

W. B. BUST.
STARCHING MACHINE.
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1,046,261.

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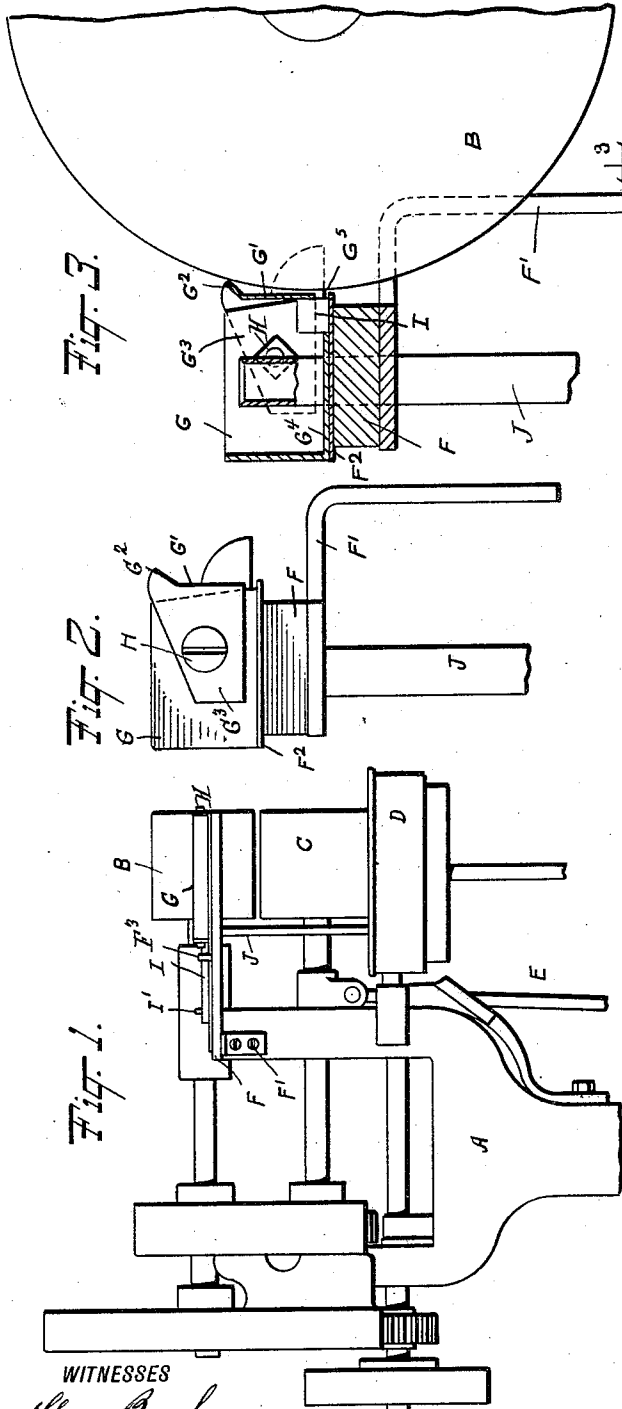


Fig. 1.

Fig. 2.

Fig. 3.

WITNESSES
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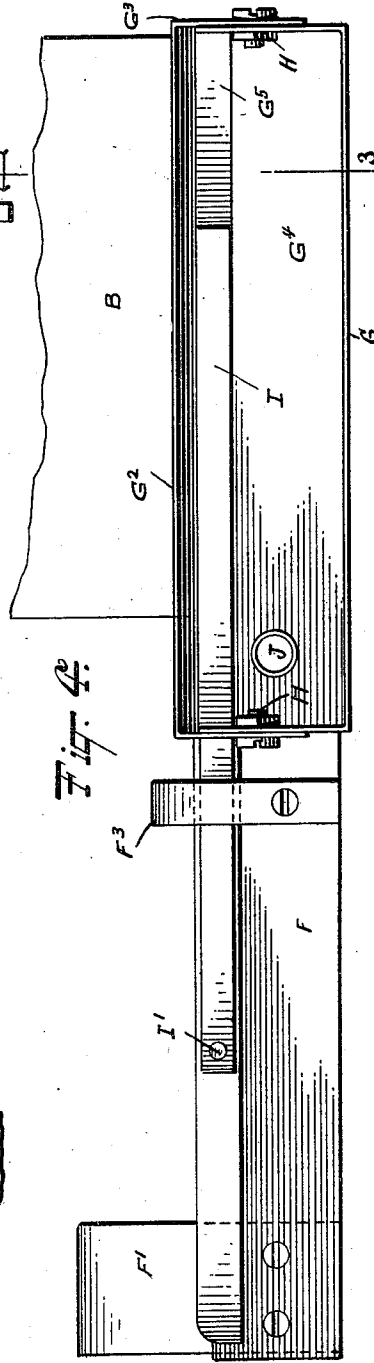


Fig. 4.

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STARCHING-MACHINE.

1,046,261.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM BURNLEY BUST, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Starching-Machines, of which the following is a full, clear, and exact description.

The invention relates to starching machines having two revoluble rollers, of which one has movement toward and from the other and is adapted to pass into a receptacle containing starch.

The object of the invention is to provide certain new and useful improvements in starching machines, such as are used for starching collars, cuffs and other articles, and whereby a constant supply of starch is supplied to the working portion of the upper cylinder to allow starching of an article at a single operation even if such article is of a length in excess of the circumference of the cylinder, thus greatly increasing the output of the machine. For the purpose mentioned use is made of means for removing the starch from the upper cylinder and transferring the collected starch back onto the actual working portion of the peripheral face of the cylinder.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the starching machine provided with the improvement; Fig. 2 is an enlarged end elevation of the improvement; Fig. 3 is a cross section of the same as applied, the section being on the line 3—3 of Fig. 4; and Fig. 4 is a plan view of the same.

A starching machine of the usual construction is mounted on a frame A and is provided with an upper revoluble cylinder B and a lower revoluble cylinder C adapted to pass into the receptacle D containing starch, the lower cylinder C being moved bodily up and down, toward and from the upper cylinder B by a suitable pedal mechanism E under the control of the operator. The rollers B and C are driven in the usual manner, it being understood that the starching machine so far described is of the usual

construction. The improvement on the starching machine presently to be described in detail is mounted on a supporting bar F attached to a bracket F' bolted or otherwise fastened to the main frame A of the starching machine, and the supporting bar F is provided on top with a metallic plate F² on which is set a trough G extending close to the peripheral face of the upper cylinder B and beyond the inner end thereof, as plainly indicated in Figs. 1 and 4. The side G' of the trough G adjacent the peripheral face of the cylinder B is provided at its upper edge with a lip G² in close proximity to the peripheral face of the upper cylinder B to scrape off the starch that may be on the cylinder at the time. The side G' is provided at its ends with arms G³ engaged by bolts H attached to the ends of the trough G to permit of swinging the side G' up or down with a view to move the lip G² in proper relation to the peripheral face of the cylinder B, and at the same time to move the lower edge of the side G' farther up or down relative to the bottom G⁴ of the trough so as to form with the said bottom an outlet opening G⁵ for the starch to pass back onto the peripheral face of the cylinder B. A portion of the bottom G⁴ adjacent the side G' is cut out to form a guideway for a valve I in the form of a bar mounted to slide lengthwise in the trough G on top of the metallic plate F². The bar valve I extends through one end of the trough G to the outside thereof, and the outer portion of the valve is mounted to slide in a bearing F³. The outer terminal of the valve I is provided with a knob or a handle I' under the control of the operator for moving the valve inward or outward to increase or decrease the length of the outlet opening G⁵ according to the width of the actual working portion of the cylinder B. Thus when narrow goods are starched the valve I is pushed inward to leave the opening G⁵ of a length corresponding approximately to the width of the narrow goods, and when wider goods are starched the valve I is drawn outward so that a portion of the outlet G⁵ is uncovered corresponding to the width of the wider goods.

When the device is in use the lip G² scrapes off the starch on the entire width

of the peripheral face of the cylinder B and this starch passes into the trough G, from which the starch can pass out by the outlet G⁵ and back onto the actual working portion of the peripheral face of the cylinder B. It is understood that every time the lower cylinder C is raised the entire peripheral face of the upper cylinder B is supplied with starch, but as only a portion of the working face of the cylinders B and C is used for starching narrow goods it is evident that some of the starch remains on the cylinder B and this starch is removed from the peripheral face of the cylinder by the lip G² and collected in the trough G. A portion of this starch passes by way of the outlet G⁵ back onto the peripheral face of the upper cylinder B but only at the actual working portion thereof, so that the working portion is constantly supplied with starch to permit of starching goods of a length considerably in excess of the circumference of the cylinder B. It will also be noticed that by the arrangement described a number of articles can be starched in a comparatively short time owing to the fact that the upper cylinder B is provided at all times on its actual working face with starch. The cylinder C is only lowered and raised periodically to supply the necessary starch to the upper cylinder B.

An overflow pipe J is arranged in the trough G and leads to the starch supply receptacle D, so that in case more starch accumulates in the receptacle D than is discharged at the outlet G⁵, such surplus can pass by way of the overflow pipe J back into the starch supply receptacle D.

It is understood that on loosening the bolts H, the side G' can be swung up or down until the proper position is reached, and then the bolts are tightened to fasten the side G' in the adjusted position. It is further understood that by the arrangement described the starch on the rear or unused portion of the cylinder B is transferred to the front or working portion of the said cylinder.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A starching machine having upper and lower cylinders, and means engaging the peripheral face of the upper cylinder to remove the starch from the unused portion thereof and to transfer the collected starch to the working portion of the peripheral face of the upper cylinder.

2. A starching machine, comprising lower and upper cylinders, of which the lower cylinder has bodily movement toward and from the upper cylinder, a supply receptacle containing starch and into which extends the said lower cylinder, and means operating in conjunction with the face of

the upper cylinder to remove the starch therefrom and to pass it back onto the actual working portion of the peripheral face of the upper cylinder.

3. A starching machine provided with revoluble cylinders, a starch supply receptacle for supplying starch to one of the cylinders, and a trough lengthwise of the peripheral face of the other cylinder and having a lip in close proximity to the said peripheral face to remove the starch therefrom, the trough having an outlet for returning the collected starch to the actual working portion of the peripheral face of the said cylinder.

4. A starching machine provided with revoluble cylinders, a starch supply receptacle for supplying starch to one of the cylinders, a trough lengthwise of the peripheral face of the other cylinder and having a lip in close proximity to the said peripheral face to remove the starch therefrom, the trough having an outlet for returning the collected starch to the actual working portion of the peripheral face of the said cylinder, and manually-controlled means controlling the said outlet.

5. A starching machine provided with revoluble cylinders, a starch supply receptacle for supplying starch to one of the cylinders, a trough lengthwise of the peripheral face of the other cylinder and having a lip in close proximity to the said peripheral face to remove the starch therefrom, the trough having an outlet for returning the collected starch to the actual working portion of the peripheral face of the said cylinder, and an overflow in the said trough leading to the said starch supply receptacle.

6. A starching machine provided with upper and lower cylinders, a starch supply receptacle for the lower cylinder, a collecting trough at the front face of the upper cylinder and provided with an adjustable side having a lip in close proximity to the peripheral face of the upper cylinder to remove the starch therefrom and to deliver it to the said trough, said trough side forming with the bottom of the trough an outlet in close proximity to the peripheral face of the upper cylinder to return the starch to the said cylinder, and a manually-adjustable slide valve controlling the said outlet.

7. A starching machine provided with upper and lower cylinders, a starch supply receptacle for the lower cylinder, a collecting trough at the front face of the upper cylinder and provided with an adjustable side having a lip in close proximity to the peripheral face of the upper cylinder to remove the starch therefrom and to deliver it to the said trough, said trough side forming with the bottom of the trough an outlet in close proximity to the peripheral face of the upper cylinder to return the starch to

the said cylinder, a manually-adjustable slide valve controlling the said outlet, a starch supply receptacle for the lower cylinder, and an overflow in the said trough and discharging into the said starch supply receptacle.

name to this specification in the presence of two subscribing witnesses.

WILLIAM BURNLEY BUST.

Witnesses:

MATTHEW UNGER,
HERBERT ELOESSER.

In testimony whereof I have signed my

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."