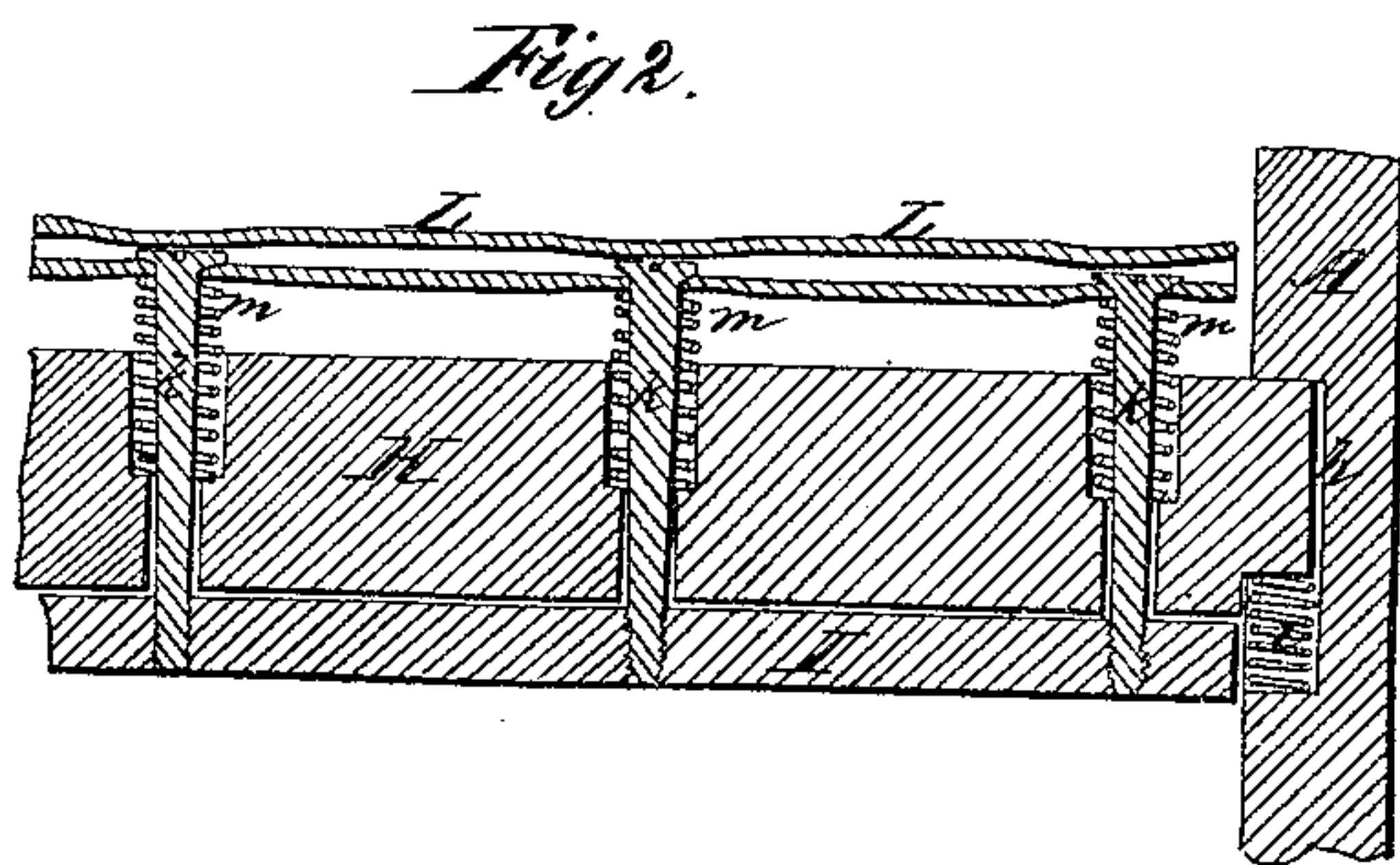
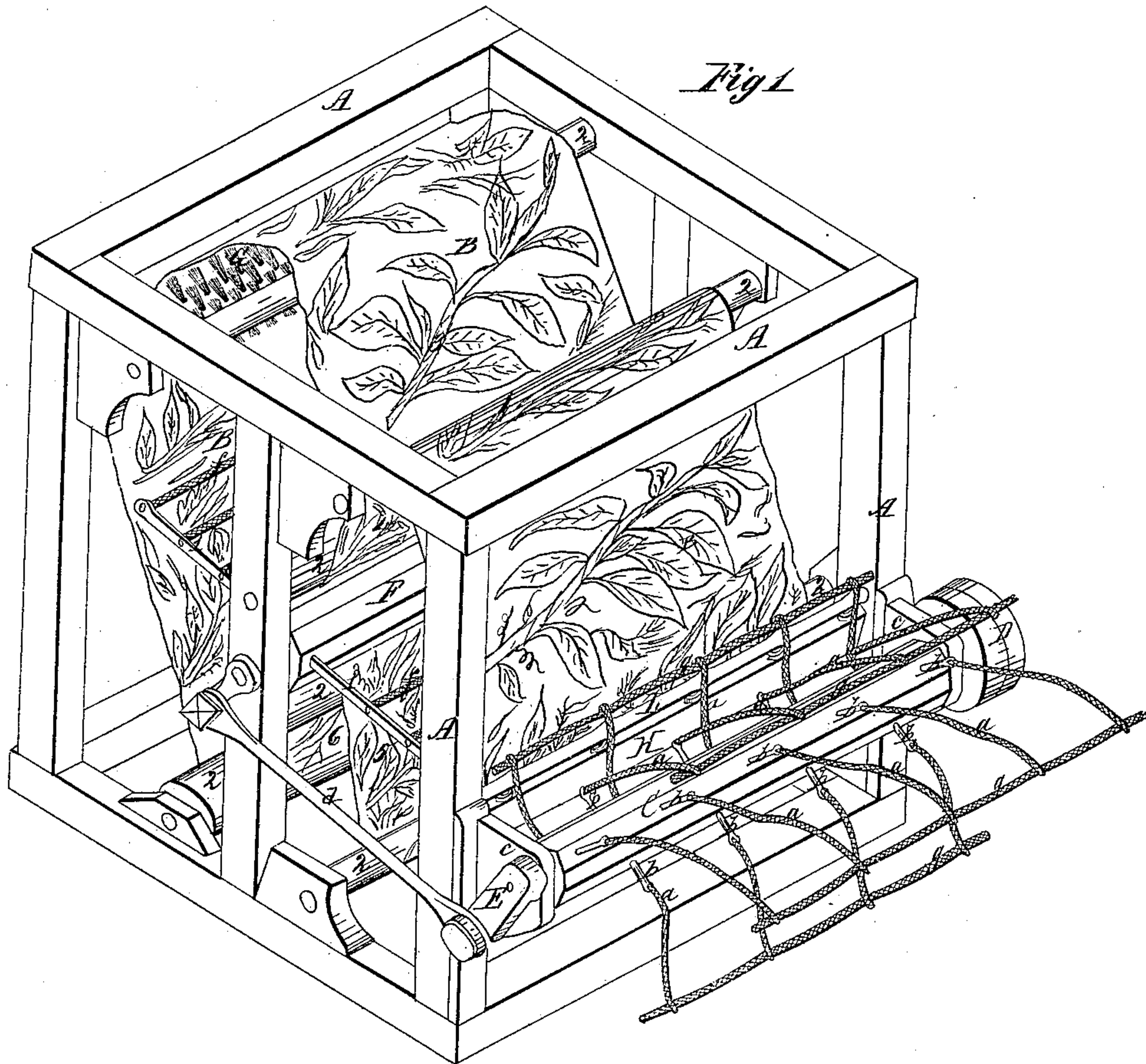


D. Holmes & J. Harris, Jr.

Carpet Cleaner,

N^o 19,465.

Patented Feb. 23, 1858.



UNITED STATES PATENT OFFICE.

JOSEPH HARRIS, JR., OF ROXBURY, AND DANIEL HOLMES, OF CHELSEA,
MASSACHUSETTS, ASSIGNORS TO DANIEL HOLMES.

IMPROVED CARPET-BEATING MACHINE.

Specification forming part of Letters Patent No. 19,465, dated February 23, 1858.

To all whom it may concern:

Be it known that we, JOSEPH HARRIS, Jr., of Roxbury, in the county of Norfolk, and DANIEL HOLMES, of Chelsea, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Carpet-Beating Machines, of which the following is a full, clear, and, exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the machine; Fig. 2, detail to be referred to.

A is the frame of the machine, in which are hung suitable rolls 2, over which the carpet B to be beaten and cleaned is distended. This beating is performed in part by a series of elastic whips *a*, attached to short rods *b*, projecting from the shaft C. This shaft is hung in suitable bearings *c* at one end of the machine, and is driven by a band on a pulley D at one end of the shaft. To the other end of the shaft C is attached a crank E and connecting-rod *d*, by which a vibratory motion is given to a shaft F, supported in bearings in the middle uprights of the frame. To this shaft are attached on opposite sides the beaters *f*, consisting of the rigid pieces *l* and the elastic cords distended between them. These beaters, as the shaft F is vibrated, strike in rapid succession on the portions of the carpet which are distended opposite to them, as at 3, 4, 5, and 6, by which means the carpet is beaten on the surface opposite to that on which the whips on the shaft C operate. Revolving brushes, driven by bands from the pulley D, are placed at proper intervals and in proper positions to brush both surfaces of the carpet. (One of them is seen at G, where the carpet is broken away to show it.)

We have tried independent elastic whips attached to a revolving shaft for the purpose of beating carpets; but in the machine in which they were employed each whip (*a* of these drawings) being free at its outer end did not strike in a regular manner and with sufficient force. To obviate this we have con-

nected the ends of the several whips *a* of each row together by an elastic cord or rod *g*, which renders the beating much more effective by causing the whips to strike in regular lines, and also by the cord *g* itself striking over portions of the carpet that would have been missed by the whips *a* operating alone. This cord *g* will be made sufficiently stiff to keep the whips *a* in their proper lines. The elastic whips were also allowed to strike on the carpet immediately over the roll 2 on which it was distended. This soon destroyed the whips, as they expended the force of their blows on a hard rigid substance—the roll. To obviate this we have arranged an elastic guard in front of the roll 2, so that the whips *a* may strike on and be drawn over it instead of the hard roll. This guard we have constructed in the following manner, (a part of it being shown in section in Fig. 2:) A stout piece H extends across the machine directly in front of the roll 2 from one post to the other of the frame A. It plays up and down in slanting grooves *h*, cut in the sides of the posts, being supported therein by a spiral spring *i*, under each end. Long screws *k* pass through the piece H and screw into a strip I, beneath it. Each screw is surrounded by a light spiral spring *m*. The holes in the piece H, through which the screws pass, are enlarged near the top for the reception of these springs. An elastic cushion or tube L is attached to the heads of the screws *k*, as shown in Fig. 2. On this cushion the whips strike as the shaft C is revolved, and by it the force of the blow is received, and the whips are not destroyed, as they would be if they struck on the carpet immediately over the rigid roll 2. This manner of supporting the cushion L allows it to have a considerable amount of elasticity without descending so low as to let the whips strike on the roll 2. If there should be any breaks or loose ends of the carpet to pass over the roll 2, this guard prevents the whips from tearing it down by catching in it, as they were liable to do.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The use of the elastic whips *a*, connected together at their ends by the cord *g*, in the manner and for the purpose substantially as set forth.

2. Placing an elastic cushion *L* in front of the carpet for the whips to strike on, in the manner and for the purpose substantially as described.

3. The vibrating beaters *f* for beating the

opposite surface of the carpet, arranged and operating substantially as specified.

JOSEPH HARRIS, JR.
DANIEL HOLMES.

Witnesses to Harris's signature:

WM. V. K. LINSON,
G. M. CURTIS.

Witnesses to Holmes's signature:

THOS. R. ROACH,
P. E. TESCHEMACHER.