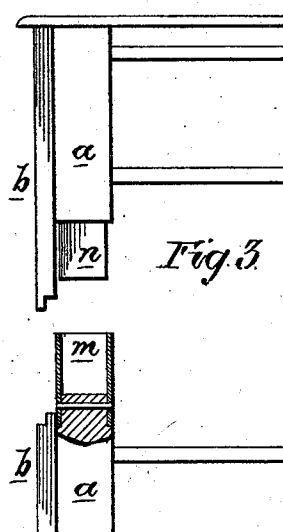
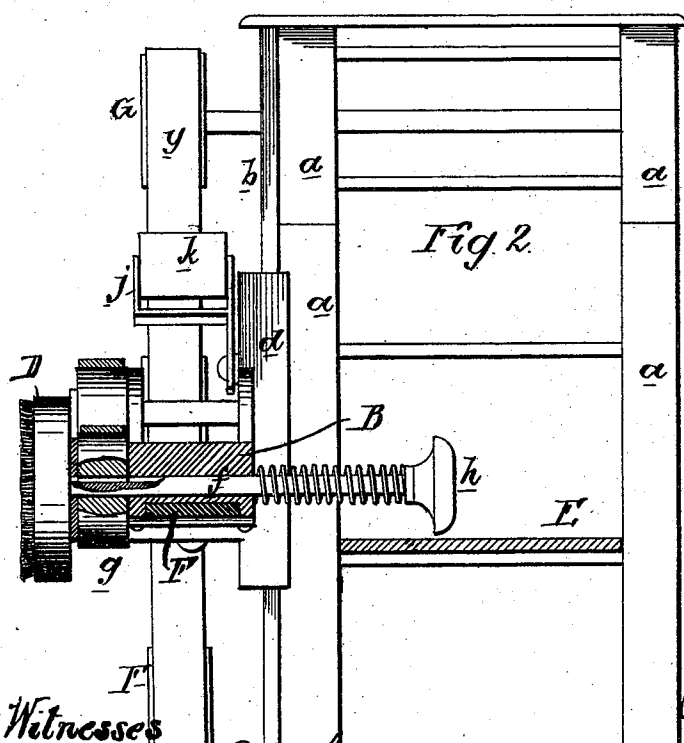
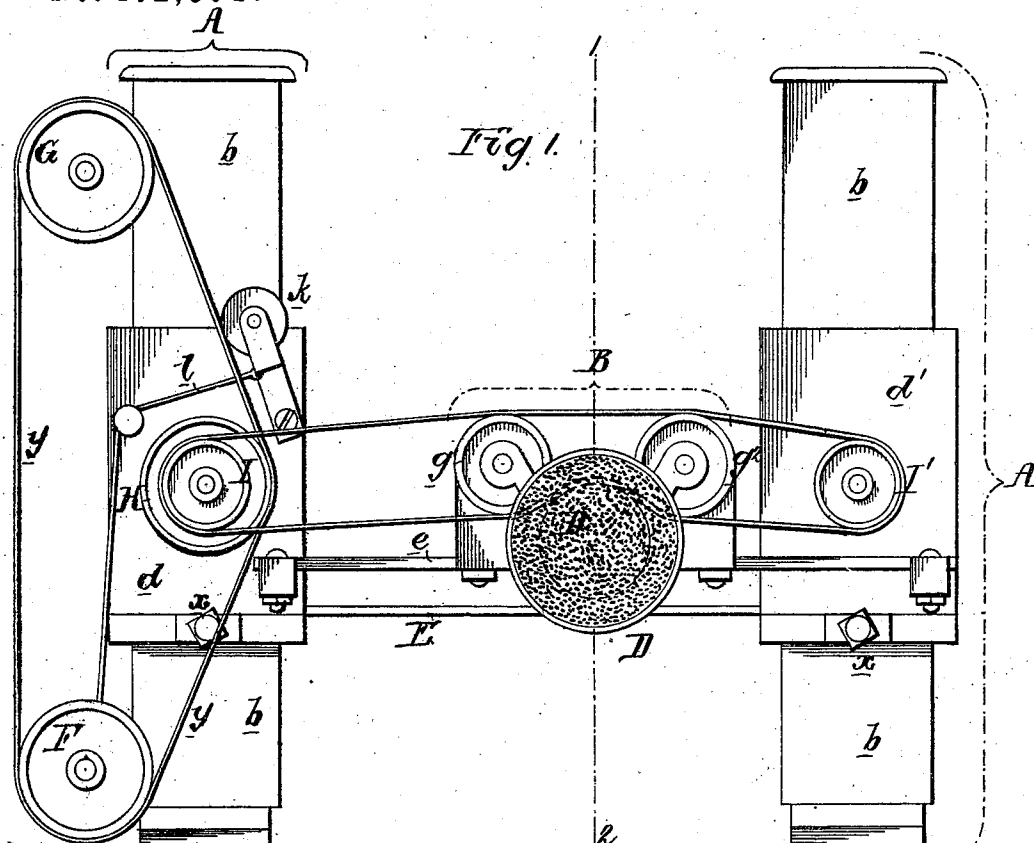


J. WATERMAN.
APPARATUS FOR CLEANING BRICK WALLS, &c.
 No. 172,804. Patented Jan. 25, 1876.



Witnesses
 Henry Smith
 Hubert Howson

John Waterman
 by his Attorneys,
 Howson and Son.

UNITED STATES PATENT OFFICE.

JOHN WATERMAN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR CLEANING BRICK WALLS, &c.

Specification forming part of Letters Patent No. **172,804**, dated January 25, 1876; application filed June 9, 1875.

To all whom it may concern:

Be it known that I, JOHN WATERMAN, of Philadelphia, Pennsylvania, have invented an Apparatus for Cleaning Walls of Brick, Stone, &c., of which the following is a specification:

The object of my invention is to construct a device for rapidly and effectively cleaning the surface of brick or stone walls; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a front view of the apparatus; Fig. 2, a sectional view of the same on the line 1 2, Fig. 1; and Fig. 3 a detached view of a portion of the apparatus.

The working parts of the machine are carried by two end frames, A A, which are arranged at any suitable distance apart, and each of which is composed of two upright posts, *a a*, connected together by suitable braces, the front post being furnished with a plate, *b*, by which the frame carrying the cleaning-brush is guided vertically.

I prefer to make these end frames in sections, fitted together as described hereafter, so that the apparatus can be increased or diminished in height as desired.

The frame which carries the cleaning-brush consists of two end pieces, *d d'*, and a horizontal plate, *e*, on which is arranged to slide a carriage, B, through a bearing in which slides the spindle *f* of the brush D, the said spindle also passing through and being revolved through the medium of a pulley, *g*, but being permitted to slide freely to and fro within said pulley, without having any rotary movement independently of the same.

The spindle *f* has at its inner end a knob, *h*, by pressing upon which the attendant, standing upon the platform E, can force the cleaning-brush D against the surface of the wall to be operated upon, a spiral spring, *i*, tending to remove the brush from contact with the wall, when pressure is removed from the knob.

The end pieces *d d'* of the brush-carrying frame have jaws at each end, which embrace the edges of the guiding-plates *b*, so that the said frame can be adjusted vertically to any desired position, set-screws *x* serving to secure the same in place after adjustment.

The means which I prefer of applying power to the cleaning-brush are shown more fully in Fig. 1, in which F represents a pulley secured to a driving-shaft, which turns in bearings on the lowermost section of one of the end frames A, a similar pulley, G, being secured to a shaft carried by the uppermost section of said frame, and the driving-belt *y* passing round both these pulleys and round a pulley, H, the shaft of which turns in bearings in the end piece *d*, and carries at its outer end a smaller pulley, I. The opposite end piece *d'* also carries a pulley, I', similar to the pulley I, and a belt passes round the pulleys I and I', and over and between the pulleys *g*, *g*¹, and *g*², carried by the sliding carriage B, the pulley *g* communicating motion to the spindle of the brush D.

A hinged arm, *j*, is secured to the end piece *d*, and carries at its outer end a roller, *k*, which can be moved inward against the belt *y*, by drawing upon the cord or chain *l*, so as to increase or diminish the tension upon said belt.

The manner of fitting together the sections of the end frames A A is shown in Fig. 3, which represents the adjoining ends of two sections. The front and back posts of each section are socketed at one end, *m*, and provided at the other end with a projecting portion, *n*, adapted to the socket of the adjoining section, and the front post of each section carries a portion of the guiding-plate *b*, which is cut away at the socketed end of the post, and projects at the opposite end, the ends of each section being also grooved, so as to make a close joint.

The revolving brush D consists, preferably, of a disk, in which are inserted a number of short pieces of wire; but any device which will have a scraping or scratching effect on the surface of the brick or stone may be employed, or a bristle-brush and water may be used when a painted wall is to be operated upon.

The above-described apparatus can be made of any desired width or height, and is intended to be erected in proximity to the wall of a building to be cleaned, in the same manner as a painter's scaffold, every part of the wall being rapidly and effectively operated upon by the brush D, owing to the ready adjustability of the latter.

I claim as my invention—

1. A device for cleaning walls, &c., consisting of an adjustable frame adapted to guides at each end, and provided with a sliding carriage, carrying a revolving brush or scraper, all substantially as set forth.

2. The combination of the vertically-adjustable frame and its end pieces *d d'*, with the opposite end frames *A A*, and their guides *b* made in sections, all substantially as set forth.

3. The combination of the belt *y* and the pulleys *F* and *G*, the shafts of which turn in

bearings secured to the upper and lower sections of one of the end frames, with the pulley *H*, carried by one of the adjustable end pieces *d d'*, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN WATERMAN.

Witnesses:

HUBERT HOWSON,
HARRY SMITH.