

(No Model.)

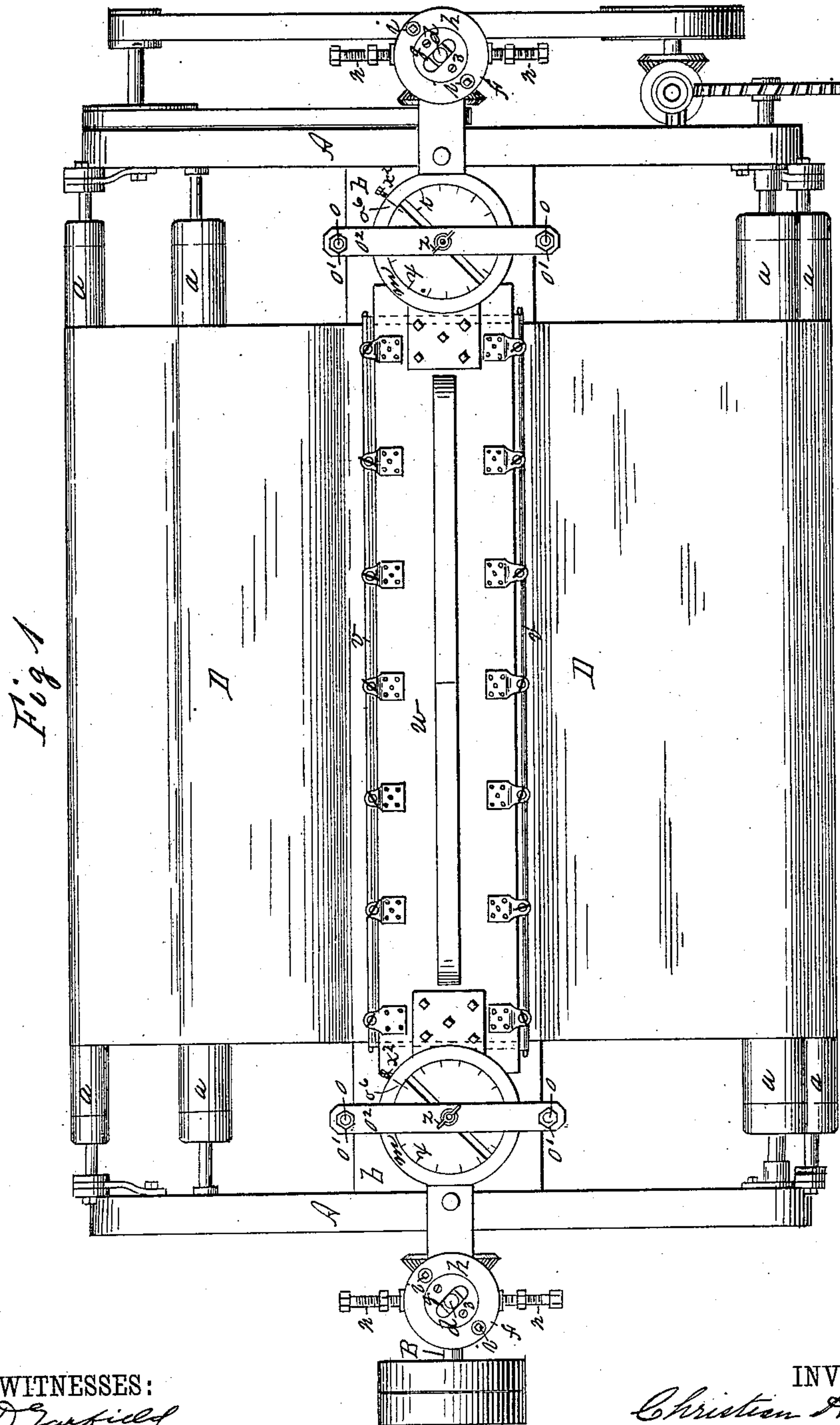
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C. H. BAUSH.

MACHINE FOR CHINCHILLA FINISHING CLOTH.

No. 304,402.

Patented Sept. 2, 1884.



WITNESSES:

*J. D. Garfield*  
*W. F. Rice*

INVENTOR

*Christian H. Baush*

BY *Henry A. Chapin*

ATTORNEY

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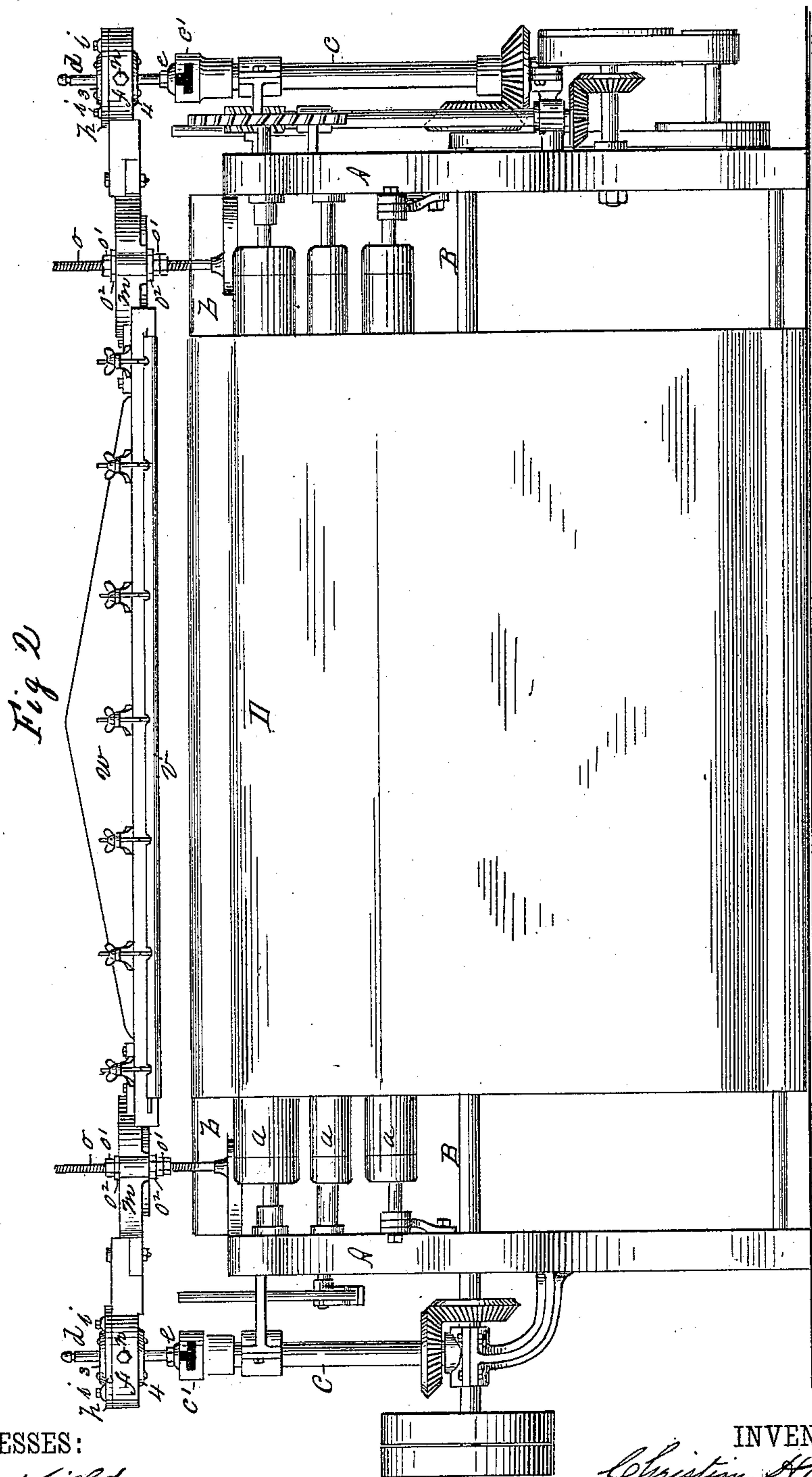
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*Walter Price*

INVENTOR

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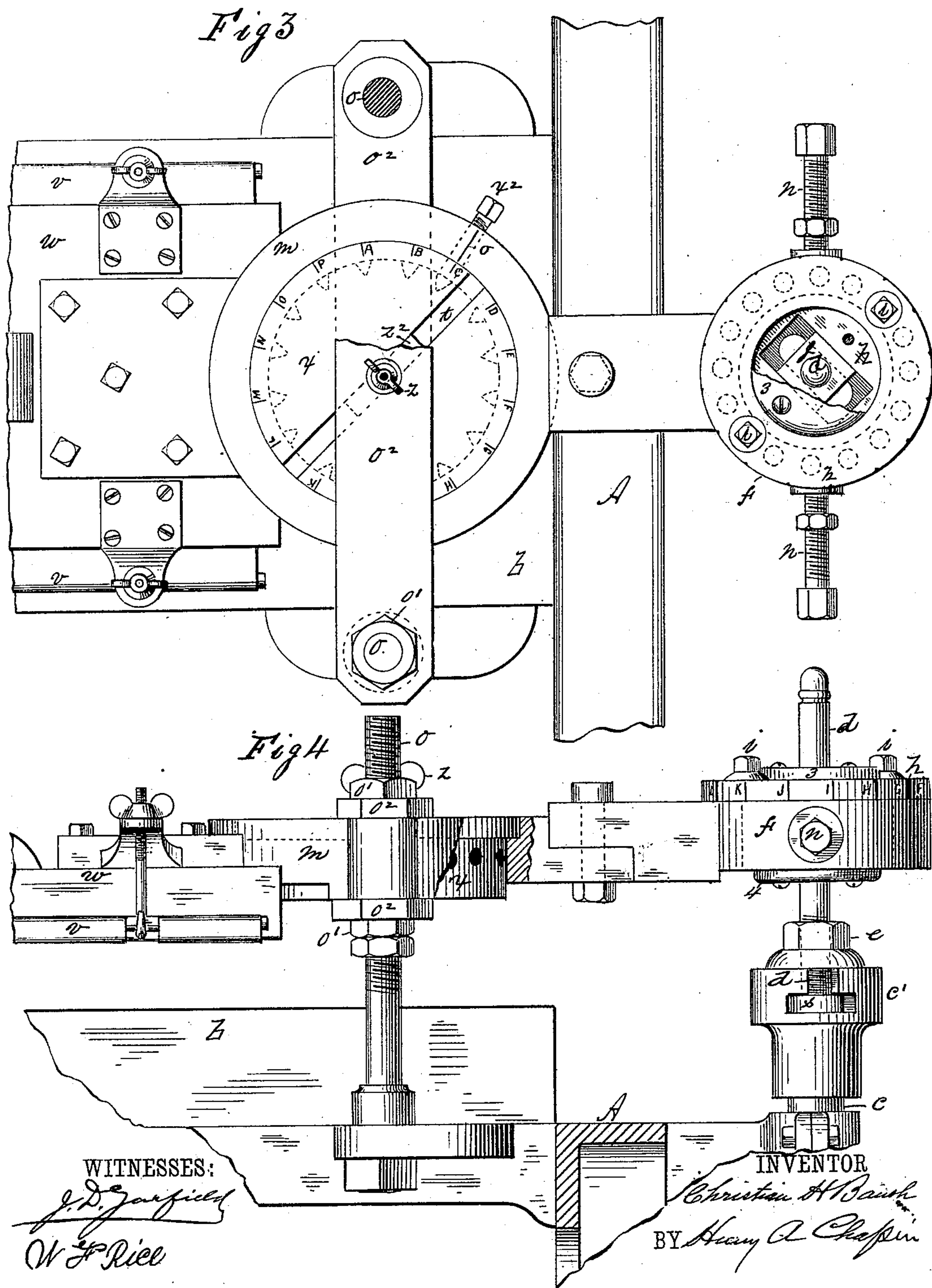
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# UNITED STATES PATENT OFFICE.

CHRISTIAN H. BAUSH, OF HOLYOKE, MASSACHUSETTS.

## MACHINE FOR CHINCHILLA-FINISHING CLOTH.

SPECIFICATION forming part of Letters Patent No. 304,402, dated September 2, 1884.

Application filed September 10, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTIAN H. BAUSH, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Machines for Chinchilla-Finishing Cloth, of which the following is a specification.

This invention relates to machines for chinchilla-finishing cloth, the object being to provide improved means for imparting to the napping-bar thereof the various motions required for producing different styles of nap-finish on the cloth.

In the drawings forming part of this specification, Figure 1 is a plan view, and Fig. 2 is a side elevation, of a napping-machine embodying my improvements. Figs. 3 and 4 are enlarged detail views.

The machine herein illustrated consists of a frame, A, in which are mounted the usual cloth-carrying rollers, *a*, the cloth-table *b*, over which the cloth D is drawn by said rollers, and the driving-shaft B, with which said rollers are connected in any suitable manner common to this class of machines, the same forming no part of the present invention.

The above-named parts of the machine, together with the napping-bar *w*, are elements which belong ordinarily to machines of this class; and my improvements consist in mechanism, as hereinafter described, for actuating the napping-bar to give the desired chinchilla-finish to the cloth. The said bar-actuating mechanism is the same at each end of the machine, and acts in conjunction upon the bar; and in the description thereof relative to its construction and adjustment for practical operation it will be understood that corresponding parts on the machine are adjusted alike.

The bar *w* is supported in a horizontal position over table *b* by two yoke-frames—one at each end—each of which consists of two posts, *o o*, on which nuts *o'* are fitted, and two straps, *o<sup>2</sup> o<sup>2</sup>*. The bar *w* lies upon the lower of said straps, and the upper ones are adjusted to bear properly upon the upper surface of the bar-connections, whereby the bar is made to retain such position relative to the surface of the cloth as it may be adjusted to. Said adjustment is effected by operating said nuts *o'* to

lower or raise the bar and to bring the face of the rubber or other material, *v*, which is usually stretched across the under face of the bar, into proper proximity to the surface of the cloth D. The bar *w* is so supported in said yoke-frames that it is free to be moved in the direction of its length and laterally, and it is connected with the driving-shaft B by means of the below-described devices.

A vertical shaft, *c*, is connected by gears, as shown, with shaft B, and carries on its upper end a head, *c'*, having in its end an inverted T-shaped transverse slot. A crank-post, *d*, having a head, *s*, thereon, and a nut, *e*, is adjustably secured to head *c'* of the shaft *c* in the manner shown in Fig. 4, whereby post *d* may be set so that its axial line and that of shaft *c* correspond; or post *d* may be set off to one side of the center of shaft *c*, to act like a crank when the latter rotates.

Each end of bar *w* has bolted to it a circular guide-plate case, *m*, which occupies a position centrally between the straps *o<sup>2</sup>*, and in said case is fitted a rotatable guide-plate, *x*, having a groove, *t*, in it, and provided with marks and letters around its border. A guide-key, *z<sup>2</sup>*, is fitted into groove *t*, and is secured to strap *o<sup>2</sup>* by a bolt passing up through the latter, on which is a thumb-screw, *z*. The key *z<sup>2</sup>* is adapted to be turned with plate *x*, and then to be fastened by the thumb-screw. A mark, *o<sup>6</sup>*, on the face of the case *m* indicates the point to which the lettered marks on the plate *x* are turned to bring the groove *t* to different degrees of incline to a line drawn through the center of bar *w* from end to end. A series of countersunk holes is formed in the periphery of plate *x*, into which the tapered end of a set-screw, *x<sup>2</sup>*, is forced to secure the plate firmly in any position to which it is turned.

A crank-box case, *f*, is firmly bolted to the above-mentioned guide-plate case *m*, and has fitted into it a rotatable box-plate, *h*, which has a flange extending over the border of case *f*, and is provided with a slot through it, in which is fitted a crank-post box, *g*, through which passes the post *d*. A plate, 3, on the upper side of plate *h*, and a plate, 4, on the lower side thereof, keep box *g* in position in said slot. The plate *h* has two bolts, *i i*, passing through its flange into holes in case *f* to



secure the plate in any position to which it may be turned, and two set-bolts, *n n*, are placed in opposite sides of case *f*, to be turned against the ends of box *g*, when its slot is turned into line with said bolts, and when it is desired that the box shall be rigidly secured in its slot. A gage-mark corresponding to mark *o*<sup>6</sup> on case *m* is provided on case *f*, so that when plate *x*, for instance, is turned to bring its index-letter C to the gage-mark, plate *h* is likewise turned to bring its index-letter C to the mark on case *f*; and the letter-marks on the plates *x* and *h* are so arranged that when the plates are adjusted, as aforesaid, the line of movement of the box *g* in its slot will be at right angles to the groove in the plate *x*.

In order to produce the varieties of "chinchilla-finish" on cloths which are desirable, the bar *w* is adjusted to come near the cloth, so that its rubber-face *v* will slightly rub on its napped surface while the cloth is drawn under it, and different motions are given to the bar for that purpose, as follows: To give the bar *w* a diagonal movement, the plate *x* is turned to a position similar to that shown in Fig. 3, and there secured by screw *x*<sup>2</sup>, and the guide-key *z*<sup>2</sup> is correspondingly secured. The plate *h* in case *f* is then turned to bring its box-slot at right angles to groove *t*, and there secured by bolts *i i*, and the crank-post *d* is set off a proper distance from the center of shaft *c*. The machine being then set in motion, the bar *w* will be given a reciprocating movement in the direction of the groove *t*, and diagonally to the line of movement of the cloth D.

To change the movement of the bar *w* to one transverse to the movement of the cloth, the guide-plate *x* and key *z*<sup>2</sup> are turned, so that groove *t* is in a line with bar *w*, and plate *h* is turned to bring its box-slot at right angles to the groove *t*, and post *d* is left as at first. To give the bar lateral reciprocating movements, the plate *x* is turned to bring the groove *t* in a line across the bar, and plate *h* is turned to bring the box-slot therein at right angles to the groove *t*. The bar *w* is given a motion subject solely to that of the crank-posts *d*, by removing the key-guides *z*<sup>2</sup>, turning plate *h* to bring the box-slot in line with the bolts *n n*, and screwing the latter against the ends of the box *g*, to bring the latter to a central and fixed position in the plate *h*, the latter being then secured by bolts *i i*, as before. The above-described adjustments of bar *w* are some of which it is capable, the mechanism which actuates it being adapted to the production of a great variety of chinchilla effects.

What I claim as my invention is—

1. The combination, with the napping-bar of a chinchilla-machine and a supporting yoke-frame, substantially as described, of a guide-key supported in said frame, a rotatable guide-plate having a groove therein to receive said key, a guide-plate frame to receive said guide-plate, and means, substantially as described, for securing the latter in its frame and for imparting to said bar reciprocating motions in a horizontal plane, substantially as set forth.

2. The combination, with the napping-bar of a chinchilla-machine and a supporting yoke-frame, substantially as described, of a circular box-case secured to the end of a bar, a rotatable slotted box-plate to fit said case, a crank-post box to fit said slotted plate, a shaft, a crank-post passing through said box and adjustably secured on the end of said shaft, and means, substantially as described, for securing said plate at different positions in said frame, and means for revolving said shaft, substantially as set forth.

3. The combination, with the napping-bar of a chinchilla-machine and a supporting yoke-frame, substantially as described, of a guide-key supported in said frame, a rotatable guide-plate having a groove therein to receive said key, a guide-plate frame to receive said guide-plate, a circular box-case secured to the end of the bar, a rotatable slotted box-plate to fit said case, a crank-post box to fit said box-plate, a shaft, a crank-post passing through said box and adjustably secured on the end of said shaft, and of means, substantially as described, for securing said guide-plate and said box-plate at different positions in their frame and case, respectively, and for revolving said shaft.

4. The combination, with the bar *w*, the shaft *c*, and the post *d*, adjustably secured to the latter, of the case *f*, slotted plate *h*, and box *g*, and means, substantially as described, for securing plate *h* in different positions in its case, substantially as set forth.

5. The combination, with the bar *w* and its yoke-frame, of the frame *m*, the grooved plate *x*, the key *z*<sup>2</sup>, the case *f*, slotted plate *h*, the box *g*, shaft *c*, the post *d*, adjustably secured to the latter, and means, substantially as described, for securing plates *x* and *h* in frame *m* and case *f*; and means for revolving the shaft, substantially as set forth.

CHRISTIAN H. BAUSH.

Witnesses:

H. A. CHAPIN,  
W. F. RICE.