J. E. SEGUIN.

ADJUSTABLE FORM FOR ROUTING MACHINES OR THE LIKE.

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1,022,883. Patented Apr. 9, 1912.

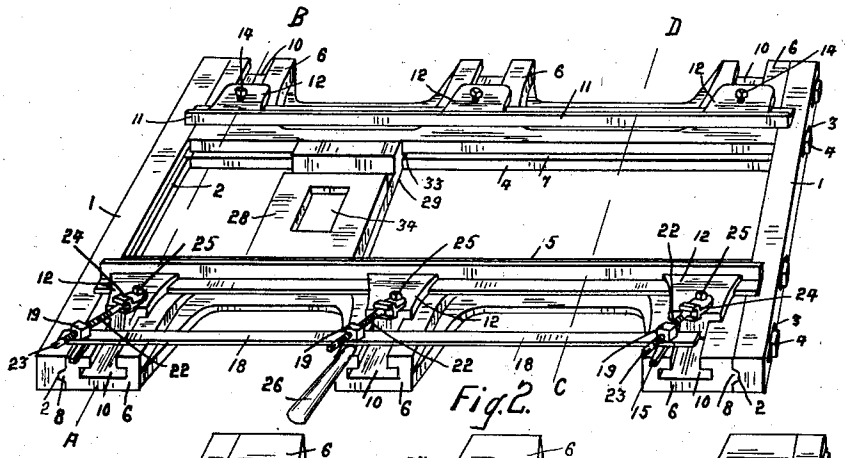

Fig. 2.

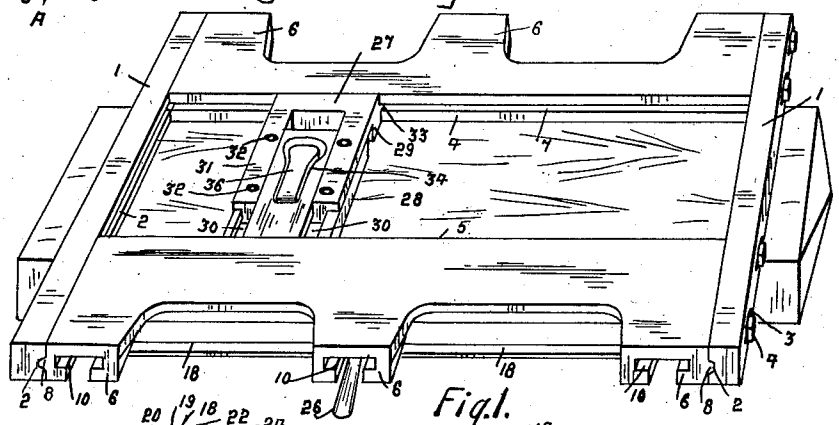

Fig. 1.

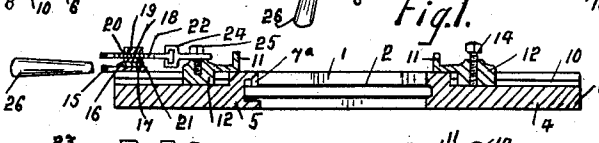

Fig. 5.

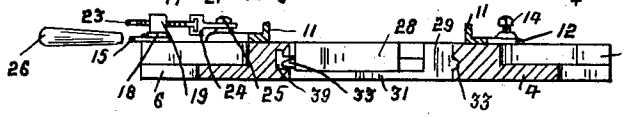

Fig. 6.

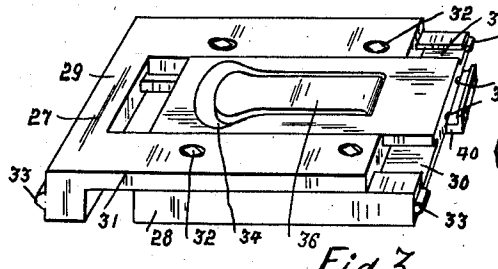

Fig. 3.

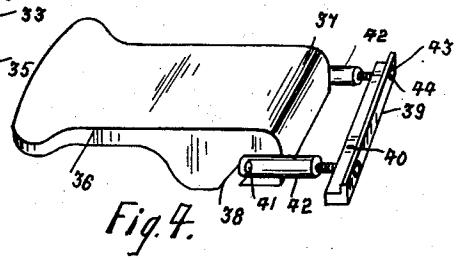

Fig. 4.

Witnesses.

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ADJUSTABLE FORM FOR ROUTING-MACHINES OR THE LIKE.

1,022,883. Specification of Letters Patent. Patented Apr. 9, 1912.

Application filed September 5, 1911. Serial No. 647,742.

To all whom it may concern:

Be it known that I, JOSEPH EMILE SEGUIN, a subject of the King of Great Britain, and resident of the city of Hull, Quebec, Canada, have invented certain new and useful Improvements in Adjustable Forms for Routing-Machines or the Like, of which the following is a specification.

The invention relates to improvements in adjustable forms for routing machines or the like, as described in the present specification, and illustrated in the accompanying drawings, that form part of the same.

The invention consists essentially of the novel arrangement and construction of parts, whereby a pair of end bars have a pair of side bars adjustably arranged therebetween, and provided with adjustable clamping means, and an adjustable cross piece.

The objects of the invention are to devise a readily adjustable metallic form to replace the several wooden forms commonly used, to guide the operations of routing machines or the like in panel-work, and thereby save much time, material and expense, as well as insuring a more perfect and durable form for the purpose specified.

In the drawings, Figure 1 is a perspective view of the form as viewed from the top, and clamped to a post or other piece of wood to be paneled. Fig. 2 is a perspective view of the adjustable form from the under side thereof. Fig. 3 is an enlarged perspective detail view of the adjustable cross-piece of the form. Fig. 4 is an enlarged perspective detail view of the clamp as used in the adjustable cross-piece. Fig. 5 is an enlarged sectional view on the line A—B in Fig. 2. Fig. 6 is an enlarged sectional view on the line C—D in Fig. 2.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 are the end-pieces of the frame, having the grooves 2 on the inner face thereof, and the slots 3 extending through the side thereof to the grooves 2.

4 and 5 are the side-pieces formed with the bracket extensions 6 extending laterally therefrom. The side-pieces 4 and 5 have the grooves 7 in the inner side face thereof corresponding to the grooves 2 in the end-pieces 1, one of said grooves having the dove-tailed extension 7^a, as particularly shown in Fig. 5.

8 are tongues extending from the ends of the side-pieces 4 and 5 into the grooves 2 of the end-pieces 1.

9 are screws extending through the slots 3 in the end-pieces 1, and into correspondingly threaded orifices in the ends of the side-pieces 4 and 5, and securing said side pieces to said end-pieces. The slots 3 in said end-pieces admit of considerable lateral adjustment between the said side-pieces 4 and 5.

10 are dove-tailed grooves in the bracket extensions 6.

11 are angular-shaped clamping bars, having the lugs 12 secured thereto or forming part therewith, said lugs 12 having the flanges 13 extending from the sides thereof, and fitting the dove-tailed slots 10 of the bracket extensions 6. The lugs 12 of the clamping irons on the side 4 have the set-screws 14 inserted through correspondingly threaded orifices in the said lugs 12, whereby said set-screws may be tightened against the base of the dove-tailed slots 10, and thereby clamp said lugs with the clamping bar in any desired position.

15 are crank arms pivotally secured at one end thereof by the pin 16 at the outer end of the bracket extension 6 of the sides 5. The crank arms 15 at the inner end thereof have the pins 17 extending upwardly therefrom.

18 is a connecting rod extending parallel with the clamping iron 11 of the side 5, and having orifices therethrough fitting over the pins 17 of the respective crank arms 15.

19 are nuts, having the threaded orifices 20 therethrough, and the threaded orifices 21 for the reception of the correspondingly threaded pins 17.

22 are threaded pintles, having the squared outer ends 23, and the lugs 24 slidably secured to the inner end thereof, said lugs 24 being pivotally fastened by the screws 25 to the lugs 12 of the clamping irons on the side 5. The crank arm 15, pivotally secured to the center lug 5, is extended to form the handle 26.

In clamping the form to a piece of wood or post to be paneled or molded the sides of the form are first adjusted by the screws 9 in the slots 3 to approximately the width of the piece of wood, to which the form is to be clamped, and as a further adjustment in this particular, the clamping iron 11 on the

side 4 may be readily adjusted in the dove-tailed grooves 10. The clamping iron on the side 5 is similarly adjusted against the piece of wood to be clamped when the handle 26 is moved so that the crank arms 15 are tangential to said clamping bar, and it will be readily understood that when the handle 26 is moved to bring the crank arms 15 at right angles to the clamping bar, the said clamping bar will be moved to its extreme inner position through the connection of the threaded pintle 22, thereby clamping the form firmly upon the work. The threaded pintle 22 pivotally arranged as described may be readily turned to adjust the position of the clamping iron on the side 5 of the form, and the operation of the handle 26 will clamp or release the clamping iron throughout its entire length through the medium of the connecting rod 18 connected to all three of the crank arms as shown. It will be thus understood that lateral adjustment of the form may be readily accomplished, thereby defining the width of cut to be made in the piece of wood by the router. In order to determine the length of cut, the cross-piece as hereinafter described, is adjustably arranged in the form.

27 is a cross-piece comprising the sections 28 and 29. The section 28 has the dove-tailed grooves 30 toward each side thereof, while the section 29 has the forks 31 correspondingly formed and slidably arranged in the dove-tailed grooves 30.

32 are set-screws counter-sunk in the correspondingly threaded orifices in the forked ends 31 of the section 29, said set-screws contacting with the bed of the grooves 30, and locking the forked ends 31 of the section 29 in any desired position therein. By this means the two sections may be extended to fit between the sides 4 and 5 of the form, said sections being provided on the outer ends thereof with the tongue strips 33 fitting the grooves 7 in the side-pieces 4 and 5. The section 28 of the cross-piece is cored out in the center thereof at 34, and has the orifices 35 extending from the outer end thereof into said cored center.

36 is a cam lever fitting the cored center 34 of the section 28, and having the cam-shaped end 37.

38 is a slot extending from side to side of the cam-shaped end 37 of the lever 36.

39 is a clamp strip having the flange 40 extending into the dove-tailed section of the slot 7^a.

41 is a pin extending from end to end of the slot 38, and having the tubes 42 secured to the ends thereof.

43 are screws, having the heads thereof counter-sunk in the orifices 44 extending through the clamping piece 39, said screws extending through the orifices 35 in the section 28 of the cross-piece, and being threaded into the correspondingly threaded inner peripheries of the tubes 42. The screws 43 are adjusted so that under normal conditions when the handle of the cam lever 36 is raised, the cross-piece 27 is free to slide longitudinally in the grooves 7 of the side-pieces 4 and 5, the said screws 32 being tightened to clamp the sections of the cross-piece together, while accordingly adjusted.

In order to clamp the cross-piece in position, the handle of the clamping lever 36 is pressed down, drawing upon the tubes 42 and screws 43, whereby the clamping-piece 39 is moved toward the outer end of the section 28 of said cross-piece pinching the forked portion of the dove-tailed groove 7^a, and securely holding the cross-piece in position. The router or similar machine may be readily guided about the space inclosed by the form, cutting or paneling the wood to which the said form is clamped as hereinafter described. The inner edges of the form being made of metal will wear indefinitely.

When it is desired to change to a new piece of wood of the same dimensions, the release of the lever 26 will unclamp the side clamping irons, and the form may be readily transferred to the next piece of wood, and if the next piece of wood is of different dimensions to the piece upon which the form has been secured, both the side pieces and the cross-pieces are readily adjusted as hereinbefore described to conform to the dimensions of the portion to be routed or paneled. Much time and material will thus be saved, as at present it is customary to make many forms, not only on account of the varying dimensions of the surfaces which it is desired to panel, but also on account of the mutilation of the inner edge of the forms by the routing machine.

What I claim as my invention is:

1. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces adjustably secured to said end-pieces, a cross-piece adjustably secured between said side-pieces, and means for locking said cross piece in any desired position.

2. An adjustable form for routing machines or the like, comprising a pair of slotted end-pieces, a pair of side-pieces, screws inserted through the slots in said end-pieces into said side-pieces, a cross-piece slidably arranged between said side-pieces and means carried by said cross-piece for clamping the same to one of said side-pieces.

3. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces adjustably secured to each of said end-pieces and a cross-piece adjustable lengthwise of and adjustably secured between said side-pieces.

4. An adjustable form for routing ma-

chines or the like, comprising a pair of end-pieces, a pair of side-pieces adjustably secured to said end-pieces, a clamping iron adjustably arranged on one of said side-pieces and a crank lever operatively connected to said clamping iron.

5. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces adjustably secured to said end-pieces, a clamping iron adjustably arranged on one of said side-pieces, a plurality of crank arms pivotally secured at one end thereof to the side carrying said clamping iron at intervals throughout the length of said side, adjustable connections between said crank arms and said clamping iron, a rod connecting the movable ends of said crank arms one with the other and means for reciprocating said rod.

6. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces secured between said end-pieces, one of said side-pieces having a dove-tailed longitudinal groove on the inner face thereof, an adjustable cross-piece slidably arranged between said side-pieces, a clamp strip fitting the groove in said side and a cam lever carried by said cross-piece and operatively connected to said clamp strip.

7. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces having laterally extending dove-tailed grooves, a pair of clamping irons extending along said side strips on the under side thereof and having lugs extending therefrom into said grooves and slidably arranged therein, set screws extending through the lugs of one of said clamping irons and bearing upon the bed of said dove-tailed grooves of one side-piece and crank arms pivotally secured to the other of said side-pieces and operatively connected to the lugs of the other of said clamping irons.

8. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side pieces adjustably connected between said end-pieces and grooved along the inside face thereof, one of said grooves being dove-tailed, a pair of mortised pieces forming a cross-piece and adjustably secured one to the other and having extensions fitting the grooves in the inner faces of said side-pieces, one of said mortised pieces having a cored center, a cam lever operatively arranged in the cored center of one of said mortised pieces, a clamp strip slidably arranged in the dove-tailed groove of said side-pieces and adjustable links operatively connecting said clamp strip with said cam lever.

Signed at the city of Ottawa, Canada, this 2nd day of August 1911.

JOSEPH EMILE SEGUIN.

Witnesses:

THOMAS R. BALMER,

K. F. MACGIBBON.