

H. C. LONGSDON & J. R. BOTTOMLEY.

COLLAR AND CUFF PRESSING MACHINE.

APPLICATION FILED NOV. 10, 1906.

998,622.

Patented July 25, 1911.

3 SHEETS—SHEET 1.

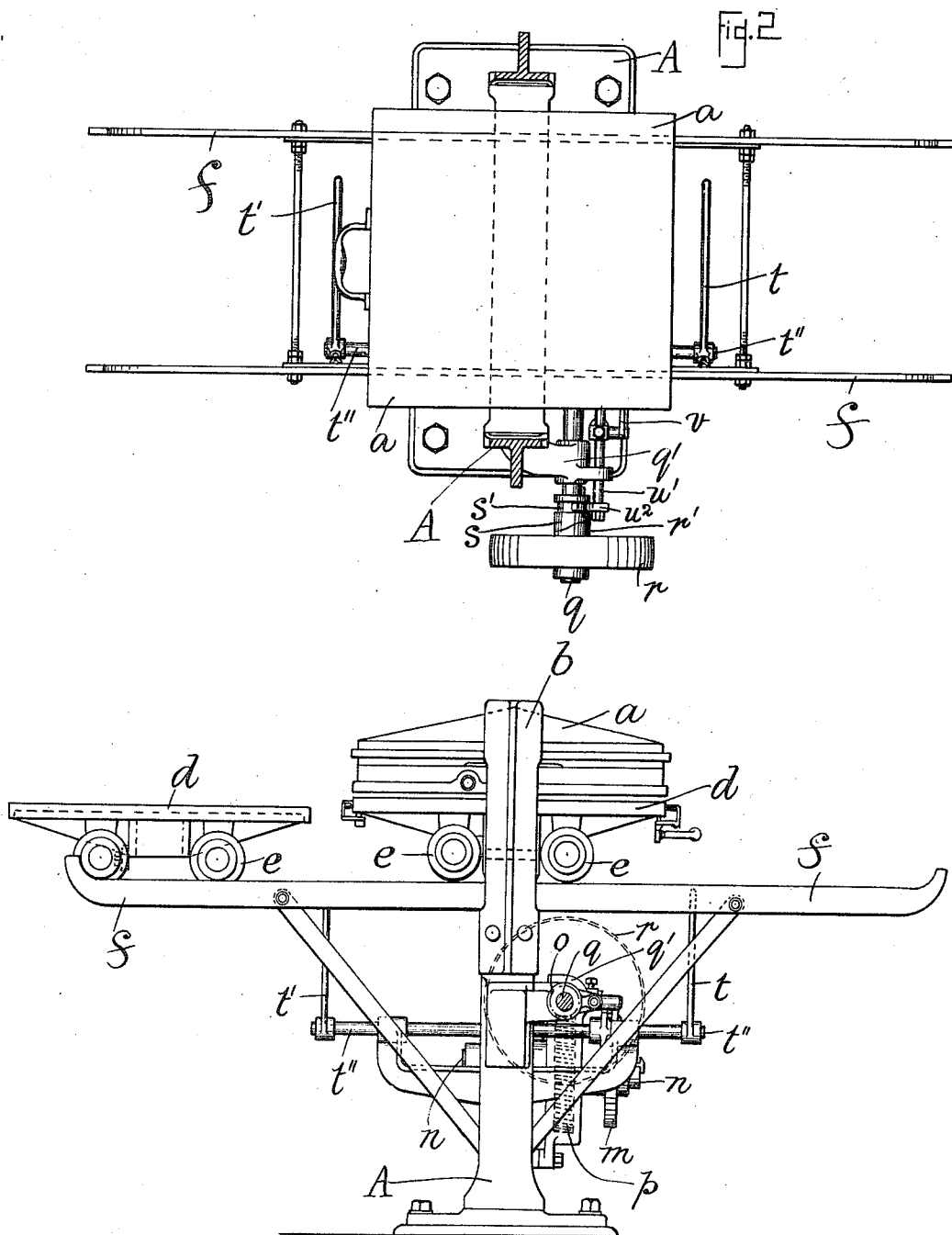


Fig. 1

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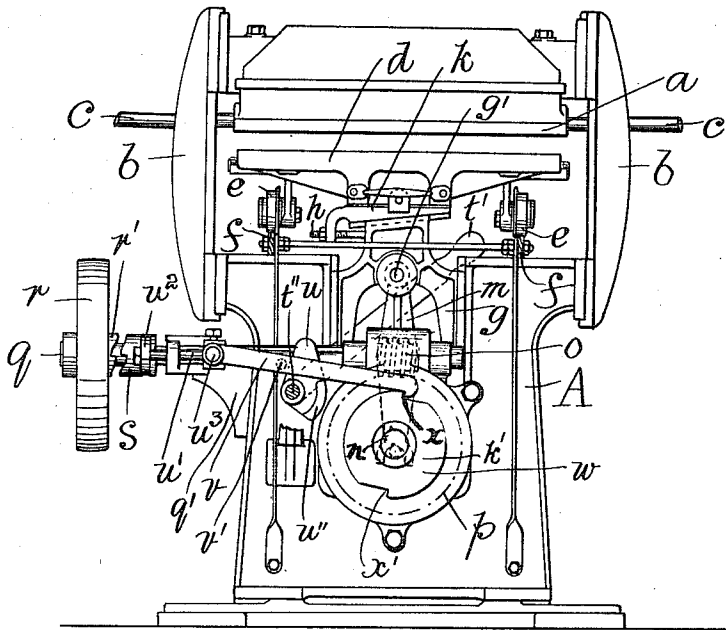


Fig. 4

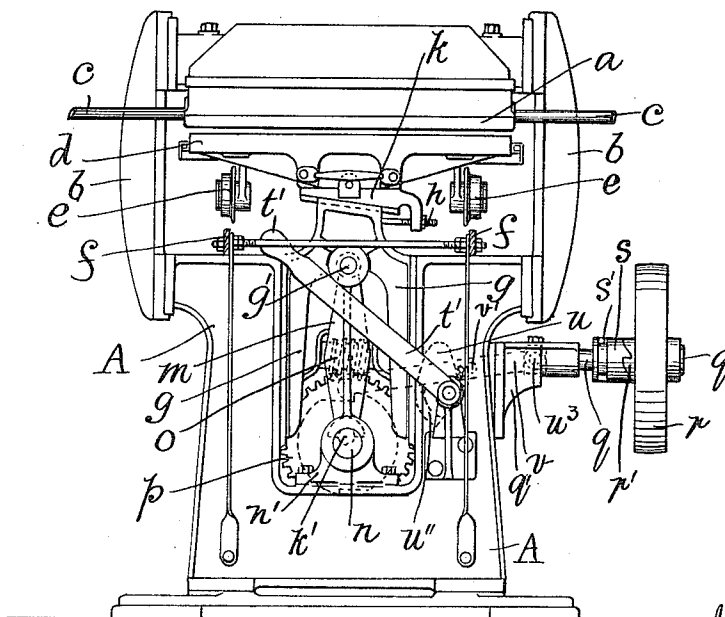


Fig. 3

Witnesses
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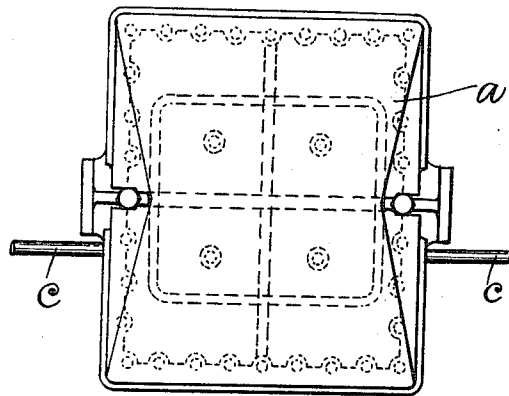
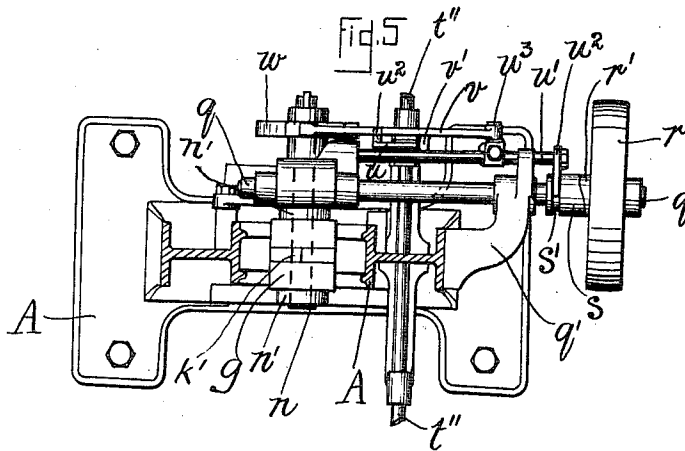


Fig. 6

Witnesses

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UNITED STATES PATENT OFFICE.

HENRY CROFTS LONGSDON AND JAMES ROBERT BOTTOMLEY, OF KEIGHLEY, ENGLAND,
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COLLAR AND CUFF PRESSING MACHINE.

998,622.

Specification of Letters Patent.

Patented July 25, 1911.

Application filed November 10, 1906. Serial No. 342,827.

To all whom it may concern:

Be it known that we, HENRY CROFTS LONGSDON and JAMES ROBERT BOTTOMLEY, subjects of the King of Great Britain, and residents, respectively, of Thorncroft, Keighley, in the county of York, England, and 44 Ashleigh street, Keighley aforesaid, have invented new and useful Improvements in Collar and Cuff Pressing Machines, of which the following description, together with the accompanying sheets of drawings, is a specification.

In the treatment of collars, cuffs and other starched articles so as to produce uncreased, even and polished surfaces thereon, it has been found advantageous to subject them to the actions of pressing mechanism prior to their treatment by the ironing or glossing machinery and this invention relates to improved means whereby such presses may be enabled to treat a considerable number of such articles and to afford improved facilities for adjustment so that varied thicknesses of goods may be operated upon while the actions of said presses are at all times well under the control of the operatives making use of them, and our said invention consists in improved means as hereinafter described and claimed whereby the lower pressure plate may be entirely free from the lifting mechanism, actuating devices being provided which may be adjusted to carry said lower plate to a higher or lower position as occasion may require, and to cause said plate to automatically stop at its highest or lowest position until restarted by the operative.

In the accompanying sheets of drawings which are illustrative of this invention:—
40 Figure 1 is a side elevation of a machine constructed in accordance with our invention. Fig. 2 is a sectional plan of parts shown by Fig. 1. Figs. 3 and 4 are elevations of the two ends of the machine, the latter showing the table in its lowest position and the former showing it in its raised position. Fig. 5 is a sectional plan illustrating certain of the operating mechanism. Fig. 6 is a plan view of the heated pressure
50 plate.

A is the framework of the machine.

In standards *b* forming part of or fixed upon the framework A we mount the upper smoothing iron or plate *a*, this iron being

heated as by steam or the like by means of 55 the pipe *c*.

In bearings *q'* on the framework A we mount the shaft *q* which is free to revolve but is held against lateral movement. This shaft has loosely mounted upon it the pulley *r* which is provided with the clutch member *r'*. The clutch member *s* is also mounted upon the shaft *q* and is connected thereto by a feather and key-way so that it may freely slide over said shaft longitudinally, but will transmit movement thereto when placed in gear with the clutch member *r'*. Upon the shaft *q* is also fixed the worm *o* which gears with the worm wheel *p* fixed upon the shaft *n* which is mounted in bearings *n'* on the framework A. This shaft *n* is provided with an eccentric *k'* which operates within the end of the link *m* the other end of the latter being mounted upon the pin *g'* on the framework *g*. The framework *g* takes within guides in the framework A and slides vertically therein as the eccentric *k'* is rotated. At the upper end of the framework *g* and in a suitable guide therein is mounted the wedge *k* which is provided with an adjusting screw *h* so that as it is moved backward or forward in its guide its upper surface may be raised or lowered as desired. Mounted upon the framework A are the rails or guides *f* which support the wheels *e* carrying the lower iron or plate *d*, said plate *d* being raised or lowered as the eccentric *k'* is rotated, by the wedge *k* coming into contact with its framework and raising it from the position shown by Fig. 4 to the position shown by Fig. 3, wherein any article placed on the iron *d* will be firmly pressed between it and the iron *a*. The wedge *k*, by being adjustable, may be regulated so that varied thicknesses of articles may be pressed between the two irons *a* and *d*.

Within the groove *s'* on the clutch member *s* takes the arm *u*² fixed upon the rod *u*¹ which is free to move laterally through its bearings but can not rotate therein. On a stud *u*³ extending from this rod *u*¹ is fulcrumed the arm or lever *v* the end of which is of hook shape and upon which is fixed the laterally projecting pin *v'*. The hooked end of the arm *v* extends into proximity to the disk *w* fixed upon the shaft *n* and rests thereon when in its normal position: said 105

disk *w* is provided with two indents *x* and *x'*. Upon a shaft *t*², which is mounted in bearings on the framework *A* and provided with operating arms *t*, *t'*, is fixed the arm *u* on which is formed a laterally projecting part *u*⁴ which takes beneath the arm *v* so that by moving said shaft *t*² and arm *u* in one direction the arm *v* is raised by the projecting part *u*⁴ and is then moved longitudinally by said arm *u* coming into contact with the pin *v'*, said arm *v* at this time carrying with it the rod *u'* and clutch member *s* thus placing the latter into gear with the member *r'*. On releasing the operating arm *t*, or *t'*, the arm *u* is removed from contact with the pin *v'*, which permits the arm *v* to fall by gravity into the position indicated by Figs. 3 and 4, allowing the arm *v* to fall upon the disk *w* so that when the indent *x* or *x'* arrives under the hooked end of the arm *v*, the latter will be pulled so as to be moved in a direction to draw the clutch member *s* out of gear with the member *r'* and so arrest the motions of the machine.

We preferably employ two lower smoothing irons *d* and their carriages so that two operatives may work at the same machine. For this purpose, the rails *f* are continuous and extend to equal distances each side of the vertical plane of the iron *a*, so that either carriage and its iron *d* can be simply rolled to and from position for pressing.

The actions of the apparatus are as follows:—Taking it that the several parts of the machine are in the positions indicated by Fig. 4, and that one of the irons *d* has upon it the article or articles to be pressed and the carriage of said iron has been rolled to central position, the operative moves the lever *t* so as to rock the shaft *t*² and arm *u* to raise the arm *v* out of contact with the indent *x* and cause the arm *u* to engage the pin *v'* and slide the rod *u'* to shift the clutch member *s* into gear with the member *r'* so that the rotary motion of the shafts *q* and *n* are commenced, by which means the disk *w* is rotated and carries the indent *x* out of proximity to the hooked end of the arm *v* so that when the operative releases his or her hold of the lever *t* and this falls by gravity and allows the arm *v* to do so, the hooked end will rest upon the edge of said disk *w*, ready to drop into the next indent. The continued rotation of the shaft *n* causes the framework *g* to be moved upwardly by means of the eccentric *k'* and the link *m*, such movement being continued until the carriage and its iron has been bodily lifted from the rails *f*, and the articles carried by the plate *d* are pressed into contact with the iron *a*, at which time the abrupt side of indent *x'* will engage the hooked end of the arm *v* and will move the same longitudinally to withdraw the clutch member *s* out of gear with the member *r'* and so arrest the motions

of the machine, the iron *d* being thus retained in its raised position until the operative again moves the operating arm or lever *t* to cause the operations of the parts to be recommenced, when, by the several shafts rotating in the same direction as before, the table *d* and its carriage is lowered onto the rails until the indent *x* engages with the hooked end of the arm *v* and the motions of the machine are again arrested, this time with the table *d* in its lower position with the wheels *e* resting upon the rails *f*. The operative now withdraws her iron *d* and the operative at the opposite side of the machine advances her iron *d* into position beneath the iron *a*, then moves the operating arm or lever *t'* to cause the machine to be re-started so as to raise her iron *d* after which the several operations are repeated as above described.

Such being the nature and object of our said invention what we claim is:—

1. A collar and cuff pressing mechanism comprising a heated pressure plate, a removable plate coöperating therewith, mechanism for reciprocating said removable plate with relation to said pressure plate and including a shaft, a catch plate mounted on said shaft, power mechanism for driving said shaft, a catch member controlling said driving mechanism and arranged to be operated by said catch plate to disengage said power mechanism, and a hand lever provided with means for operating said catch member independently of said catch plate.

2. A collar and cuff pressing mechanism comprising a heated pressure plate, a removable plate coöperating therewith, mechanism for reciprocating said removable plate with relation to said pressure plate and including a shaft, a catch plate mounted on said shaft, power mechanism for driving said shaft, a catch member controlling said driving mechanism and arranged to be operated by said catch plate to disengage said power mechanism, and a hand lever provided with a cam for disengaging said catch member from said catch plate and also provided with means to shift said catch member to operatively connect said shaft with said power mechanism.

3. A collar and cuff pressing mechanism comprising a heated pressure plate, a removable plate coöperating therewith, mechanism for reciprocating said removable plate with relation to said pressure plate and including a shaft, a catch plate mounted on said shaft, power mechanism for driving said shaft, a catch member controlling said driving mechanism and arranged to be operated by said catch plate to disengage said power mechanism, and a hand lever provided with a cam having a shoulder for disengaging said catch member from said catch plate, and also provided with a projecting

arm, and a pin carried by said catch member and adapted to be engaged by said arm, whereby said catch member is shifted to operatively connect said shaft with said power mechanism.

5 4. In mechanism of the class described, a stationary heated pressure plate, a removable plate for use in conjunction therewith, a cam-actuated sliding device for transmitting
10 a vertical motion to said removable plate, a shaft for actuating said cam mechanism, a catch plate mounted on said shaft, a lever carrying a catch arranged to be operated by
15 said catch-plate to disengage the power driven mechanism, and said power driven mechanism, substantially as herein specified.

5 5. In mechanism of the class described, a heated pressure plate, a removable plate for use in conjunction therewith, a shaft for
20 transmitting motion to said removable plate, a catch-plate mounted on said shaft, a catch to be actuated by said catch-plate for disengaging the driving mechanism, and handle mechanism whereby the catch may be
25 manually thrown out of and put into gear with the catch-plate, substantially as herein specified.

30 6. In mechanism of the class described, a heated pressure plate, a removable plate for use in conjunction therewith, a shaft for transmitting motion to said removable plate,

a catch-plate mounted on said shaft, a lever carrying a catch to be actuated by said catch-plate, a sliding bar operatively connected with said lever and having means for
35 controlling the operation of the machine by power, and handle-actuated devices for raising and lowering said catch relatively to said catch-plate, substantially as herein specified.

40 7. In mechanism of the class described, a heated pressure plate, a removable plate co-operating therewith, mechanism for transmitting motion to said removable plate, a
45 rotatable catch plate connected with said motion transmitting mechanism, power mechanism, a slidable clutch bar for controlling said power mechanism, a catch lever having one end pivotally connected with
50 said clutch bar, the other end of said lever normally engaging said catch plate, and a hand lever provided with means for disengaging said catch lever from said catch plate and also for moving said clutch bar.

In testimony whereof we have affixed our
55 signatures in presence of two witnesses.

HENRY CROFTS LONGSDON.
JAMES ROBERT BOTTOMLEY.

Witnesses:

FRED HAMMOND,
SAMUEL HEY.