(No Model.)

L. W. BOSLEY.

MANDREL ATTACHMENT.

No. 492,775. Patented Mar. 7, 1893.

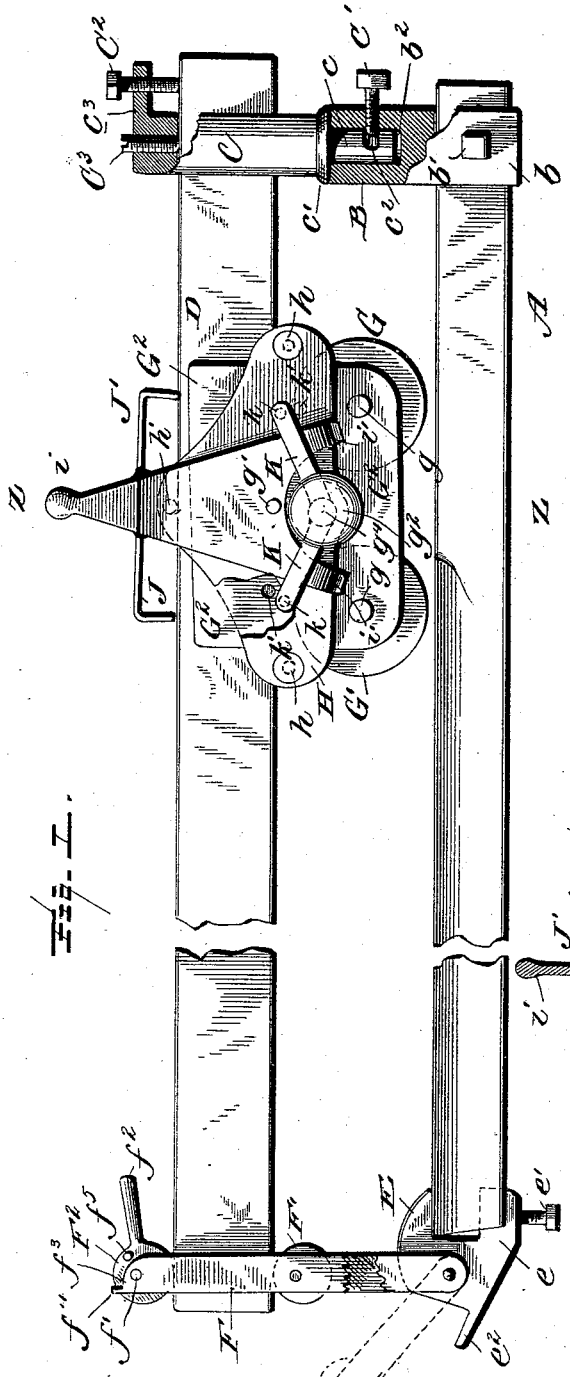

Fig. 1.

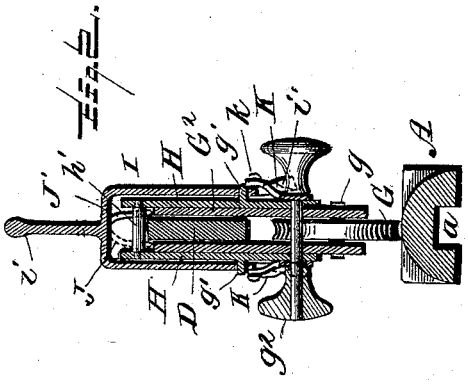

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

LEE W. BOSLEY, OF GAINESVILLE, TEXAS.

MANDREL ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 492,775, dated March 7, 1893.

Application filed April 19, 1892. Serial No. 429,701. (No model.)

To all whom it may concern:

Be it known that I, LEE W. BOSLEY, a citizen of the United States, residing at Gainesville, in the county of Cooke, State of Texas, have invented certain new and useful Improvements in Mandrel Attachments, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in mandrel attachments and it has for its objects, among others, to provide a simple, cheap, durable and efficient device which may be readily applied or detached when necessary and which will permit of the desired adjustments and for the swinging or pivotal movement for the placing on or taking off of the work. I provide a bar at one end with a plate for its attachment and at the other end with a cam and eccentric for detachable connection and adjustment the support carrying the cam and eccentric being hinged so as to drop down so that cylinder work can be slipped over the mandrel and then the eccentric and cam raised up and tightened to the bar to hold the work to be performed.

Other objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon form a part of this specification, and in which—

Figure 1 is a side elevation with parts broken away, showing my improved device in position for use. Fig. 2 is a vertical cross section through the line $z\ z$ of Fig. 1.

Like letters of reference indicate like parts in both views.

Referring now to the details of the drawings by letter—A designates the mandrel of known construction with the longitudinal recess a, and B is a plate having jaws b designed to embrace the larger end of the mandrel and provided with set screws b', by which it is held thereto. This plate has a socket b^2, in which is seated the pintle c, of the head C, being provided with a shoulder c', resting upon the top of the plate B, as seen in Fig. 1, the pintle being provided with a horizontal groove or slot c^2, for the reception of the end of the bolt C′, which is screwed through the plate B, and into said groove or slot to prevent vertical displacement of the head C, and still permit of its being swung around to either side of the mandrel as occasion may require. This head is provided with an aperture for the passage of the bar D, and is also provided with a flange c^3, through which passes the set screw C^2, which together with the screw C^3, provides for vertical adjustment of the bar D, to any desired height.

The bar D is held at one end in the head in the manner above described and at its other end in the following manner:—E is a clamp designed to embrace the end of the mandrel with one jaw e, fitting in the groove a, as seen in Fig. 1, and its other jaw bearing upon the upper side of the mandrel, a set screw e' being provided to hold it firmly in place; the clamp may be provided with a handle or thumb piece e^2, if desired. Pivoted or hinged to this clamp, as at f, are the bars F, between which, at a point to receive the lower edge of the bar D, is a cam F′, and between the same, at the upper ends, in position to engage the upper end of said bar is arranged a cam F^2, pivoted at f', and having a handle f^2, by which said cam or eccentric F^2, may be manipulated to engage or disengage the bar. The upper ends of the arms or bars F, are rounded, as shown at f^3, and provided with stop lugs f^4, which are designed to be engaged by a pin or pins f^5, on the eccentric.

The cam F′, permits of adjustment of the bar D, to the proper height and the eccentric serves to tighten the bar against said cam, the hinge or pivot of the arms F, carrying said cam and eccentric allowing the same to drop down into the position shown in dotted lines in Fig. 1, for the placing on of the work and then turned up into position shown in full lines and tightened upon the bar D.

The groover consists of two wheels G and G′, the one being grooved, as seen in Fig. 2, for grooving and the other flat or not grooved for closing the seam; these wheels are journaled on suitable axles or pintles g held between the two flat plates G^2, as seen best in Fig. 2, the said plates being pivoted upon the pivot g', to which are connected the handles g^2, as seen best in Fig. 2.

H are plates arranged upon the outside of the plates g^2, and also pivotally supported upon the pin g'. Between these plates, at opposite ends thereof, are the anti-friction rollers h, upon which the bar D, is designed to move and at the upper end or edges of said plates is the roller or pin h', designed to limit the upward movement of the bar. Pivoted on the pin g', and outside of the plates H, is the tilting frame I, provided at its upper end with a suitable handle i, and carrying, at its upper end the angularly disposed arms J, and J', which are arranged to extend upon opposite sides of the bar D, and to engage alternately the upper edges of the plates G^2, as seen best in Fig. 2. The tilting frame I is bifurcated at its lower end, and the bifurcations form spring portions i' which are designed to pass under the spring arms K, which are held upon the shaft g^4, and extend in opposite directions therefrom carrying at their outer ends pins k, which are designed to engage holes k', in the plates H, and G^2, to hold the same from tilting. When the tilting frame is moved so that its arms J, J', come in contact with the upper edges of the plates G^2, the lower ends i', of said frame pass alternately under and impinge against the inner face of the arms K, and thus remove the pin from the arm forced out from engagement with its holes in the plates so as to permit the same to tilt, so that when one wheel is in use the other is elevated out of the way. The pin or wheel or roller h' works on the top of the bar D, thus keeping the whole from falling off from the bar when thrown around to one side.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is—

1. The combination with the mandrel and bar, of the pivoted bars and the cam and eccentric carried thereby and constructed to engage the main bar, and means for connecting the mandrel and bar at the end opposite said pivoted bars as set forth.

2. The combination with the mandrel and bar, of the clamp to engage the mandrel, the bars pivoted to the clamp, and the cam and eccentric carried by the bars and constructed to engage the main bar and means for connecting the mandrel and bar at the end opposite said pivoted bars, as set forth.

3. The combination with the mandrel and bar, of the clamp at one end carried by a swiveled head and having jaws, means at the other end connecting the mandrel and bar, and means for vertical adjustment of the bar, as set forth.

4. The combination with the mandrel and bar and the swiveled head with its clamp plate and adjusting means, of the clamp at the other end with its cam and eccentric constructed to engage the main bar, as set forth.

5. The combination with the mandrel and bar with its swiveled head and adjustable clamp at one end, of the adjustable clamp with its pivoted bars at the other end and the cam and eccentric carried by the said bars and adapted to embrace the main bar upon opposite faces, as set forth.

6. The combination with the mandrel and bar, and means at each end connecting the mandrel and bar, of the groover slidingly arranged on the bar and comprising a tilting frame, as set forth.

7. The combination with the mandrel and bar and its attaching means, of the groover frame slidingly arranged on the said bar and comprising a tilting frame and rocking arms for tilting the frame, as set forth.

8. The combination with the mandrel and bar, and the latter's attaching means, of the groover frame, the tilting plates thereon, the spring arms with their pins and the rocking tilting arms, as set forth.

9. The combination with the mandrel and the bar and its attaching means, of the groover slidingly arranged upon said bar, the tilting plates having holes, the rollers, the tilting frame with its spring arms, and the spring arms engaged thereby and carrying pins substantially as and for the purpose specified.

10. The groover consisting of the parallel plates, the wheels journaled therein, the plates embracing said plates, and pivoted on the same pivots, the tilting frame with its bifurcations and alternately-arranged arms carried thereby, and the spring arms with their pins constructed and arranged to co-operate with a mandrel and a bar carried thereby, as set forth.

11. The combination with a mandrel and its bar, of the groover wheels and the plates carrying the same, the tilting frame with its lower sides bifurcated and serving as spring pawls, the spring arms actuated thereby and carrying pins, and the roller at the top of the frame to travel upon the top of said bar, as set forth.

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

LEE W. BOSLEY.

Witnesses:
GEO. N. RICE,
SAMUEL W. ENGLISH.