

J. M. JONES.
SAFETY DEVICE FOR WOOD SHAPING MACHINES.
APPLICATION FILED AUG. 21, 1907.

955,408.

Patented Apr. 19, 1910.

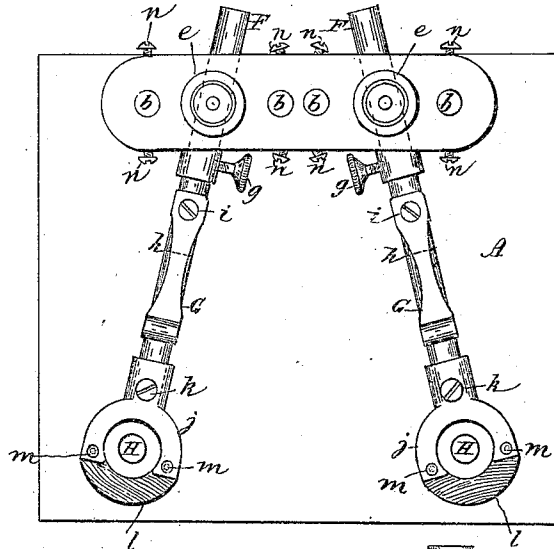


Fig. 1.

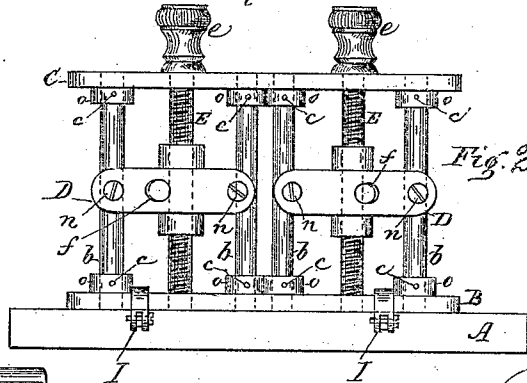


Fig. 2.

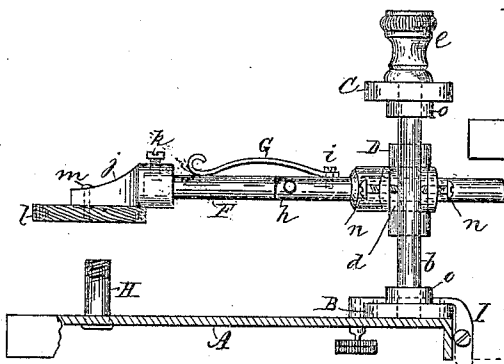


Fig. 3.

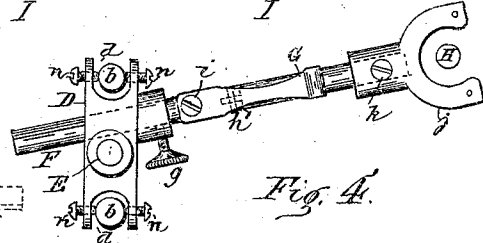


Fig. 4.

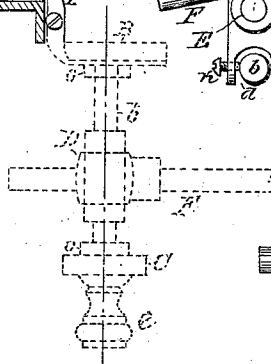


Fig. 5.

Witnesses
F. M. Laird.
L. Sammis

Inventor
James M. Jones,
By W. Bruce,
Atty.

UNITED STATES PATENT OFFICE.

JAMES MELVIN JONES, OF BUFFALO, NEW YORK.

SAFETY DEVICE FOR WOOD-SHAPING MACHINES.

955,408.

Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed August 21, 1907. Serial No. 389,449.

To all whom it may concern:

Be it known that I, JAMES MELVIN JONES, a citizen of the Dominion of Canada, and at present temporarily residing at No. 1443 Niagara street, in the city of Buffalo, in the county of Erie, in the State of New York, have invented a certain new and useful Safety Device for Wood-Shaping Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

The invention relates to a very handy and convenient safety device for wood shaping machines which will possess the following advantages:—It prevents the operator from accidental cutting when operating with the knives. It is easily and quickly adjusted to any class of work that may be operated on a wood shaping machine. It is quick of operation in adjusting knives. In the case of extra large work to be done on a wood shaping machine it can be instantly placed out of the way below the surface of the table. It has lateral and vertical adjustments and is easily attached to any wood shaping machine. The said safety device consists of a frame hinged to the top of a table of a shaping machine, and comprises a base plate and a top plate secured together at a certain distance apart by four columns. There are two carriers formed to slide vertically between the columns; a screw is made to pass through the top plate and through each of the carriers so as to raise and lower the carriers. Each carrier has a horizontal hole through it to receive and hold a horizontal arm secured to and adjusted by a set screw. Each arm is jointed and has at its outer end a circular shaped fork secured with a set screw to the carrier. Each carrier arm is provided with a spring to keep the front portion down horizontally to the work, and provision is made in the carrier to move the arms laterally to suit the distance apart of the spindles of the machine, and other advantages which will be described in detail hereinafter. I attain these objects by the mechanism illustrated in the accompanying drawing, in which:—

Figure 1, is a plan view of the device embodying my invention. Fig. 2, is a rear end elevation of the same. Fig. 3, is a side elevation. Fig. 4, is a plan view of one of the carriers and its arm detached from the machine. Fig. 5, is a side view of one of the arms showing the front part of the arm

tipped up to allow heavy work to pass under it.

Similar letters refer to similar parts throughout the several views.

The table or plate A, represents the top of a wood shaping machine; B, the bottom plate of the attachment hinged to the said plate A, by hinges I, I, and C, is a similarly shaped top plate, the said top and bottom plates B, and C, secured together by columns *b, b, b, b*, held by pins *c, c, c, c*, at top and bottom.

D, D, are two carriers having a recess *d*, at each end so that said ends will partially encircle the columns *b*, and slide vertically upon them and be held at any intervening distance between the top and bottom plates B, C, by means of two screws E, E, which pass through the top plate C, thence through the carriers and into the bottom plate B. The tops of said screws E, are provided at their upper ends with thumb nuts *e, e*, for convenience in turning said screws to adjust the carriers D, to the required height.

The two arms F, F, pass horizontally through the carriers D, D, respectively at the holes *f, f*, and are held thereto and adjusted by the thumb screws *g, g*. Each arm F, is jointed at the point *h*, or about the middle half of the arms, so as to allow the outer half to hinge upward to allow it free play under conditions when the wood operated upon requires its free passage when the outer end of the arm will rise to allow it to pass, a flat spring G, (being secured to the rear half of each arm F, by a cap screw *i*) has its outer end made to press on the corresponding end of the arm to push that part of the arm down again after being raised by a portion of wood operated on thicker than the ordinary space between the table A and the said outer ends of the arms. On the extreme end of each arm F, is a forked head *j*, held thereto by a screw *k*, and the said fork is made to partially surround the head H, secured to the table A, of the machine and to said head H, the knives are secured. To the outer ends of the said forks *j*, is secured a half circular piece of wood *l*, by screws *m*, which completes the circle around the head H, this material is for the purpose of preventing the knives from injury should they accidentally come in contact with the front ends of the forks.

Provision is made in the carriers D, to allow the arms F, to move the carriers D,

laterally a short distance to right or left to suit the width apart of the spindles of a wood shaping machine, and the recesses *d*, in the carriers D, are made larger than the upright columns *b*, so as to allow a little play of the said carriers D to permit the said arms to move a little back and forth laterally for the purpose above mentioned. When the horizontal position of the carriers D, is adjusted they are each held in their desired position by the four set screws *n*, *n*, *n*, *n*, which pass through the carriers and impinge on the columns *b*, and fasten the carriers and arms in the desired position.

It will be observed that the said safety device is hinged to the table A, of a wood shaping machine, by hinges I, and when extra large work is to be operated upon the device can be removed out of the way by simply turning it back on its hinges and placing it below the surface of the table, as shown by dotted lines Fig. 3. It will also be observed that circular lugs or collars *o*, are made on the bottom and top plates B, C, through which the columns *b*, pass and are held thereto by the pins *c*, which pass through the said lugs *o*, and columns *b*, and hold the parts firmly together.

Having thus described my device and its advantages what I claim as my invention and desire to secure by Letters Patent, is—

1. A safety attachment to a wood shaping machine comprising a frame of top and bottom plates connected together a distance apart by vertical rods or pillars, carriers made to slide vertically between the rods or pillars, and adjusted thereto, a screw made to pass through each carrier to adjust it vertically, a jointed arm made to pass through and be held to the carriers, a fork attached to the outer end of the arms, and a curved wood guard secured to the outer end of the forks, and a spring attached to each arm to

depress the forward end of the same after being elevated, all constructed for the purpose specified.

2. A safety attachment comprising a frame hinged to a wood shaping machine, and having its top and bottom plates connected by vertical rods or pillars, carriers formed with a recess in each end to partially encircle the said vertical rods or pillars and slide upon them, a vertical threaded screw made to pass through the top plate and through each carrier into the bottom plate to raise and lower the carrier to adjust the same to the desired height for the work to be operated upon, a jointed arm made to pass through and be held in each carrier, to allow it to be raised by an extra thickness of wood being operated upon, and a spring secured to the rear portion of each arm to impinge on the front jointed end of the arm to push it down again after being elevated from any cause.

3. In a safety attachment to wood shaping machines in combination with the top and bottom plates (B, C) connected with pillars *b*, adjustable carriers (D, D) made to slide vertically on said pillars, cutter guard carrying arms supported by said carriers, there being end recesses formed in each of the carriers so as to allow the ends partially to surround the pillars, screws made to pass through the projecting ends of the carriers to impinge on the pillars to adjust the movement of the said carriers when necessary to permit the arms (F, F) to have lateral movement to suit the width apart of the spindles of a wood shaping machine.

Hamilton, Ont., July 16th, 1907.

JAMES MELVIN JONES.

Signed in the presence of—

F. DONAHOE,

WM. BRUCE.