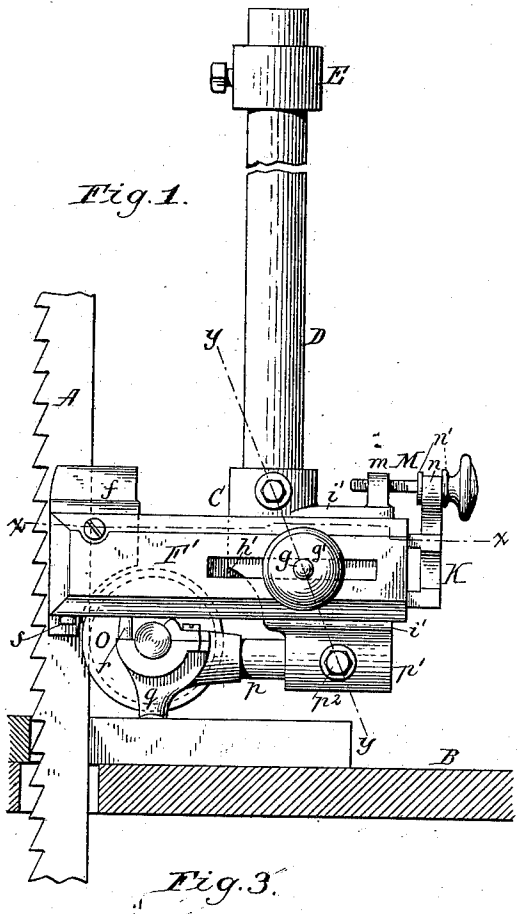


Fig. 2.

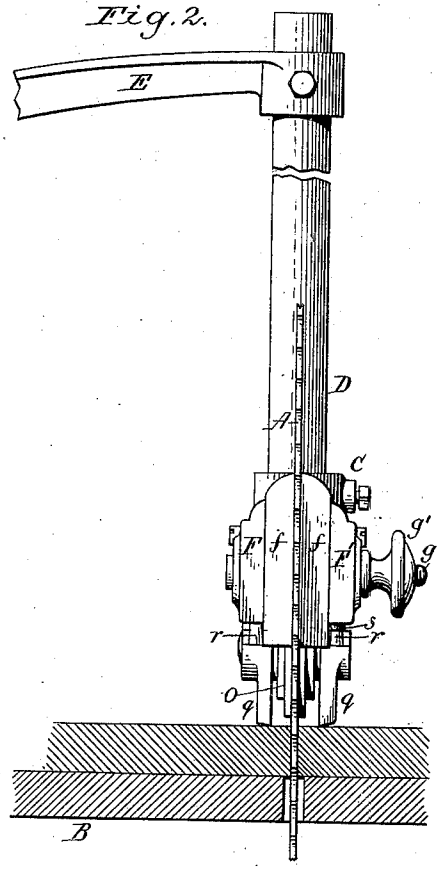


Fig. 3.

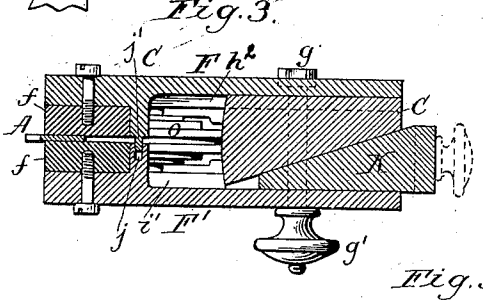


Fig. 4.

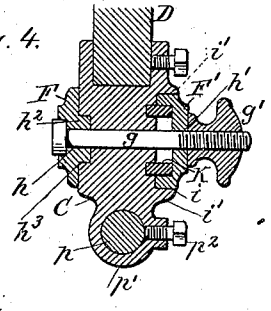


Fig. 5.

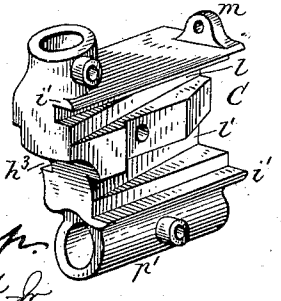
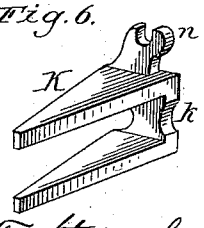


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE F. STRIEGEL, OF BUFFALO, NEW YORK.

SAW-GUIDE.

SPECIFICATION forming part of Letters Patent No. 380,828, dated April 10, 1888.

Application filed October 27, 1887. Serial No. 253,507. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. STRIEGEL, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Saw-Guides, of which the following is a specification.

This invention relates to an improvement in that class of saw-guides which are employed for preventing the vibration and swerving of band-saws, and which are capable of two adjustments, so that they can be adjusted to fit saws of varying thickness and width.

The object of my invention is to construct a simple guide of this nature which can be readily adjusted and which shall be comparatively inexpensive.

The invention consists of the improvements which will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved saw-guide applied to a saw. Fig. 2 is a front elevation thereof. Fig. 3 is a horizontal section in line *x x*, Fig. 1. Fig. 4 is a cross-section in line *y y*, Fig. 1. Fig. 5 is a perspective view of the head or frame of the guide. Fig. 6 is a perspective view of the wedge whereby the guide-plates are adjusted laterally.

Like letters of reference refer to like parts in the several figures.

A represents the endless band-saw, which runs around suitable pulleys in the usual manner; and B is the horizontal table upon which the lumber is placed, and which is provided with the usual opening, through which the saw passes.

C represents the head or supporting-frame of the saw-guide; and D is a vertical rod secured with its lower end to the head C, and whereby the guide is supported. The rod D is adjustably secured with its upper end to a supporting-arm, E, secured to the main frame of the machine, so that the guide can be arranged at a greater or less distance above the table B, as may be required by the thickness of the lumber.

F F′ represent the guide-plates, between the front ends of which the saw passes, and which are made adjustable both longitudinally and laterally to accommodate saws of different width and thickness. The front ends of the guide-plates F F′ are provided on their inner sides with steel jaws *f*, which receive the wear of the saw. The jaws *f* are seated in depressions in the guide-plates, and are secured thereto by screws or other suitable means.

The plates F F′ are fitted against opposite sides of the head C, and are attached thereto by a horizontal screw-bolt, *g*, which passes through an opening in the head C and through longitudinal slots *h h′*, formed in the plates F F′. The plate F is provided with a longitudinal rib, h^2, which engages in a corresponding way or groove, h^3, formed in one side of the head C, and the plate F′ is provided with lips or flanges *i*, which fit between longitudinal ledges *i′*, formed on the opposite side of the head C. The screw-bolt *g* is provided with a thumb-nut, *g′*, which bears against the plate F′, and whereby both plates are firmly secured to the head C. The head of the bolt *g* is preferably flattened, and is countersunk in the plate F, so as to hold the bolt against turning. Upon loosening the thumb-nut *g′* the plates F F′ can be moved longitudinally upon the head to adjust the same to the width of the saw.

j represents a transverse groove or depression formed on the inner side of the plate F′ in rear of the jaws *f*, and *j′* is a tenon formed on the plate F and engaging in the groove *j*. The groove and tenon *j j′* compel the two guide-plates to move lengthwise simultaneously, and prevent one plate from sliding ahead of the other in adjusting the same.

K represents a wedge, which is interposed between the plate F′ and the head C, and whereby the guide-plates are spread apart to adjust the same to the thickness of the saw. The wedge K is composed of two branches arranged on opposite sides of the bolt *g*, and which are connected by an upright bar, *k*. The branches of the wedge K bear with their inclined inner sides against the inclines *l l′*, formed on the adjacent side of the head C, while the outer sides of these branches, which rest against the plate F′, are made straight, as shown in Figs. 3 and 6, so as to cause the plate F′ to stand parallel with the plate F in all positions of the wedge.

M represents a horizontal adjusting screw, which works in a screw-threaded lug, *m*, formed near the rear end of the head C, and to which

the wedge K is attached. The neck of the adjusting-screw M engages in a notched or recessed lug, *n*, formed at the rear end of the wedge K, and is held against longitudinal movement in said lug by collars *n'*, secured to the adjusting-screw and bearing against opposite sides of the lug.

The screw M is provided with a suitable button or thumb-piece for turning it.

Upon loosening the thumb-nut *g'* of the bolt *g* and turning the adjusting-screw M in the proper direction the wedge K is moved forwardly, thereby spreading the plates F F' apart and increasing the distance between their jaws *f*. When the plates have been separated sufficiently to accommodate the thickness of the saw, the thumb-nut *g'* is tightened. The guide is thus readily adjusted to a saw of any size by loosening the thumb-nut *g'* and adjusting the plates longitudinally to the width of the saw, and then adjusting them laterally by means of the adjusting-screw M to the thickness of the saw, the thumb-nut *g'* being tightened after the plates have been properly adjusted. As the wedge K moves toward either extreme of its movement, the recessed lug *n* moves slightly out of line with the lug *m*. To prevent binding of the adjusting-screw in the lug *n*, the recess in this lug is made of sufficient size to permit the proper play of the adjusting-screw.

O represents a grooved guide-wheel or roller arranged below the guide-plates F F', and against which the smooth back of the saw bears. The guide-wheel O receives the thrust of the saw and prevents the saw from bending or yielding rearwardly under the pressure of the lumber. The wheel O is journaled in suitable bearings arranged at the front end of an adjustable rod, *p*, which latter is arranged in a horizontal socket, *p'*, formed on the under side of the head C and secured therein by a set-screw, p^2.

q represents downwardly-projecting guards or lugs, which are formed on the bearings of the roller O and extend beyond the periphery thereof, so as to prevent the lumber from coming in contact with said roller.

The jaws *f* of the guide-plates F F' extend downwardly to about the center of the guide-wheel O, so as to steady the portion of the saw bearing against the guide-wheel and prevent the saw from leaving the groove in the guide-wheel.

r represents short posts formed on the upper portion of the bearings of the wheel O, and which bear against the under sides of the guide-plates F F', so as to relieve the rod *p* from strains.

s is a stop formed on the under side of the guide-plate F', and which limits the forward movement of the guide-roller O by striking the adjacent post *r*.

My improved saw-guide is easily applied to the machine and readily adjusted, and is very simple in construction.

I claim as my invention—

1. In a saw-guide, the combination, with a stationary head, of guide-plates secured to opposite sides of said head and made longitudinally adjustable thereon, and a sliding wedge interposed between the head and one of said guide-plates, whereby the guide-plates are adjusted laterally, substantially as set forth.

2. The combination, with the head C and the adjustable slotted guide-plates, of a clamping-bolt whereby said guide-plates are attached to the head C, a wedge arranged between the head C and one of the guide-plates, and an adjusting-screw whereby the wedge is operated.

3. The combination, with the head C, provided with inclines *l l'*, and the adjustable slotted guide-plates F F', of a screw-bolt, *g*, provided with a thumb-nut, *g'*, a wedge, K, bearing with one side against the inclines *l l'* and with its opposite side against the plate F', and an adjusting-screw, M, whereby the wedge K is operated, substantially as set forth.

4. The combination, with the head C, provided with a socket, *p'*, and the adjustable guide-plates, of a guide-roller, O, an adjustable rod, *p*, arranged in the socket *p'*, and to which said roller is journaled, and guard-lugs *q*, extending beyond the periphery of the roller, substantially as set forth.

Witness my hand this 22d day of October, 1887.

GEORGE F. STRIEGEL.

Witnesses:
CARL F. GEYER,
CHESTER D. HOWE.