

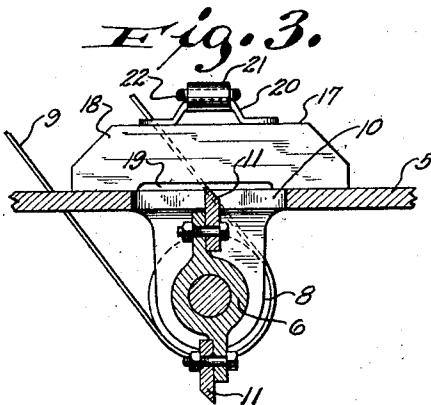
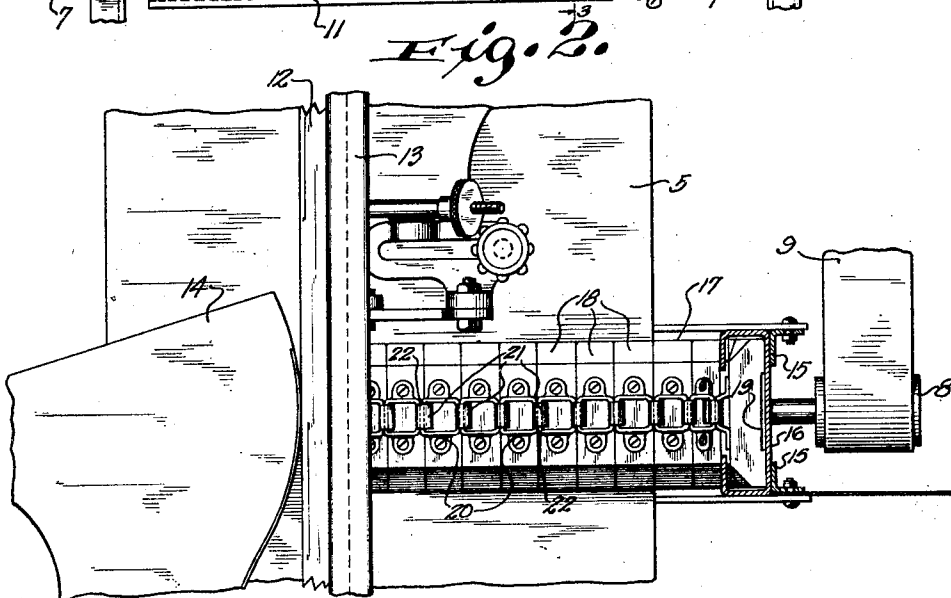
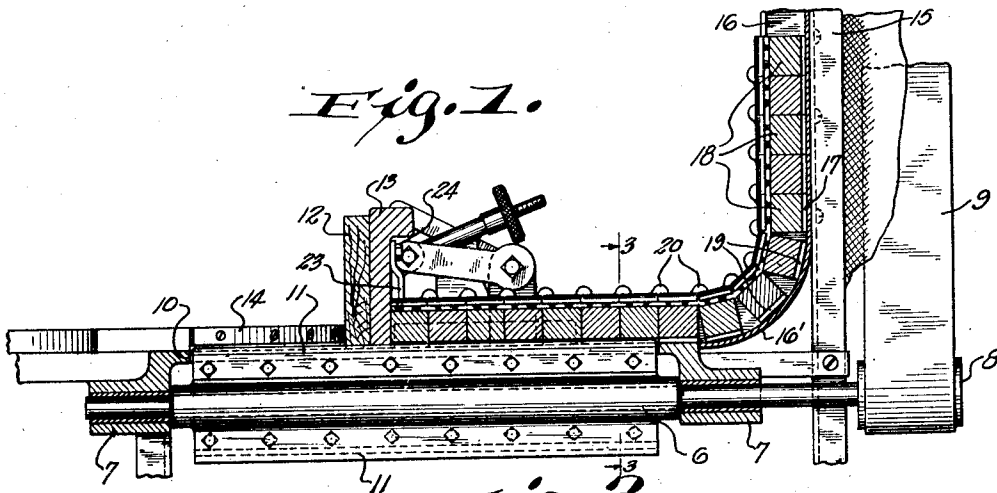
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TOOL GUARD

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TOOL GUARD.

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This invention relates to improvements in tool guards, and more particularly to guards for jointers, planers, and the like.

In tools or machines such as jointers, the revolving tool or knife extends transversely to the bench and below the same, projecting slightly above the level of the bench through a slot. The outer or working portion of the revolving tool has heretofore been satisfactorily guarded, but the inner end portion of the tool has been left unguarded with the result that if the operator should accidentally come into contact therewith serious injury will result.

It is therefore, the primary object of the present invention to provide a guarding device for the inner end portion of a jointer tool or the like.

A further object of the invention is to provide a guard of the class described which will be adjusted with the work gauge and will be effective in all positions of adjustment.

A further object of the invention is to provide a guard of the class described which is flexible, and, although being connected with the work gauge it will permit the gauge to be folded or moved to work releasing positions.

A further object of the invention is to provide a guard for revolving tools with which any form of bench machines may be readily equipped.

A further object of the invention is to provide a tool guard which is of very simple construction, is inexpensive to manufacture, is efficient and automatic in operation, is strong and durable, and is well adapted for the purpose described.

With the above and other objects in view the invention consists of the improved tool guard, and its parts and combinations as set forth in the claims and all equivalents thereof.

In the accompanying drawing in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a cross sectional view of a jointer equipped with the improved guard;

Fig. 2 is a fragmentary plan view of a jointer and the guard therefor; and

Fig. 3 is a sectional view taken on line 3-3 of Fig. 1.

Referring now more particularly to the drawing it will appear that the numeral 5

indicates the bench portion of a jointer or similar machine and mounted transversely below the top portion of the bench, intermediate its ends is a revolving jointer tool 6 having its end portions journaled in suitable depending bearings 7 and carrying a pulley 8 at one end which is driven by means of a belt 9 extending to a suitable source of power. The bench portion 5, immediately above the tool 6, is provided with a transverse slot 10 to accommodate the cutting elements 11 of the tool and as said tool revolves said elements project through said slot slightly above the top surface of the bench to engage and cut or plane a board 12 which is pushed longitudinally of the bench against an adjustable gauge 13, being held thereagainst by a pivotally mounted, spring urged holding member 14. Said member 14 guards the portion of the tool outwardly of the work, but the portion of the tool inwardly of the work and gauge 13 is guarded by the improved means now to be explained in detail.

A support 15 extends vertically upwardly from the inner side portion of the bench adjacent the slot 10 and said support has secured thereto a slat guide 16 which has a vertical portion extending up the support and a curved lower end portion 16'. Said slat guide is of channeled formation to confine a slidable slatted chain member 17.

The chain member 17 is formed of a plurality of hingedly connected together slat members or blocks 18, each of which is shaped as clearly shown in Fig. 3. The bottom portion of each block is formed with a longitudinal groove or recess 19 and in a chain of blocks all of the grooves register and are adapted for disposition over the bench slot 10 and provide clearance or accommodation for the knives 11 of the tool 6, as shown in Fig. 3. Each block has secured to its upper surface a hinge member 20 having a projecting hook portion 21 extended over and pivotally engaging a looped portion 22 of the next adjacent hinge member. In this manner all of the blocks forming the chain are hingedly connected together. The innermost block of the chain has pivotally secured thereto an upstanding lug 23 which is bolted to the gauge 13, as at 24.

The jointer is, of course, used in the same manner as jointers of ordinary construction with the work passed along over the tool between the members 13 and 14, as described.

The chain of blocks, disposed over the slot 10, and covering the inner end portion of the tool effectively guards the same and prevents the operator from being accidentally injured thereby. Also, the guard, being flexible and also being pivotally connected to the gauge 13 may be moved with said gauge. The gauge is constructed to be laterally adjustable with respect to the bench to accommodate boards of different thicknesses and when the gauge is laterally adjusted the guard will be moved therewith, always covering the inner unused portion of the tool, and in moving inwardly, the flexible guard will slide upwardly in the guide 16. The gauge 13, as is usual, may also be folded or hinged rearwardly to release the work and when the gauge is so moved the pivotal connection of the lug 23 and the flexibility of the chain permits the chain to fold or bend as much as is required.

From the foregoing description it will be seen that the improved tool guard is of very simple and novel construction, and is well adapted for the purpose set forth.

What I claim as my invention is:

1. The combination with a machine including a table, a tool positioned therebelow and projecting through the table and an adjustable gauge on the table, of an elongated flexible guard member slidably mounted on the table over a portion of the tool and adjustable with said gauge to cover more or less of one end portion of the tool, and a rigidly mounted guide member projecting upwardly from an edge portion of the table and slidably receiving a projecting unused portion of the guard.

2. The combination with a machine including a table, a tool positioned therebelow and projecting through the table and an adjustable gauge on the table, of an elongated flexible guard member connected at one end portion with said gauge and slidably positioned on said table over a portion of the tool and adjustable with said gauge to cover more or less of one end portion of the tool, and a

rigid guide member extending vertically upwardly at an angle to the guarding portion of the guard member and slidably receiving a projecting unused portion of said member.

3. The combination with a machine including a table, a tool associated therewith and an adjustable gauge on the table, of an elongated flexible guard member connected to the gauge and adjustable therewith and covering a portion of the tool, said guard member comprising a plurality of hingedly connected together, readily separable blocks.

4. The combination with a machine including a table, a tool associated therewith and an adjustable gauge on the table, of an elongated flexible guard member pivotally connected at one end portion with said gauge and adjustable therewith and covering a portion of the tool, said guard member comprising a plurality of disconnectible hingedly connected together blocks having registering grooves formed in their lower surfaces for the accommodation of projecting portions of the tool.

5. The combination with a jointer having a bench with a transverse slot therein, a revolving tool mounted below the bench and projecting through said slot and a laterally inmovable and tilttable gauge mounted on the bench adjacent said tool, of an elongated flexible guard member pivotally connected at one end portion with said gauge and slidably positioned on the bench, transversely thereto, over a portion of the slot and adjustable with said gauge to cover more or less of the tool, said guard member comprising a plurality of disconnectible hingedly connected together wooden blocks having registering grooves formed in their lower surfaces for the accommodation of projecting portions of the tool, and a rigid guide member extending upwardly at an angle to the guarding portion of said guard member and slidably receiving a projecting unused portion of the guard member.

In testimony whereof, I affix my signature.

HENRY KLEHM.