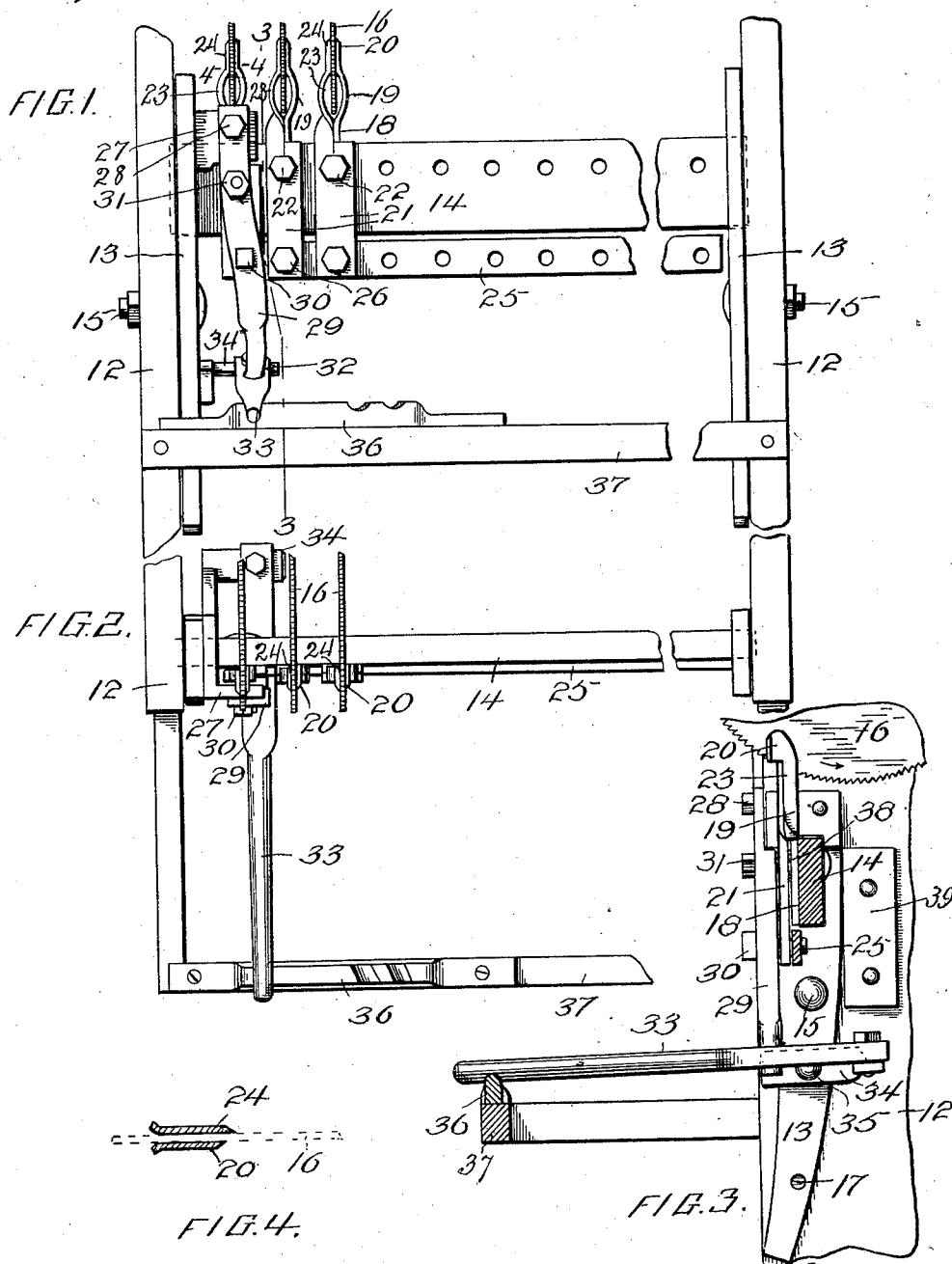


J. C. SHROPSHIRE.
GIN SAW CLEANER.
APPLICATION FILED FEB. 21, 1910.

964,818.

Patented July 19, 1910.



WITNESSES:
H. F. Key
C. M. Loomis

INVENTOR:
Jesse C. Shropshire
BY
Calvin B. Burt
Attorneys

UNITED STATES PATENT OFFICE.

JESSE C. SHROPSHIRE, OF ANICE, ARKANSAS, ASSIGNOR OF THREE-EIGHTHS TO P. C. MAYS, OF VESTA, ARKANSAS, AND ONE-FOURTH TO A. B. McLANE, OF BRANCH, ARKANSAS.

GIN-SAW CLEANER.

964,818.

Specification of Letters Patent.

Patented July 19, 1910.

Application filed February 21, 1910. Serial No. 545,155.

To all whom it may concern:

Be it known that I, JESSE C. SHROPSHIRE, a citizen of the United States, residing at Anice, in the county of Franklin and State of Arkansas, have invented or discovered certain new and useful Improvements in Gin-Saw Cleaners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has for its object to provide a gin saw cleaning device of such a character that when, in the operation of the gin, the saws become clogged with gummy matter they may be quickly and thoroughly cleaned to free them from such gummy matter, the cleaning device being of such a character that it will perform its intended function efficiently and may be operated to cause it to perform such function in a convenient manner.

In the accompanying drawings Figure 1 is a broken out elevation of an apparatus embodying a preferred form of the invention. Fig. 2 is a broken out top view of the same. Fig. 3 is a cross sectional side view on line 3—3, Fig. 1, and Fig. 4 is a detail sectional view on line 4—4, Fig. 1.

Referring to the drawings, 12 denotes side walls or parts of the gin frame, and attached to said frame are metal supporting bars 13 provided with slots which loosely receive a cross bar 14. The supporting bars 13 may be pivotally attached to the parts 12 of the gin frame by means of bolts 15, so that the cleaning device may be swung away from the gin saws 16 when not in use, if desired, or the said bars 13 may be rigidly secured in place by means of additional bolts inserted in holes 17 in said supporting bars 13. Riveted or otherwise rigidly attached to the cross-bar 14 are bars 18 from which extend forwardly curved or outwardly bowed arms 19 the ends of which are constructed to form cleaning knives 20. Above the bars 18 are similar but somewhat longer bars 21 which are pivotally attached to the cross bar 14 by means of bolts 22, said bars 21 having forwardly extending curved or outwardly bowed arms 23 at the forward end of which are formed the cleaning knives 24. The pivoted bars 21 of the entire sets of cleaners are connected together at their lower ends by means of a link or bar 25 to which the said lower ends of the said bars are jointed by means of bolts 26, so that by moving the

said link or bar 25 endwise the cleaners or cleaning knives 24, mounted on and preferably integral with the pivoted bars 21, will be caused to move toward or from the cleaners or cleaning knives 20 carried by the rigid bars 18; and in such operation, in causing the cleaning knives to approach or recede from each other, the cross-bar 14 will have a slight endwise movement in the supporting bars 13, so as to impart movements to the knives 20 toward and from the knives 24, as the pairs of knives are caused to close or open, to engage the gin saws or be removed from contact therewith.

As showing one manner in which the cleaning knives may be actuated, to open and close the same, one of the side bars 13 is provided with a bracket 27 to which is pivotally attached, by a bolt 28, a lever 29 pivotally connected to the link or bar 25 by a bolt 30; the intermediate bolt 31 serving as a pivotal connection between the said lever 29 and the pivoted bar 21 beneath it. The inner end of the lever 29 is loosely received in an aperture 32 of an operating hand lever 33 which is pivotally attached at its inner end to an inwardly extending projection or part of a bracket 34, which, in turn, is preferably pivotally attached by a bolt or rivet 35 to one of the supporting bars 13. It will be understood that by moving the operating lever 33 to the right or left the lever 29 with which it is connected will be actuated to move the bar or link 25 and the cross bar 14 endwise for the purpose of opening or closing the cleaning knives, and the said hand lever 33 may be retained in place, to maintain the cleaning knives in a closed or open position, by means of a keeper 36 provided with notches which will receive said hand lever to hold it in place. The keeper 36, in the form of the invention herein shown, is secured to a sill piece 37 of the gin frame.

The cleaning knives 20, 24, are preferably so arranged that the cutting edge of one of the knives of a set or pair will be slightly in advance of the cutting edge of the other knife of the set or pair, so that the knife or cleaner which is in advance of the other will first loosen the gummy matter clogging the teeth of the gin saw, and which loosened gummy matter will then be entirely removed by the other knife or cleaner. The knives or cleaners will preferably be of steel, and

will preferably be formed integral with the outwardly-bowed spring arms 19 and 23 by which they are carried, so that the cleaning knives will press against the sides of the gin saws in a yielding or elastic manner; and in addition to serving as cleaners the said knives will also serve to straighten any bent teeth which the saws may have.

As a convenient means of providing for having the cutting edge of one knife or cleaner of each set or pair slightly above or in advance of the other knife or cleaner of the pair, washers 38 are preferably interposed between the fixed bars 18 and the pivoted bars 21, said washers surrounding the pivot bolts 22 of the said bars. By providing washers of different thicknesses, or by inserting two or more thin washers between the bars 18 and 21, the amount of the projection of the cutting edge of one knife above or in advance of the cutting edge of its companion knife may be regulated, as may be desired.

In the operation of the invention for the purpose of cleaning the gin saws, the gin will be stopped, and the knives or cleaners will then be engaged with the saws by operating the hand lever 33 so as to close the knives or cleaners together against the saws, and the saws will then be slowly rotated backward until thoroughly cleaned. After the cleaning operation has been effected the knives or cleaners may be opened out away from the gin saws, so as not to interfere therewith, and may either remain in place in such opened-out condition, or the entire apparatus may be removed from the saws by turning the supporting bars 13 on their pivot bolts 15, if desired. When the cleaning device is thus pivotally mounted on the gin frame cleats 39 will preferably be secured to the frame parts 12 to serve as stops to limit the movement of the cleaning knives toward the gin saws 16.

The invention is not to be understood as being limited to the details herein shown and described, as it is obvious that other means, within the province of mechanical skill, for simultaneously opening and closing pairs of gin-saw cleaning knives, than those herein shown and described, may be employed. For example, instead of rigidly attaching the bars carrying one of each pair of knives to the cross-bar 14, and mounting said bar movably in the supporting bars 13, the two knives of each pair might be pivotally mounted on the said cross-bar and the pivoted bars carrying the said knives might be connected together by reversely moving links suitably operated to open and close the several pairs of knives or cleaners; and other variations in the details of construction might be made without departing from the spirit of the invention.

Having thus described my invention I

claim and desire to secure by Letters Patent:

1. In a gin saw cleaning device, the combination with cleaning knives arranged in pairs and mounted so that the several pairs of knives may be opened and closed, of movable bars carrying said knives, means for connecting the said movable knife-carrying bars with each other, and means for operating the said connecting means, for simultaneously opening and closing the several pairs of cleaning knives, the cutting edge of one knife of each pair being slightly in advance of the cutting edge of the other knife of the pair.

2. In a gin saw cleaning device, the combination with pairs of cleaning knives pivotally mounted so as to be opened and closed, said knives being carried by pivotally mounted spring arms to enable them to be yieldingly pressed against the gin saws, of means connected with said spring arms and by which the several pairs of knives may be simultaneously opened and closed.

3. In a gin saw cleaning device, the combination with pairs of cleaning knives pivotally mounted so as to be opened and closed, said knives being carried by pivotally mounted spring arms to enable them to be yieldingly pressed against the gin saw, of means connected with said spring arms and by which the several pairs of knives may be simultaneously opened and closed, the cutting edge of one knife of each pair being slightly in advance of the cutting edge of the other knife of the pair.

4. In a gin saw cleaning device, the combination with pairs of cleaning knives, of pivoted bars carrying said knives, a connecting link joining said bars together, an operating lever for said link, and a hand lever engaging and serving to actuate said operating lever.

5. In a gin saw cleaning device, the combination with pairs of cleaning knives, of pivoted bars carrying said knives, a connecting link joining said bars together, an operating lever for said link, a hand lever engaging and serving to actuate said operating lever, and a keeper for retaining said hand lever in any desired position to which it may be moved.

6. In a gin saw cleaning device, the combination with supporting bars provided with openings, of a cross-bar loosely received in said openings, bars fixed to said cross-bar, pairs of cleaning knives supported from said cross bar, one knife of each pair being rigidly connected with said cross-bar and the other knife of said pair being pivotally connected with said cross-bar, an operating link or bar connecting the said pivotally mounted cleaning knives, and means for operating the said link or bar for opening or closing the pairs of knives.

7. In a gin saw cleaning device, the combination with supporting bars provided with openings, of a cross-bar loosely received in said openings, bars fixed to said
5 cross-bar, pairs of cleaning knives supported from said cross bar, one knife of each pair being rigidly connected with said cross-bar and the other knife of said pair being pivotally connected with said cross-bar, an
10 operating link or bar connecting the said pivotally mounted cleaning knives, and

means for operating the said link or bar for opening or closing the pairs of knives, the cutting edge of one knife of each pair being slightly in advance of the cutting edge of 15 the other knife of the pair.

In testimony whereof I affix my signature, in presence of two witnesses.

JESSE C. SHROPSHIRE.

Witnesses:

S. T. BUMPERS,
W. W. WALKER.