

(No Model.)

E. L. CARRINGTON.
APPARATUS FOR AUTOMATICALLY POLISHING ARTICLES OF
MANUFACTURE.

No. 528,852.

Patented Nov. 6, 1894.

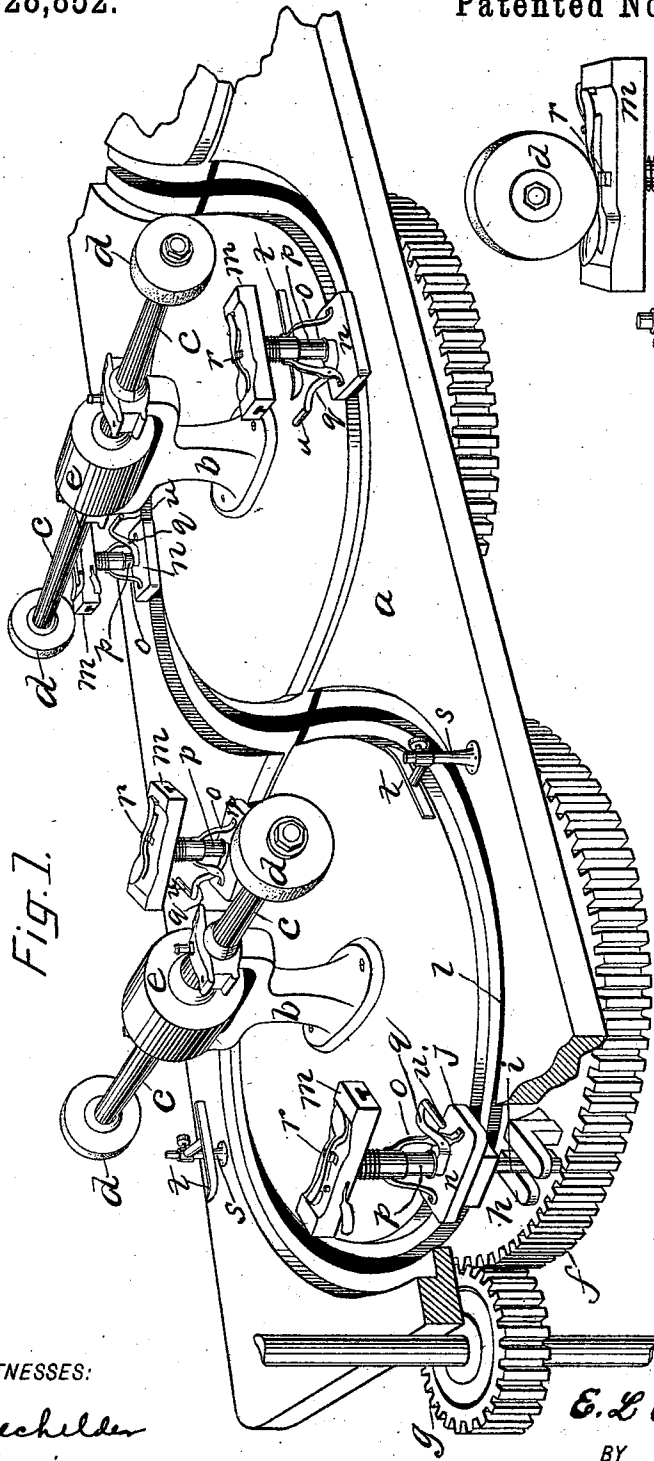


Fig. 1.

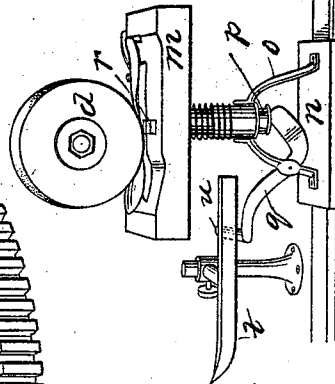


Fig. 2.

WITNESSES:

E. Baechler
A. D. Harrison.

INVENTOR

E. L. Carrington

BY

Night, Brown & Crossley,
ATTORNEY.

UNITED STATES PATENT OFFICE.

EDWARD L. CARRINGTON, OF BRISTOL, CONNECTICUT.

APPARATUS FOR AUTOMATICALLY POLISHING ARTICLES OF MANUFACTURE.

SPECIFICATION forming part of Letters Patent No. 528,852, dated November 6, 1894.

Application filed January 23, 1894. Serial No. 497,767. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. CARRINGTON, of Bristol, in the county of Hartford and State of Connecticut, have invented certain
5 new and useful Improvements in Apparatus for Automatically Polishing Articles of Manufacture, of which the following is a specification.

This invention has relation to the art of
10 polishing and buffing articles of manufacture in general, and particularly metallic articles having irregular or uneven surfaces, or surfaces of varying contour, requiring the employment of polishing rolls of various forms,
15 and the application to the roll of the article to be polished in various ways.

It is the object of my invention to provide means whereby the polishing of an article of uneven or varying contour in all of its parts
20 or surfaces may be accomplished automatically, speedily and perfectly.

To these ends my invention consists of a polishing and burnishing machine embodying in its construction a traveling carrier or
25 a plurality of carriers adapted to hold the article to be polished, so that the latter may be carried in contact with the polishing or burnishing means and pressed thereagainst in such manner as to polish or burnish all of
30 its parts or surfaces.

Reference is to be had to the annexed drawings and to the letters marked thereon forming a part of this specification, the same letters designating the same parts or features
35 as the case may be, wherever they occur.

Of the drawings—Figure 1 is a perspective view of one form of machine in which my invention may be embodied, parts being represented as broken away. Fig. 2 is a perspective view of a carrier containing a spoon,
40 showing the manner of bringing the spoon into contact with the polishing roll, and the means for operating upon the carrier to press the spoon into contact with the roll.

In the drawings—*a* designates the bed or frame of the machine upon which are mounted
stands *b* in which are journaled shafts *c*, upon the ends of which are arranged polishing or buffing rolls *d*. Upon the shafts are
50 affixed the pulleys *e* which may be driven by

belts from a point above the machine or from other suitable place. Other means may, however, be provided for mounting and driving the polishing rolls.

f designates gear wheels which are suitably
55 mounted, and which may intermesh one with another and be driven by a pinion or gear *g* suitably arranged and operated. The gear wheels *f* are provided on their upper faces with lugs *h* similar in construction to like
60 means employed in braiding machines, which lugs are adapted to engage the shanks *i* of the carriers *j*, which shanks extend down through grooves *l* in the bed *a* so that as the wheels *f* revolve, the carriers *j* will be carried
65 along above the grooves *l* and be transferred from one wheel *f* to another in a serpentine course as shown, until the end of the machine is reached, when they will be returned as indicated at the left in Fig. 1.

The carriers *j* consist of stands which support upon their upper ends a bed *m* adapted to receive on its upper surface the article to be polished. In the present instance the stands are shown to consist of a base plate *n*
75 in which are supported brackets *o* through which passes a pin or bolt *p*, spring-pressed downward upon the inner end of a lever *q*, fulcrumed upon one of the brackets *o*. Upon the upper end of the pin or bolt *p* the bed *m*
80 is securely attached. The bed *m* may be provided with a chuck *r* or other suitable means for holding the article to be polished.

Upon the bed *a* at suitable points are arranged standards *s* with which there are connected inclined plates or cams *t* so arranged
85 as that when the carriers *j* pass beneath the polishing rolls *d*, the inclines or cams *t* may operate upon a projection *u* from the lever *q* and press said lever down, raising the bolt
90 *p* and bed *m* so as to press the same in the desired way against the polishing wheels.

For example, supposing a spoon is to be polished as shown in the drawings, the carriers *j* as they are carried along may be operated upon by the first incline or cam *t* so as
95 to press the bed in against the polishing wheel and polish say, the bowl of the spoon, and passing on to the next polishing roll the contour of the incline or cam *t* may be such
100

as to polish the shank of the handle, and on the next polishing roll so as to polish the end or curved part of the handle, and so on until the article is completely polished in all of its surfaces or parts.

I do not confine my invention to means for moving the carriers in a serpentine course, since it is evident that they may be moved in a circular or straight line, nor do I limit myself in any way to the form of means for moving the carriers, or pressing the article on the bed into contact with the polishing means, since these may be varied to suit circumstances without departing from the nature or spirit of the invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all the modes of its use, it is declared that what is claimed is—

1. An apparatus for polishing articles of manufacture comprising in its construction a movable carrier adapted to receive the articles to be polished, polishing means, and a plurality of means of varying contour to move and press the article on the carrier to

a varying extent into contact with the polishing means, as set forth.

2. An apparatus for polishing articles of manufacture comprising in its construction a movable carrier provided with a vertically movable bed to receive the articles to be polished polishing means, means to move the carrier, and a plurality of means of varying contour to move the bed vertically to press the article on the carrier to varying extent into contact with the polishing means, as set forth.

3. An apparatus for polishing articles of manufacture comprising in its construction a movable carrier provided with a vertically movable bed, a lever to act upon said bed to move it vertically, and inclines or cams of varying contour to act upon said lever, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 7th day of December, A. D. 1893.

EDWARD L. CARRINGTON.

Witnesses:

ALICE E. BROWN,
ROGER S. NEWELL.