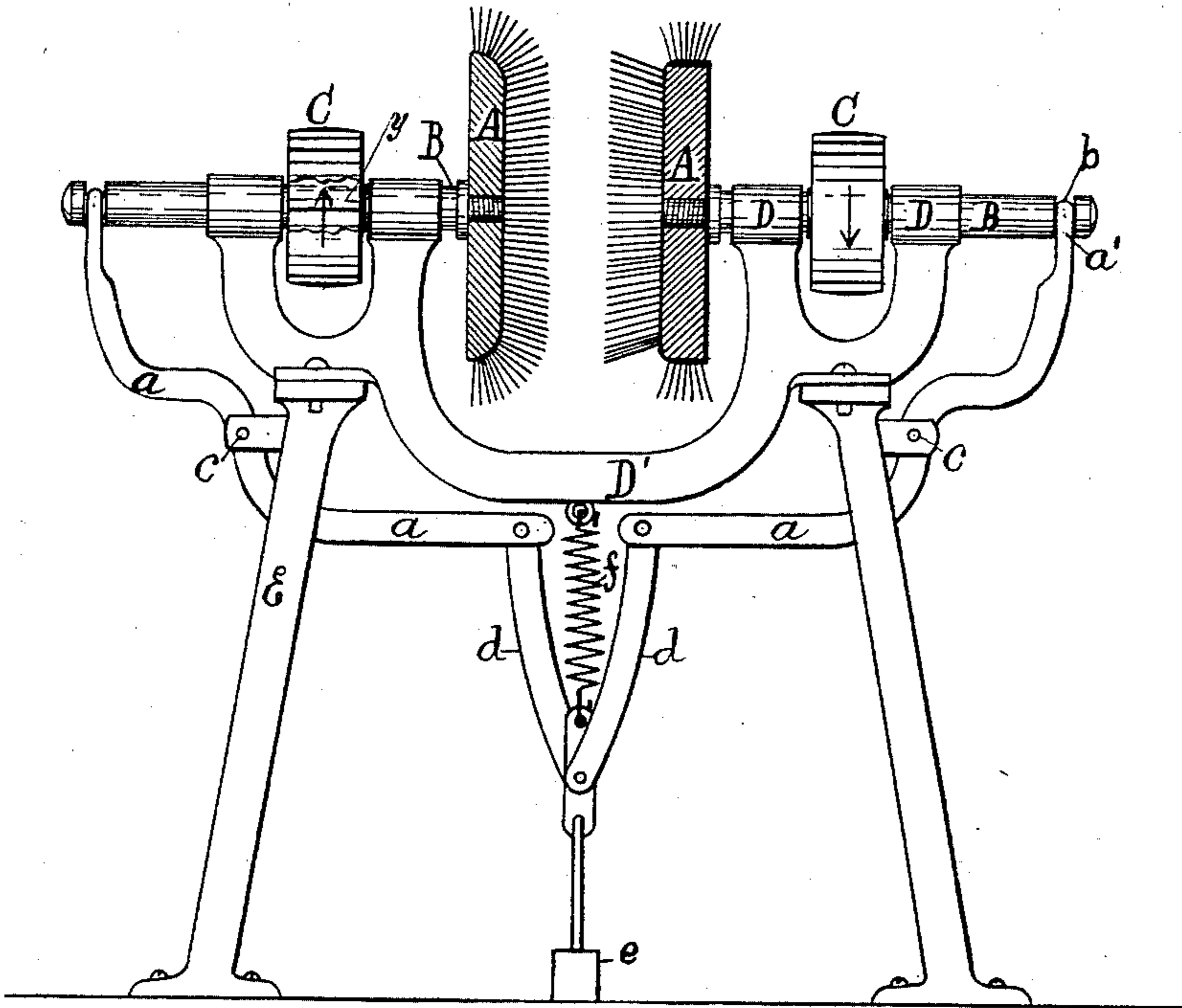


J. A. SPENCE.

Scouring-Brush Wheel.

No. 223,016.

Patented Dec. 30, 1879.



Attest:

Eug. H. Bodenschatz.
J. A. Whitehead

Inventor.

John A. Spence, per,
Thos. S. Crane, Atty.

UNITED STATES PATENT OFFICE.

JOHN A. SPENCE, OF NEWARK, NEW JERSEY, ASSIGNOR TO SIMON WIENER
AND OSCAR WIENER, OF SAME PLACE, ONE-FOURTH TO EACH.

IMPROVEMENT IN SCOURING BRUSH-WHEELS.

Specification forming part of Letters Patent No. **223,016**, dated December 30, 1879; application filed
October 15, 1879.

To all whom it may concern:

Be it known that I, JOHN A. SPENCE, of Newark, in the county of Essex, State of New Jersey, have invented a new and useful Improvement in Scouring Brush-Wheels, of which the following is a specification.

My invention consists in novel means for actuating two scouring brush-wheels, whereby the process of scouring articles can be conducted with great celerity and accuracy by one person, having both hands free to manipulate his work, and whereby there will be little or no waste of the scouring material used, as will be hereinafter explained.

The figure is a side elevation of my polishing-wheels.

A A are the wheels; B B, the spindles, shown arranged to revolve in opposite directions, as indicated by the arrows upon the driving-pulleys C C, and fitted to slide endwise in their journals D D, which are secured together by a tie-bar, D', and mounted upon legs E E, to support them at a convenient height.

To regulate the pressure exerted by the wheels upon the articles placed between them, I employ bent levers *a a*, provided with forked ends *a'*, to embrace grooves *b*, formed in the rear ends of the spindles B, the levers being pivoted to the frame or tie-bar at *c* and operated by links *d*, connecting them to a treadle, *e*.

A spring, *f*, attached to both of the links *d*, draws them upward and keeps the wheels separated until the foot is applied to the treadle.

The operation of the wheels will be the same if mounted vertically, the treadle being arranged to operate upon the bottom end of the lower spindle, to force the lower wheel against the upper when desired.

When the wheels A are set in motion by the application of suitable power, any article of wood, metal, bone, or other substance may be inserted between the two wheels and cleaned or polished on both sides at once by pressing the wheels together by the foot.

If the object be of slender form or perforated, as a terret-ring, bridle-bit with its check-rings, &c., the entire surface of it will be acted upon simultaneously, without turning or changing its position, by the penetration of the polish-

ing agents operating from opposite sides. This is especially the case when the machine is used for scouring, as the brushes employed are peculiarly adapted to penetrate and embrace all parts of the article, and an operator can thus clean ten times as many pieces, for gold, silver, or nickel plating, as can be cleaned by an expert workman with brushes by hand.

By revolving the wheels A in opposite directions, the article placed between them has hardly any tendency to pull out of the operator's hand, and he can therefore handle the pieces more easily and rapidly than upon the ordinary single wheel. The opposed motions of the wheels serve not only to force the revolving brushes more thoroughly into the irregular parts of the work, but to catch and retain the polishing-powder discharged from the faces of the opposite wheels.

The wheels may be made of any desired shape or material, one of those shown in the figure being of plain disk form, with bristles inserted in its face and outer edge, while the other is shown rounded upon the inner corner.

The edges of the wheels may be provided with bristles or suitable tufts of material, to polish certain parts of any article which cannot be properly cleaned between the two wheels; but such provision upon the edges of the wheels is not essential to the operation of the wheels.

The belt-pulleys on spindles B B will be applied by means of feathers and grooves, or in any suitable manner which will allow endwise movement to be given to the said spindles while they are rotating.

I am aware that scouring and polishing wheels without bristles have been operated in a similar manner; but the arrangements for moving such wheels toward one another are entirely unsuited for use with a brush-wheel, upon which the operator requires to use both hands to manipulate the goods with sufficient rapidity; and I therefore claim the devices I have invented to operate the wheels by the foot, while the operator uses his hands for the purpose set forth.

I claim—

In a machine for scouring with brush-wheels,

the bent levers *a a*, links *d d*, spring *f*, and treadle *e*, combined with and arranged in the relation shown to the rotary brushes *A A* and their endwise-movable spindles *B B*, as specified.

In testimony that I claim the foregoing I have hereto set my hand this 17th day of

September, 1879, in the presence of two witnesses.

JOHN A. SPENCE.

Witnesses:

THOS. S. CRANE,
OSCAR WIENER.