No. 854,166. PATENTED MAY 21, 1907.

J. C. HOLLINGSWORTH.

GIN SAW CLEANER.

APPLICATION FILED FEB. 28, 1907.

Fig. 1.

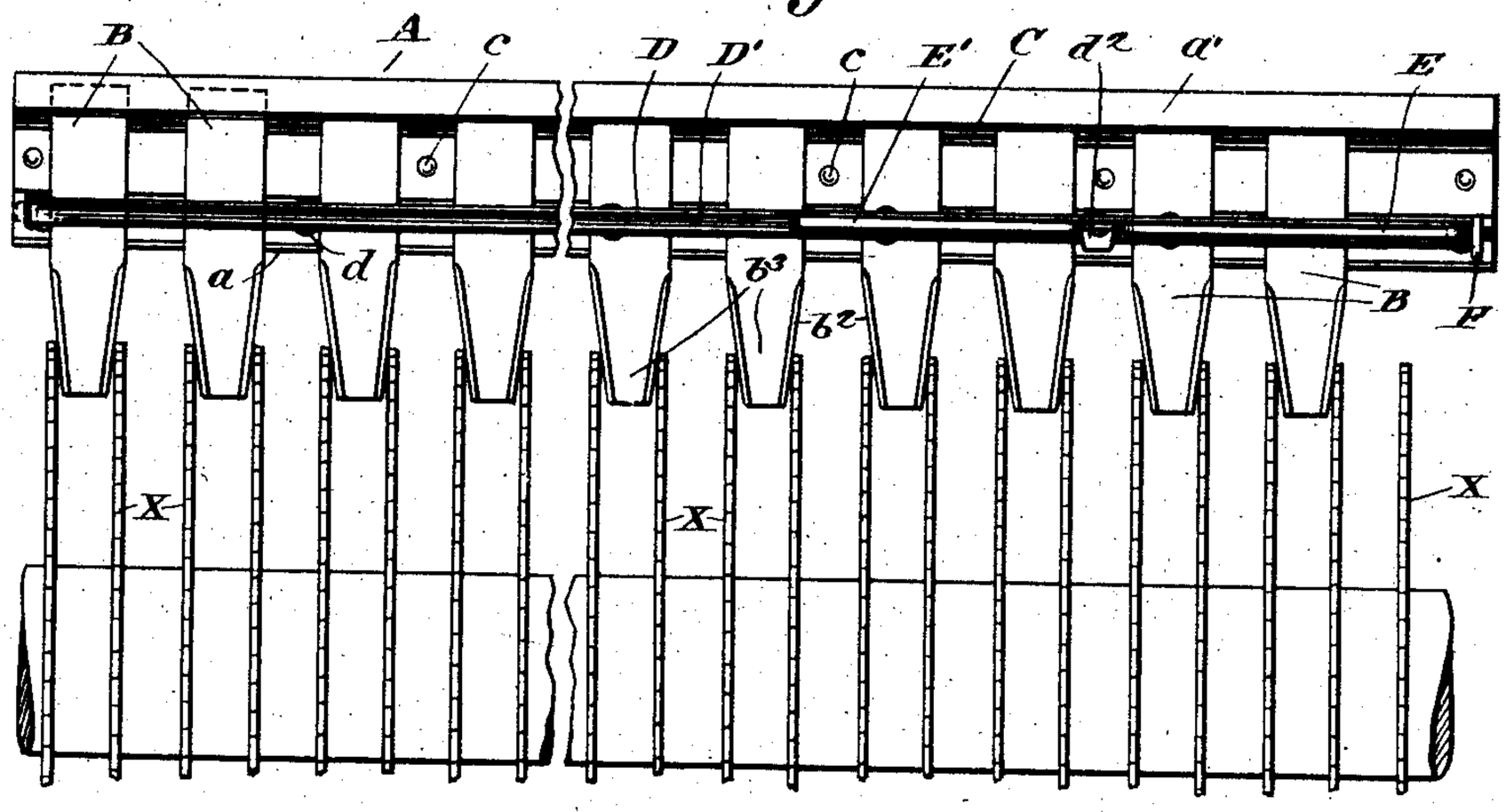


Fig. 3.

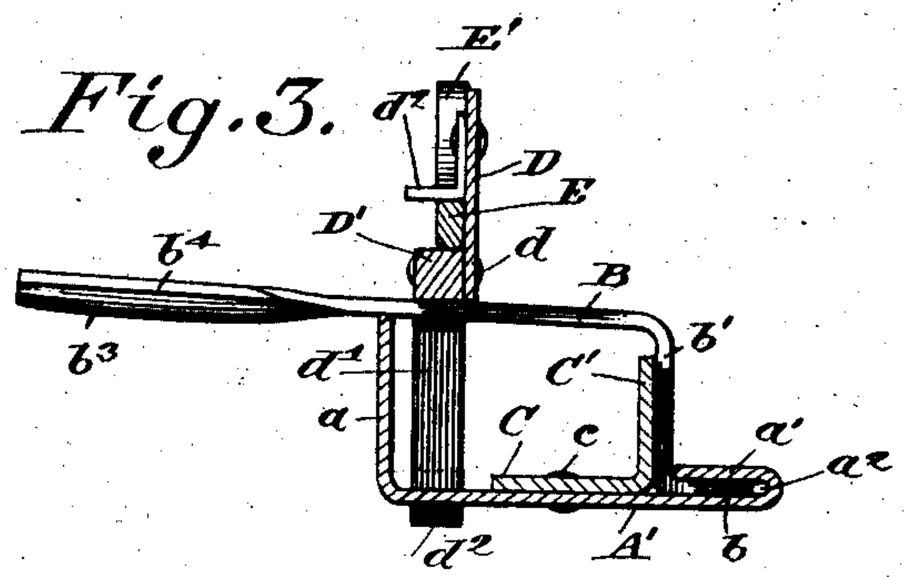
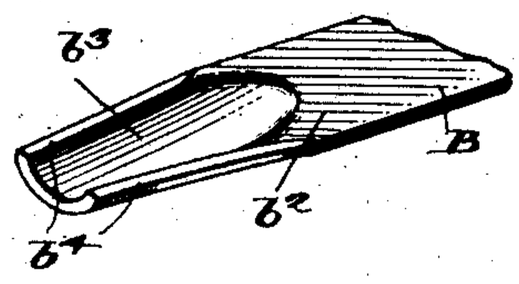


Fig. 4.



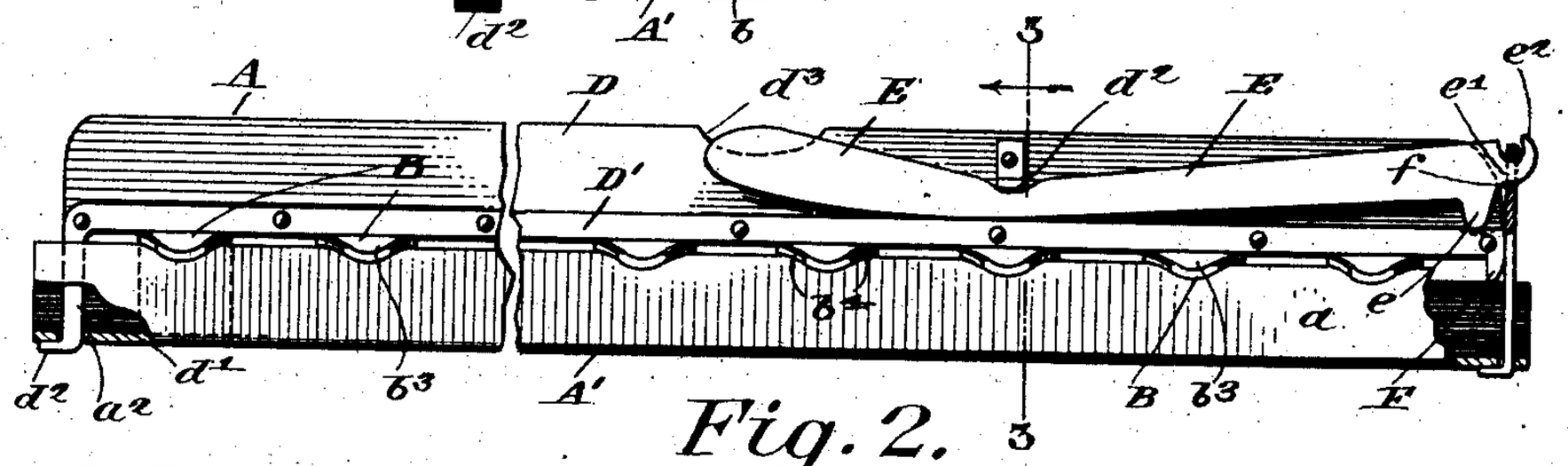


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOSEPH C. HOLLINGSWORTH, OF DALLAS, TEXAS, ASSIGNOR OF ONE-HALF TO GEORGE C. WALSH, OF DALLAS, TEXAS.

GIN-SAW CLEANER.

No. 854,166. Specification of Letters Patent. Patented May 21, 1907.

Application filed February 28, 1907. Serial No. 359,764.

To all whom it may concern:

Be it known that I, JOSEPH C. HOLLINGSWORTH, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Gin-Saw Cleaners, of which the following is a specification.

This invention relates to improvements in gin saw cleaners for use in connection principally with cotton gins and the like.

In general, the objects of the invention are to provide a device of the character mentioned for cleaning the saws of a cotton gin when they have become gummed or fouled, said device being capable of being applied to the alternate spaces between the saw blades, whereby the saws will have an opportunity to yield in the case of bent teeth and to provide a device capable of being readily used in connection with any of the usual forms of cotton gins.

With these and other objects in view, the invention consists in the mechanical elements, or their equivalents, to be hereinafter described and claimed.

In the accompanying drawings, wherein similar letters of reference are used to indicate corresponding parts in each of the several views, Figure 1 is a plan view of the cleaner arranged in position for operation on the saws; Fig. 2 is a side elevation of the cleaner; Fig. 3 is a section on the line 3—3, Fig. 2, and Fig. 4 is a fragmentary detail view of the cleaning end of one of the teeth of the cleaner.

Broadly speaking, the cleaner comprises a plurality of adjustable cleaner teeth, a suitable holder for said teeth, retaining means for maintaining said teeth in the adjusted positions and a suitable device for locking said retaining means in its operative position.

In the drawings, A indicates the holder as an entirely, comprising a base plate A′ made preferably of sheet metal and bent upon itself to present a supporting edge a and a guiding flange a' at its opposite edges respectively. The flange a' is bent over into substantial parallelism with the main portion of the base plate A′, thus forming a slide way a^2 for the feet of the adjustable teeth B of the cleaner, as clearly shown in Fig. 3.

C indicates an L bar securely attached to the base plate A′ as by rivets c with its upright face C′ close to the mouth of the slide way a^2, whereby the teeth are braced and held against forward movement.

The teeth B are formed with feet b adapted to travel in the afore-mentioned slide way a^2, a face portion b' adapted to bear against the upright face C′ of L bar C, and a blade portion b^2. The blade section terminates in a dished portion b^3 having convergent sharpened edges b^4 adapted to bear against and clean the faces of the several saws indicated herein at X of the cotton gin.

From the construction thus far described, it will be obvious that the teeth B to any desired number may be readily slid into the holder A and placed in any desired position therein, dependent upon the machine to be cleaned. In order to prevent movement of the teeth B after they have been adjusted to the desired position, a retaining bar is used. The retaining bar comprises an upright face plate D and an attached bar D′, the said bar and face plate being connected by rivets d or the like. Bar D runs longitudinally of the face plate and at one end is bent substantially at right angles to the same, as at d'. This downwardly turned portion d' passes through an opening a^2 in base-plate A′ and thereafter is again bent to form a toe d^2 which takes against the under side of base-plate A′. It will thus be seen that the above construction forms a detachable pivot connection for the retaining bar D whereby the same may be swung into or out of operative position or entirely removed at will.

For positively locking the retaining bar D in its operative position, a lever E is slidingly fulcrumed on bar D′. Lever E comprises an operating arm E′, an arm e adapted to act as a sliding fulcrum on bar D, and an arm e' terminating in a hook e^2 adapted to engage an eye f in post F which is attached to base plate A′.

It will be observed that if desired the lever E may be entirely detached by simply turning it in a direction away from plate D and removing the hook e' from the eye f.

In order to positively lock bar D in operative position, it is only necessary to turn lever F in an opposite direction until it reaches the position shown in full lines in Fig. 2, thus forcing bar D down tightly on the cleaner teeth. When in its depressed or locking position, it is held therein by an ear d^2, or similar means, attached to plate D. An opening

or notch d^3 is provided in plate D to give ready access to the handle of arm E′ of lever E and at the same time to allow of its lying wholly within the plane of plate D.

As clearly shown in Fig. 1, the teeth of the cleaner are adjusted to lie in alternate spaces only of the saws and not between every two saws. When one set of teeth are cleaned, the cleaner teeth are then adjusted and placed in position for cleaning the other set. This is an important feature in the practical application of saw cleaning devices of this nature. By so placing the cleaner teeth, sidewise or lateral movement of the saws relative to said teeth is possible. Thus, when the cleaner teeth meet with a bent or crooked saw-tooth, the saw blade is deflected to one side and not injured by such contact. On the other hand, where the cleaner teeth occupy all of the intervals between saws, it is impossible for such saws to be deflected when a crooked saw tooth is intercepted by a cleaner tooth and, consequently, much damage is done to the saws, cleaners and machinery in general; the cleaner tooth would break off the bent tooth or the saws would have to be stopped and the machine withdrawn and replaced above the obstruction. As a matter of fact, machines wherein the cleaner teeth are placed in every space instead of every alternate space, as in my improvement, are not practical in use and are failures for the reasons stated.

It will be understood, of course, that the invention is not limited to the exact construction herein shown and described, as various changes may be made therein without departing from the spirit and scope of my invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A saw-cleaner comprising a plurality of cleaner teeth, a holder for said teeth, means for retaining said teeth in their adjusted positions and means for locking in position said retaining means.

2. A saw-cleaner comprising a plurality of adjustable cleaner teeth, a holder for said teeth, a rod or plate for retaining said teeth in their adjusted positions and means for locking in position said retaining means.

3. A saw-cleaner comprising a plurality of adjustable cleaner teeth, a holder for said teeth, pivotally mounted means for retaining said teeth in their adjusted positions and means for locking in position said retaining means.

4. A saw-cleaner comprising a plurality of cleaner teeth, a holder for said teeth, means for preventing forward movement of said teeth, means for retaining said teeth in their adjusted positions and means for locking in position said retaining means.

5. A saw-cleaner comprising a plurality of cleaner teeth, a holder for said teeth, a pivotally mounted bar adapted to hold said teeth in their adjusted positions and means for locking said bar in operative position.

6. A saw-cleaner comprising a plurality of cleaner teeth, a holder for said teeth, a pivotally mounted bar adapted to hold said teeth in their adjusted positions and a locking lever, whereby said bar is forced into and held in operative position.

7. A saw-cleaner comprising a plurality of cleaner teeth, a holder for said teeth, means for retaining said teeth in adjusted position, means for locking in position said retaining means and means for retaining said locking means.

8. A saw-cleaner comprising a plurality of cleaner teeth, a pivotally mounted retaining bar adapted to bear upon and retain said teeth in their adjusted position, means for preventing forward movement of said cleaner teeth, means for forcing said retaining bar into engagement with said teeth and so locking the same and means for retaining said locking means.

9. A saw cleaner comprising a plurality of cleaner teeth, a holder for said teeth, a pivotally mounted retaining bar adapted to bear upon and retain in adjusted position said teeth, a pivotally mounted locking lever fulcrumed on said retaining bar and means for holding said lever in its operative position.

10. A saw-cleaner comprising a base portion bent to present a supporting edge, a plurality of cleaner teeth, and means for retaining said teeth in said base portion.

11. In a saw-cleaner, cleaner teeth, a base portion bent at one edge to present a support for the cleaner teeth and at the other edge bent back upon itself to form a guiding flange, and means for retaining said teeth in said base portion.

12. In a saw-cleaner, cleaner teeth, a base portion bent at one edge to present a support for the cleaner teeth and at the other edge bent upon itself to form a guiding flange, means secured to said base plate, whereby forward movement of the teeth is prevented, and means for retaining said teeth in position for use.

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

JOSEPH C. HOLLINGSWORTH.

Witnesses:
T. R. LINN,
D. C. WHITELEY.