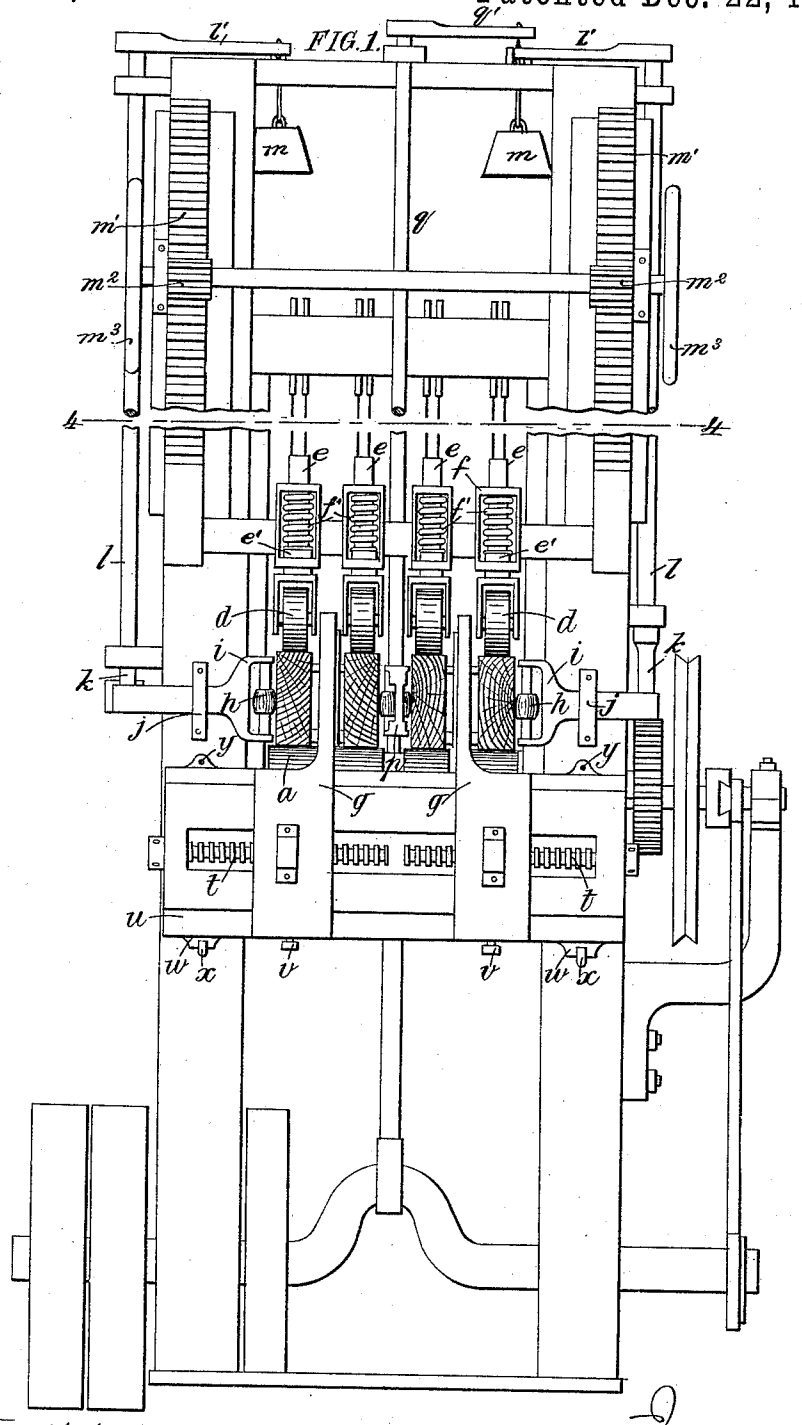
(No Model.) 5 Sheets—Sheet 1.

J. F. VAN SEVEREN.

SAWING MACHINE.

No. 465,770. Patented Dec. 22, 1891.

FIG. 1.



Witnesses:-
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By James L. Norris.
Attorney.

(No Model.)

5 Sheets—Sheet 2.

J. F. VAN SEVEREN.

SAWING MACHINE.

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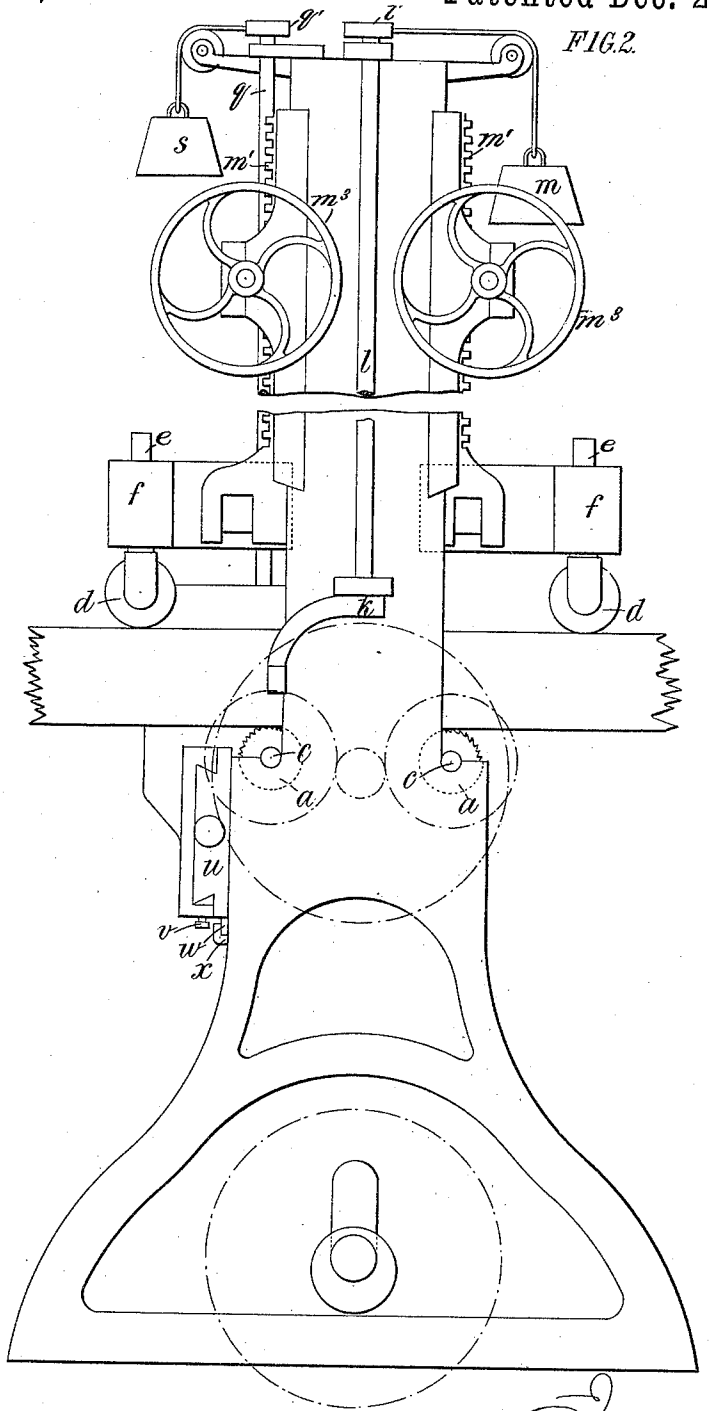
FIG. 2.



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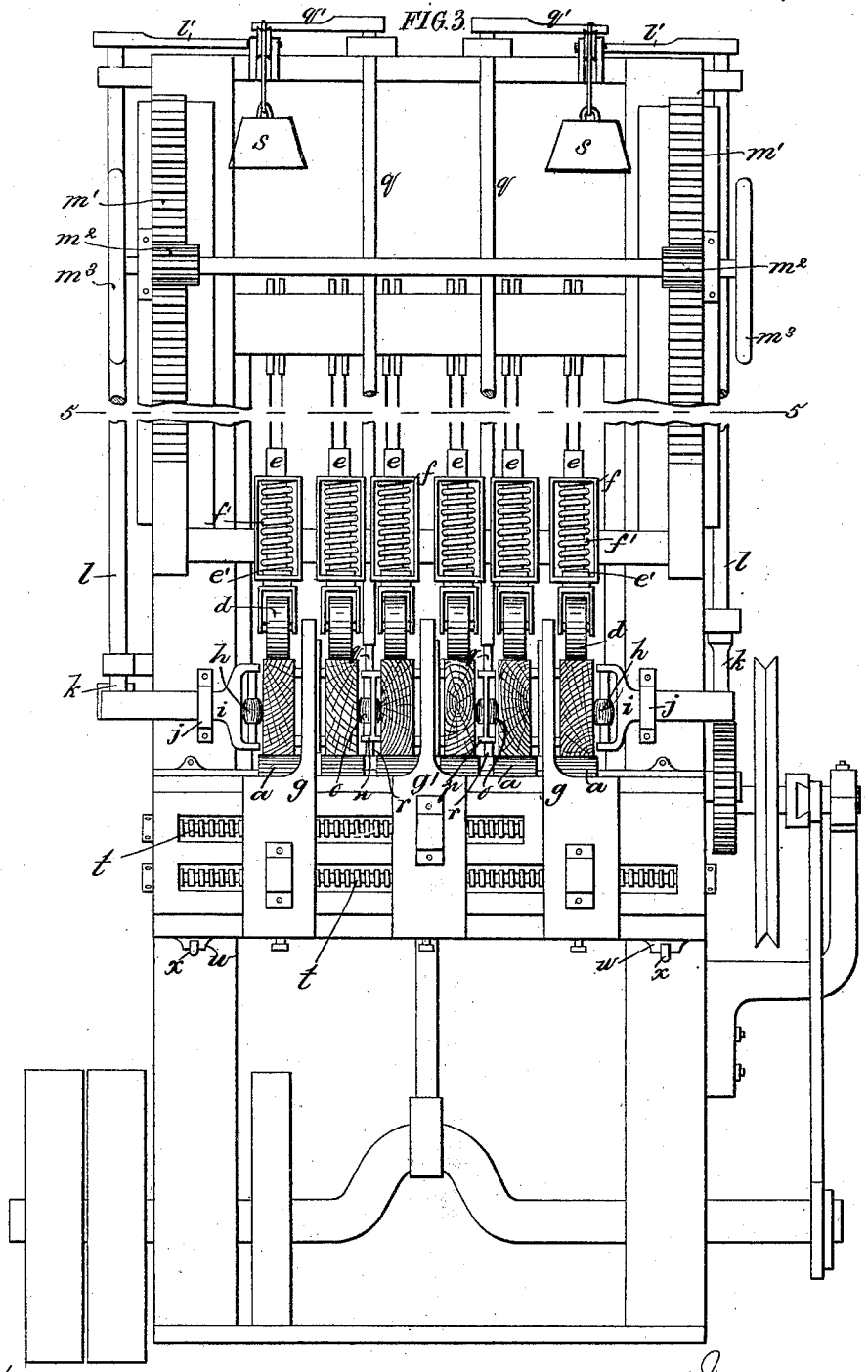
(No Model.) 5 Sheets—Sheet 3.

J. F. VAN SEVEREN.

SAWING MACHINE.

No. 465,770. Patented Dec. 22, 1891.

FIG. 3.



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(No Model.) 5 Sheets—Sheet 4.

J. F. VAN SEVEREN.

SAWING MACHINE.

No. 465,770. Patented Dec. 22, 1891.

FIG. 4.

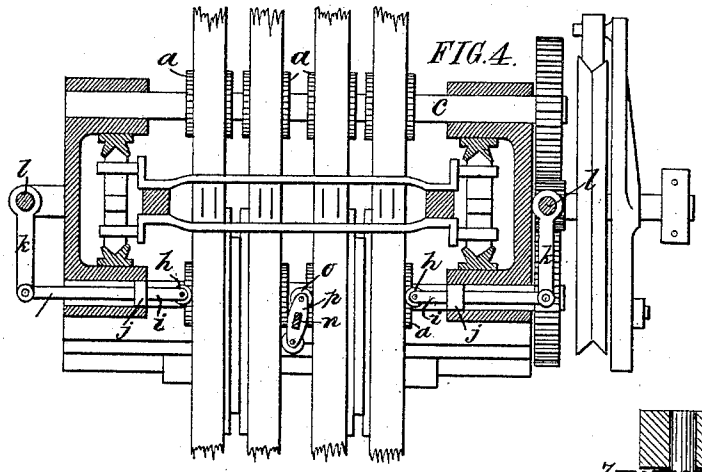


FIG. 6.

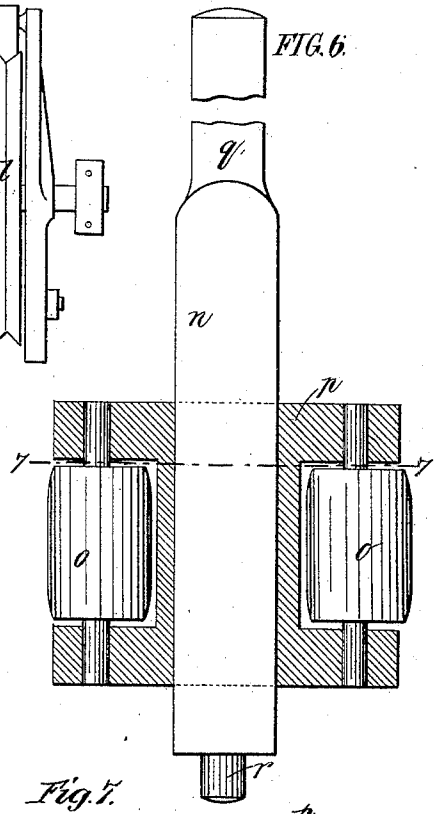


Fig. 7.

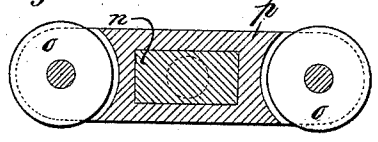
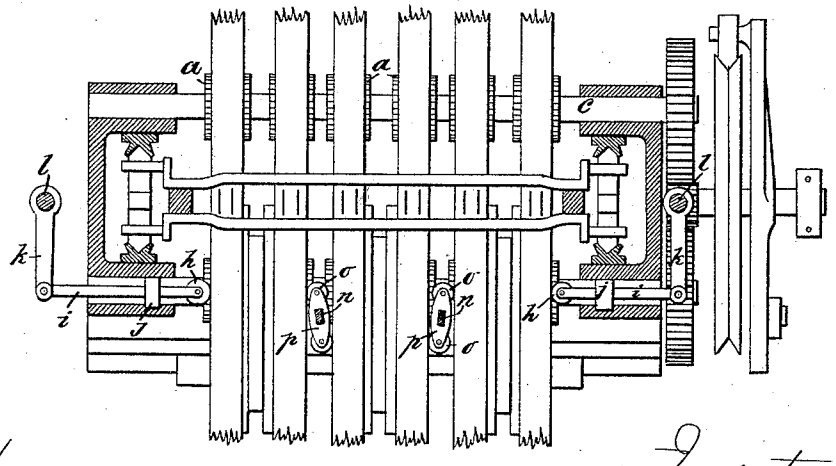


FIG. 5.



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(No Model.) 5 Sheets—Sheet 5.

J. F. VAN SEVEREN.

SAWING MACHINE.

No. 465,770. Patented Dec. 22, 1891.

FIG. 8.

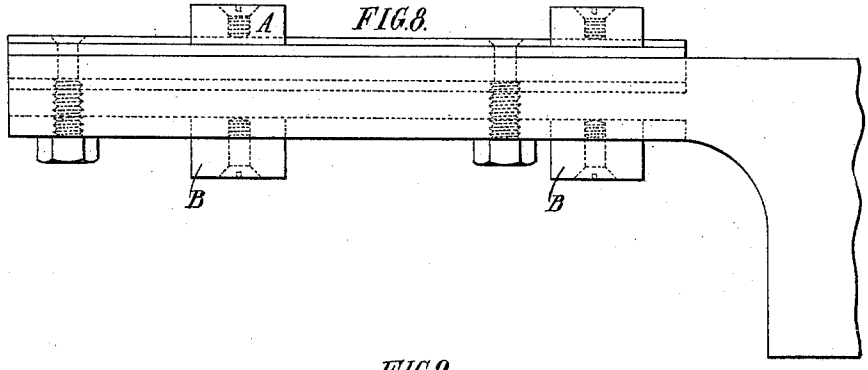


FIG. 9.

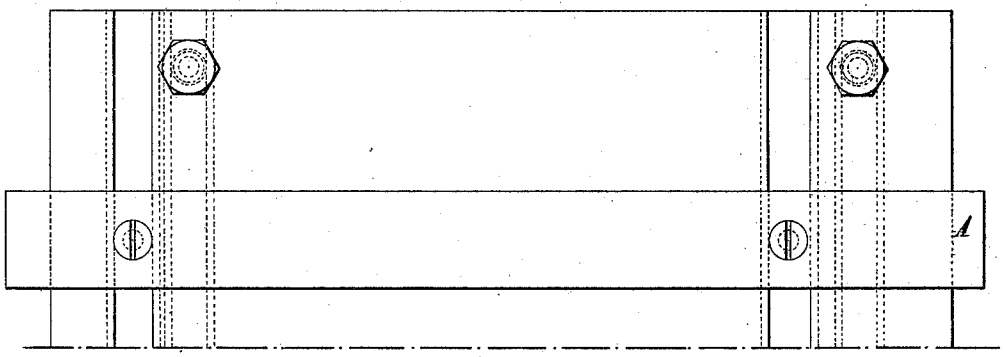


FIG. 10.

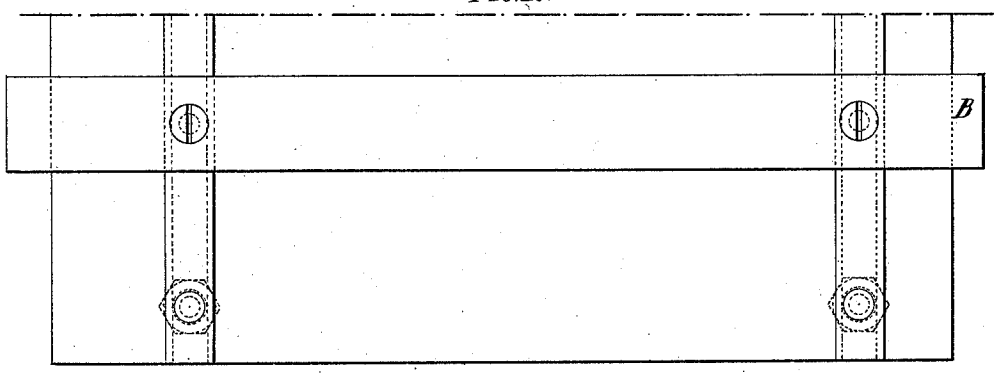
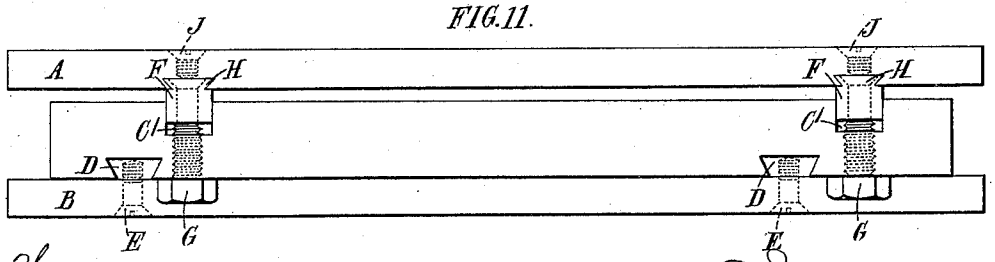


FIG. 11.



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By James L. Norris.
Attorney.

UNITED STATES PATENT OFFICE.

JEAN FRANÇOIS VAN SEVEREN, OF ALOST, BELGIUM.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 465,770, dated December 22, 1891.

Application filed June 16, 1891. Serial No. 396,443. (No model.) Patented in Belgium April 15, 1890, No. 90,199.

To all whom it may concern:

Be it known that I, JEAN FRANÇOIS VAN SEVEREN, manufacturer, a subject of the King of Belgium, and a resident of Alost, in the Kingdom of Belgium, have invented certain naw and useful Improvements in Sawing-Machines, (for which I have obtained a patent in Belgium, No. 90,199, dated April 15, 1890,) of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a sawing-machine which is designed for cutting several planks at the same time and can be changed almost instantaneously for cutting rough timber or beams of great sectional area.

In the accompanying drawings similar letters designate corresponding parts of the machine.

Figure 1 represents a front elevation of a machine for sawing four planks at the same time. Fig. 2 represents a side elevation of the same machine. Fig. 3 shows a front elevation of a machine for sawing six planks at the same time. Fig. 4 is a horizontal section on the line 4 4, Fig. 1, of the machine for sawing four planks. Fig. 5 is a similar section on the line 5 5, Fig. 3, of the machine for sawing six planks. Fig. 6 is a sectional elevation of pressing devices for forcing the planks against their guides. Fig. 7 is a transverse section on the line 7 7 of Fig. 6. Figs. 8, 9, 10, and 11 represent in plan and elevation the guides hereinafter described.

In the improved machine the planks are guided at their lower surface by means of fluted rollers *a*, which effect the feed of the planks across the saws by receiving a rotary movement from the shafts *c*, upon which they are mounted. At their upper surfaces the planks are guided by pressing-rollers *d*, mounted in stirrups having guides *e*, which extend through frames *f*, wherein are helical springs *f'*, that act upon a shoulder or projection *e'* on the said guides *e*, in order to force the rollers *d* against the planks. At their right-hand and left-hand surfaces the planks are guided by means of pressing and guide rollers, which constitute the principal feature of the said invention, and the form and operation of which are hereinafter described in detail.

In machines for cutting four or six planks the first and last planks are pressed against the guides *g* by means of pressing-rollers *h*, mounted between the branches of the stirrups *i*. These stirrups may each terminate in a flat bar guided in collars or supports *j*, fixed by screws to the frame of the machine. Against the extremity of the flat bar pushes a curved lever *k*, which is mounted upon a rod *l*, set in rotation by the aid of levers *l'* and weights *m*, which have for their object to hold the pressing-rollers against the outer planks.

When the machine is arranged for cutting four planks, the second and third planks are pressed against the above-mentioned guides *g*, and when it is arranged for cutting six planks the second and fifth planks are forced against these guides *g*, while the third and fourth planks are forced against another guide *g'* by means of the devices *n*, having two pressing-rollers *o*, which are represented apart on an enlarged scale in Fig. 6. As shown, these pressing-rollers *o* are mounted in a double stirrup *p*. This double stirrup is mounted on a rod *q*, terminating at its lower part in a pivot *r*, which engages with a hole formed in the frame of the machine. The rod *q* is prolonged to the upper part of the machine, where a system of levers *g'* is provided. From the extremity of the last of these levers is suspended a weight *s*, which has for its object to turn the said rod *q*, and thus force the pressing-rollers *o* against the planks. The guides *g* and *g'* can be moved by the endless screw *t*, and slide by means of dovetail mortises upon a dovetail tenon, with which the support *u* for the guides is provided. The latter are fixed by means of the screws *v*. The support for the guides is held against the frame of the machine by projections *w*, which engage with the hooks *x*, and by screws *y*. Under these conditions all the guides can be rapidly removed out of the way by withdrawing the screws *y* and turning down the supports *u* upon the said hooks *x*, and as, moreover, all the pressing-rollers *d* can without difficulty be lifted from the working space of the machine by means of the racks *m'*, actuated by the pinions m^2 and hand-wheels m^3, this space can in a moment receive rough timber or beams of very great sectional area.

Figs. 8, 9, 10, and 11 show the arrangement

of the frictional surfaces of the above-mentioned guides, Fig. 8 representing part of the guide in side elevation, Fig. 9 part of the left-hand surface of this guide in front elevation, Fig. 10 part of the right-hand surface in front elevation, and Fig. 11 part of the above-mentioned guide in plan.

A and B designate bars of steel having plane surfaces. These bars are arranged to be adjusted along the surfaces of the said guides, and can also be caused to recede from or approach these surfaces. In the left-hand surface of the guide are formed two dovetail grooves, with which engage two dovetailed blocks D. Into these blocks extend screws E, which serve to fix the bars B. By loosening the screws E the blocks D may be moved in the grooves C, and thus carry away the bars B. Two parallelopipedic grooves C′ are provided in the right-hand surface of the guide. A bar enters each of these grooves, and can pass more or less into the same under the action of the screw G, carrying away the bars A. The under part of this bar F presents a dovetailed tenon H, while the bars A are provided with a dovetail mortise to engage with the tenons, and their position is rendered stationary through the medium of pressing-screws J.

What I claim is—

A sawing-machine adapted for cutting a number of planks at the same time and comprising the pressing-rollers *d*, provided with springs *f′*, the pressing-rollers *h*, the devices *n*, provided with two pressing-rollers *o o*, guides movable upon screws and provided with frictional surfaces formed of bars A B, which are movable along the surfaces of said guides and adjustable to and from the same, and the guide-support *u*, provided with projections *w*, hooks *x*, and screws *y*, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JEAN FRANÇOIS VAN SEVEREN.

Witnesses:
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J. HEYOURD.