W. McArthur,

Carpet Cleaning Machine,

No. 57,532, Patented Aug. 28, 1866.

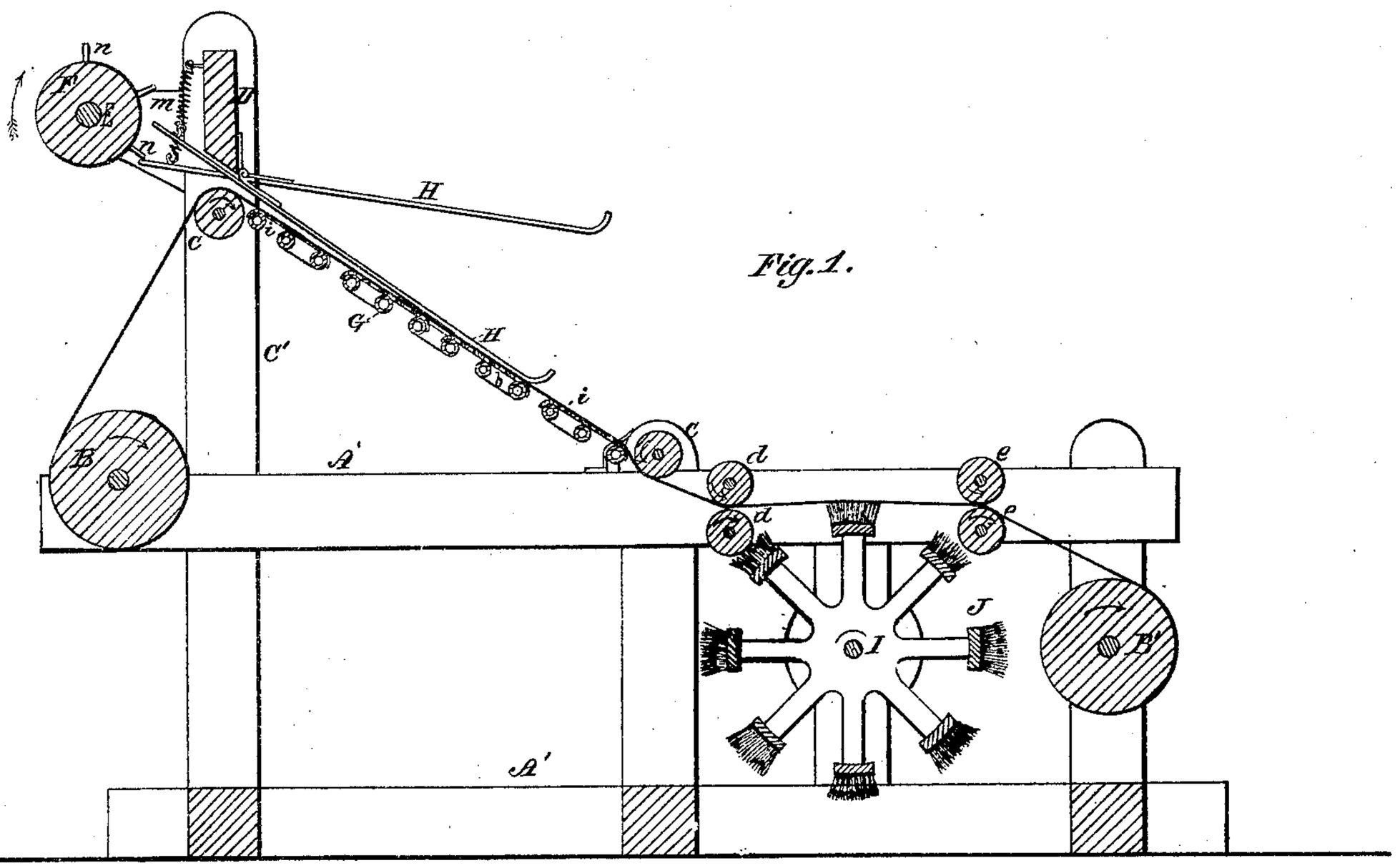
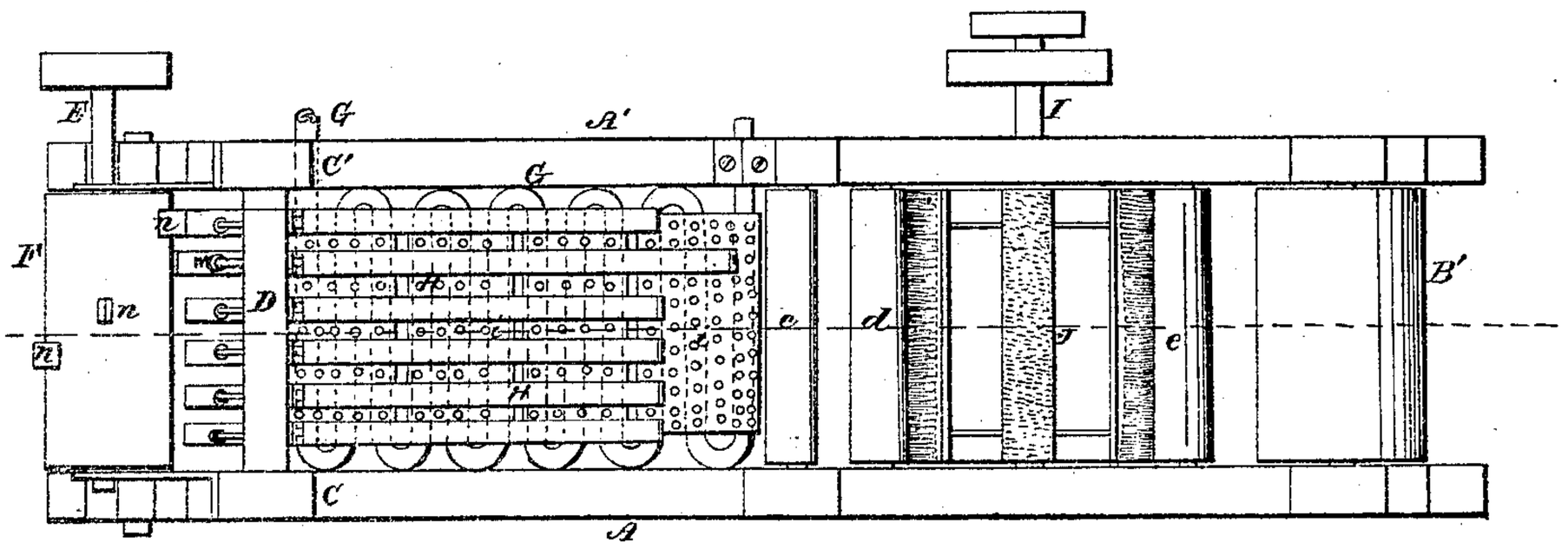


Fig. 1.

Fig. 2.



Witnesses.

Wm. Albert Seal.

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Inventor.

W. McArthur.

UNITED STATES PATENT OFFICE.

WILLIAM McARTHUR, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED CARPET-CLEANING MACHINE.

Specification forming part of Letters Patent No. **57,532**, dated August 28, 1866.

To all whom it may concern:

Be it known that I, WM. MCARTHUR, of Philadelphia, Pennsylvania, have invented certain Improvements in Carpet-Cleaning Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists, first, in the combination, substantially as described hereinafter, of steam-pipes or their equivalent with a carpet-beating machine, so that the heat may serve the twofold purpose of killing destructive insects which find a lodgment in the carpet and of reducing the latter to the best condition for the discharge of dirt and dust from the interstices; secondly, in certain devices, described hereinafter, for operating the beaters, whereby the use of the ordinary expensive and complicated cranks and gearing is avoided; third, in the general combination of the several parts of the machine, arranged for joint action in the manner described hereinafter.

In order to enable other skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a sectional elevation of my improved carpet-cleaning machine, and Fig. 2 a plan view.

A and A′ are the side frames of the machine, in which turn the journals of the rollers B B′ *c d d e e*. Between two standards, C C′, secured to and forming a part of the side frames, extends a cross-piece, D, and in brackets secured to the said standards turns a driving-shaft, E, on which is a roller, F. Below the cross-piece D turns a roller, *c′*, and between the latter and the roller *c* is an inclined steam-pipe, G, which is bent to a zigzag form, as shown in Fig. 2, and to this pipe are secured a numbed of perforated plates, *i*.

To the lower edge of the cross-piece D are hung a number of narrow flexible strips or beaters, H, which, when depressed, will rest at their lower end on the perforated plates *i*.

To the face of the roller F are secured a number of pins, *n n*, which, as the roller revolves in the direction of the arrow, will elevate the beaters and permit them to fall by their own weight, and by the aid of spiral springs, one of which connects the short arm of each beater to the cross-bar D.

To a shaft, I, which turns in the opposite side frames, A A′, is secured a revolving brush, J, constructed in the manner clearly indicated in the drawings.

The carpet to be cleaned is drawn over the roller *c′* and in contact with the perforated plates *i i*, passed between the rollers *d d* and *e e*, and is stitched at one edge to a cloth wound on the roller B and at the opposite edge to a cloth wound on the roller B′. A rotary motion in the direction of its arrow is then imparted to the shaft I, to each of the rollers B B′, and to the roller F, and steam is admitted to the pipe G, when the operation of the machine will be as follows:

As the carpet is drawn slowly downward over the plates *i i*, it will be heated by the pipe, and the beaters H will repeatedly strike the carpet and drive out the particles of dust, which pass downward between the plates *i i* and through the perforations in the same. As the carpet is carried onward it will be further cleansed by the action of the revolving brush J, and will then be wound onto the roller B′. The motion of the rollers may now be reversed and the carpet carried upward and wound on the roller B, and may be moved backward and forward as many times as necessary, and submitted to the combined action of the beaters, the heat, and the rotary brush.

I have found by practical experiments that when the carpet is heated the dust may be much more readily and thoroughly driven from the same, and that all moths and insects in the carpet are destroyed by the heat.

By employing the spiral springs, the roller F, and its pins, in connection with the beaters H H, the use of the ordinary expensive cranks and connecting-rods is avoided, while the beaters can be operated with great rapidity without employing complicated and expensive gearing.

When it is not desired to heat the carpet during the process of beating, the steam-pipes may be dispensed with, and a simple perforated plate or grating used for supporting the carpet.

I do not desire to confine myself to the precise arrangement of zigzag steam-pipes de-

scribed, as other heating apparatus may be used to advantage; but

I claim as my invention and desire to secure by Letters Patent—

1. The combination, substantially as described, of a steam-pipe, G, or other equivalent heating apparatus, with a carpet-beating machine, for the purpose described.

2. The combination of the beaters H, their spiral springs, and the roller F, with its pins *n*, the whole being arranged and operating substantially as and for the purpose specified.

3. The inclined plates *i i*, beaters H, brush J, and rollers B B′, *c c′*, *d*, and *e*, the whole being constructed and arranged for joint operation substantially as and for the purpose specified.

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

WILLIAM McARTHUR.

Witnesses:

CHARLES E. FOSTER,

JOHN WHITE.