

UNITED STATES PATENT OFFICE.

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CREASING-MACHINE.

No. 815,234.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM H. H. TRACY, a citizen of the United States, and a resident of Troy, Rensselaer county, State of New York, have invented certain new and useful Improvements in Creasing-Machines, of which the following is a specification.

My invention relates to machines for creasing collars and cuffs, and has for its object to provide a simple and efficient device of this character.

My invention will be described in detail hereinafter, and the features of novelty will be pointed out in the appended claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a plan view of a machine constructed according to my invention. Fig. 2 is a sectional view thereof on the line 2 2 of Fig. 1. Fig. 3 is a sectional view taken on line 3 3 of Fig. 2. Fig. 4 is a detail view of another form of creasing-rollers, and Fig. 5 is a detail view of still another form of creasing-rollers.

A represents the base of the machine, provided with standards B and B'. Attached to these standards B and B' is a protecting-hood C, secured in position by screws C'.

A driving-shaft D is journaled in bearings E and E' in the standards B and B' and has mounted upon it at the end a driving-pulley D', to which power may be applied in any suitable manner. At its other end the said shaft D carries a creasing-roller D². A counter-shaft F, journaled in bearings F' and F² in the standards B and B', also carries a creasing-roller G at its one end and has mounted upon it a gear-wheel H, which meshes with a corresponding gear-wheel I on the shaft D. Thus as power is applied to the pulley D' the driving-shaft D is rotated and through the medium of the gears H and I transmits power to the counter-shaft F, thus rotating the creasing-rollers D² and G.

J is a table adapted to receive the material. A guide J' is secured to this table J by means of a screw J². This guide may be of any suitable and well-known form to guide the folded material to the creasing-rollers D² and G.

Mounted on the counter-shaft F to rotate therewith is a cam K, which coöperates with a rocker-arm L. This said rocker-arm is provided with a roller L' at the point where it engages the cam K in order to reduce the friction. The rocker-arm L is pivoted at L² to a lug or projection A' on the base A and is pro-

vided at its one end with a stud L³, which engages the bearing F² for the purposes to be more fully described hereinafter.

To accommodate goods or material of varying degrees of thickness, there is provided a spring M, mounted in a casing M' and with its one end in engagement with a washer M², abutting against the bearing E'. The other end of the spring M is in engagement with an adjustable cap M³, which screws into the upper end of the casing M'. A rod N, provided with an enlargement or collar N', passes through this cap M³ and has its lower end screw-threaded and screws through the washer M² and into the bearing E'. The object of this construction will appear from the description hereinafter.

The operation of the device is as follows: After the several thicknesses of material have been sewed together to form the collar in the usual manner the said material is folded or bent over at one end and inserted into the guide J' and between the rollers D² and G. Power now being applied to revolve the rollers D² and G, the material will be fed along and creased as it travels. As the shaft F is revolved the cam K will cause the rocker-arm L to vibrate and the roller G to alternately move toward and away from the roller D². The object of this intermittent motion is to allow the material being creased to be gradually turned to accommodate the curved or irregular line, upon which the edge of the collar may be cut. If the rollers were constantly in engagement, it would be impossible to turn the material without buckling it. In order to prevent the roller D² from following the roller G when said roller G drops away as the rocker-arm L is operated by the cam K, the rod N is provided, the enlargement or collar N' of which engages the cap M³, and thus limits the downward movement of the bearing E' and the roller G. It will be understood that the bearing F', in which the counter-shaft F is journaled, is so arranged as to permit of the limited downward swinging movement of the shaft F and the roller G when the end of the arm L passes into the cut-out portions of the cam K and, further, that the said shaft F and the roller G drop down by gravity.

In the form of creasing-rollers shown in Fig. 4 the upper roller *d* may be of the same character at the roller D² described above, while the lower roller *g* is a mutilated roller—that is, said roller is in feeding or creasing en-

gagement with the roller *d* intermittently, thus permitting the goods to be turned, as mentioned hereinbefore.

In the structure shown in Fig. 5 both the rollers 1 and 2 are of the mutilated type, engaged intermittently in the same manner and for the same reasons as described with relation to Fig. 4.

It will be understood that when the creasing-rollers shown in either Fig. 4 or Fig. 5 are used the cam K and the rocker-arm L will be omitted and the bearing F² will be made stationary. Otherwise the remaining mechanism may be the same as described with respect to Figs. 1, 2, and 3.

I wish it understood that while I have described my invention in connection with collars and cuffs the said machine may be used whenever it is desired to crease material for any purpose.

Various modifications may be made without departing from the nature of my invention.

The intermissions occurring in the feeding movement release the fabric sufficiently to enable it to be turned so that the crease will be curved to correspond to the edge of the article. The guide J' simply folds the material preparatory to creasing it and governs the distance of the crease from the edge.

It is unnecessary when using my invention to indicate the crease by a line on the goods or to use any particular care in order to have the crease at a uniform distance from the edge.

I claim as my invention—

1. In a creasing-machine, the combination

of two rollers geared together so as to rotate continuously in opposite directions one of said rollers being movable toward and from the other without bringing them out of gear, and means for shifting the movable roller toward and from the other roller at regular intervals as the rollers rotate.

2. In a creasing-machine, the combination of two creasing-rollers permanently geared together, and means for alternately separating the working surfaces of the rollers and again bringing them into cooperative relation at regular intervals during the revolution of the rollers.

3. In a creasing-machine, the combination of two creasing-rollers, one of which is movable toward and from the other, means for rotating said rollers in opposite directions, and a shifting device, governed by said means, for shifting said movable roller toward and from the other roller.

4. In a creasing-machine, the combination of two creasing-rollers, one of which is movable toward and from the other, means for rotating said rollers in opposite directions, a rocker-arm extending lengthwise of the shaft of the movable roller and connected therewith to shift said roller, and means, located on one of the roller-shafts, for periodically swinging said rocker-arm.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM H. H. TRACY.

Witnesses:

J. E. HOAG,

P. J. MCGOWAN.