

(No Model.)

W. J. DREW.
CARPET SWEEPER.

No. 388,768.

Patented Aug. 28, 1888.

Fig. 1.

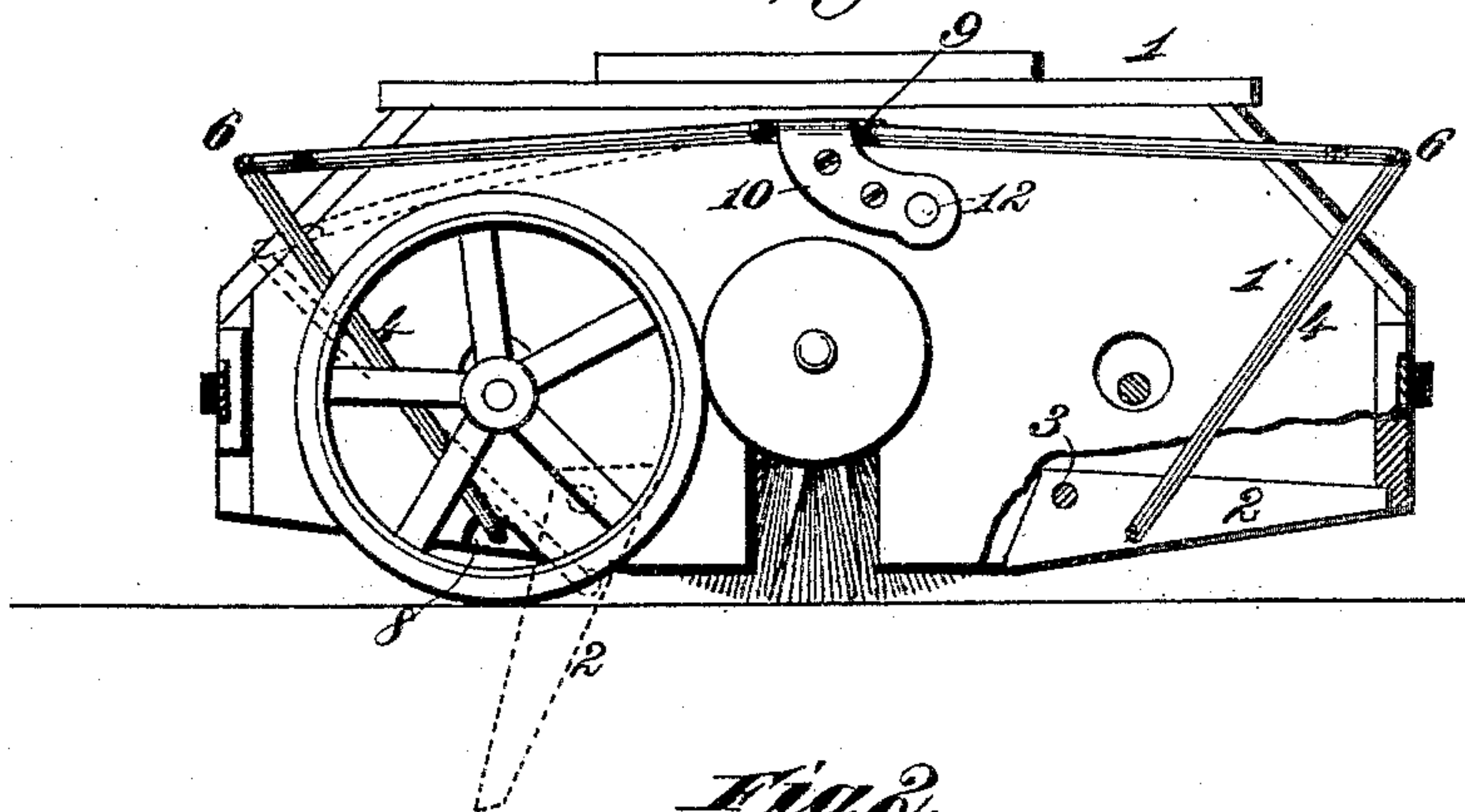


Fig. 2.

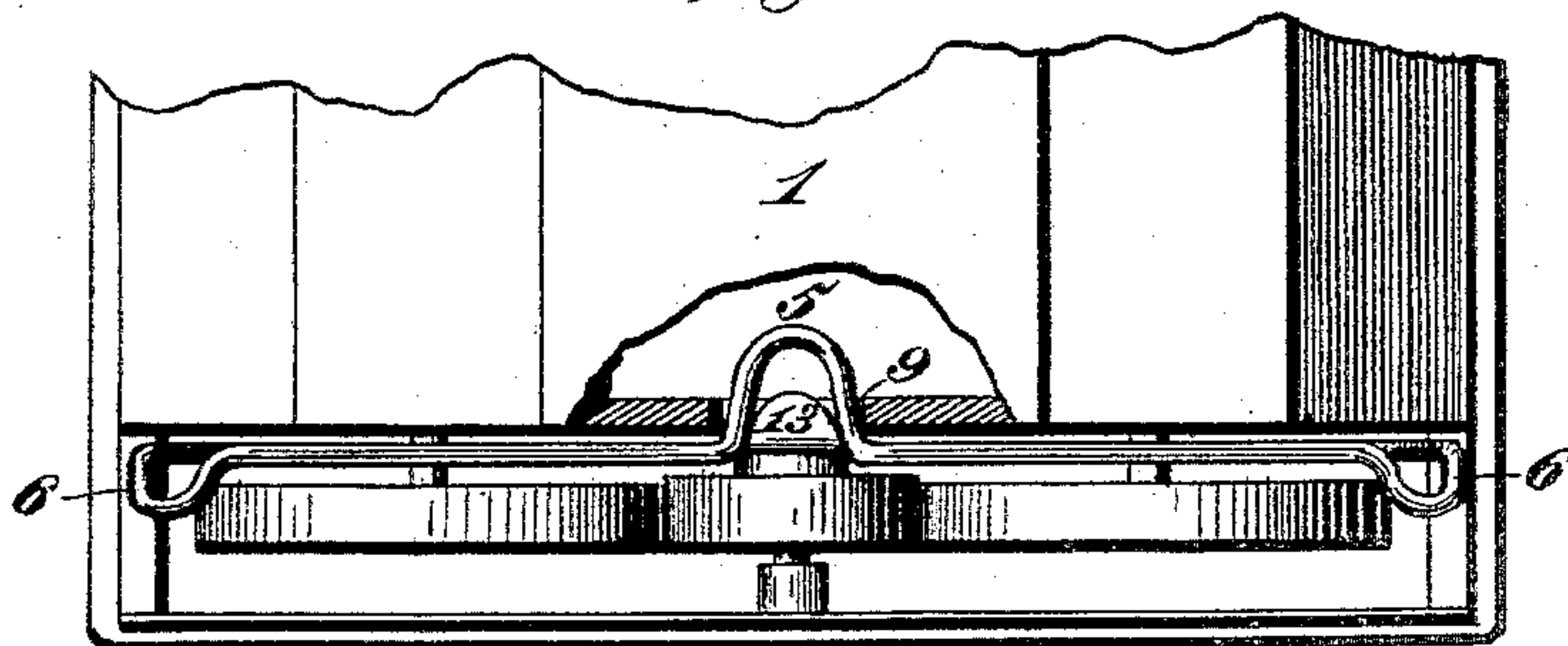


Fig. 3.

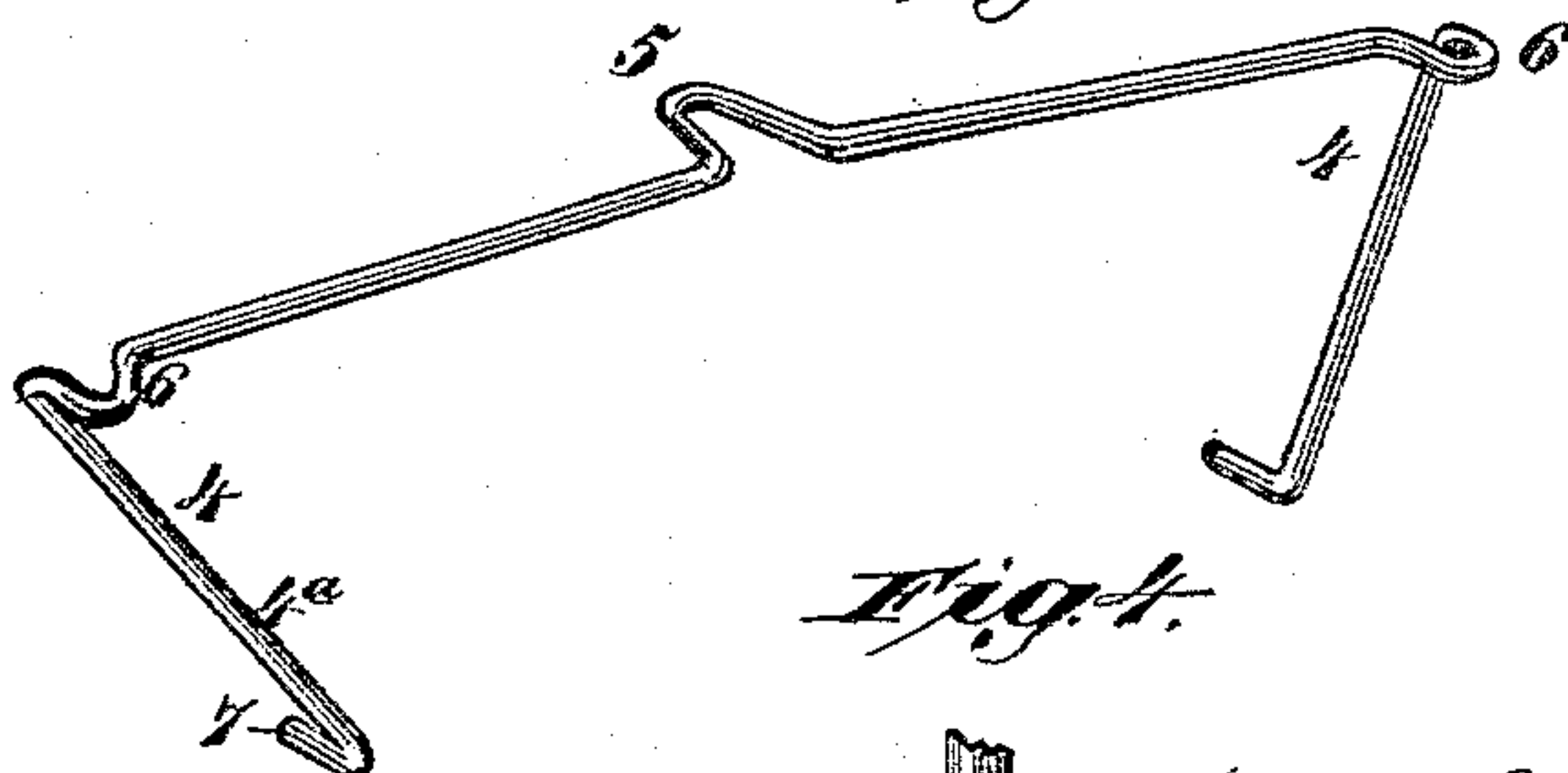
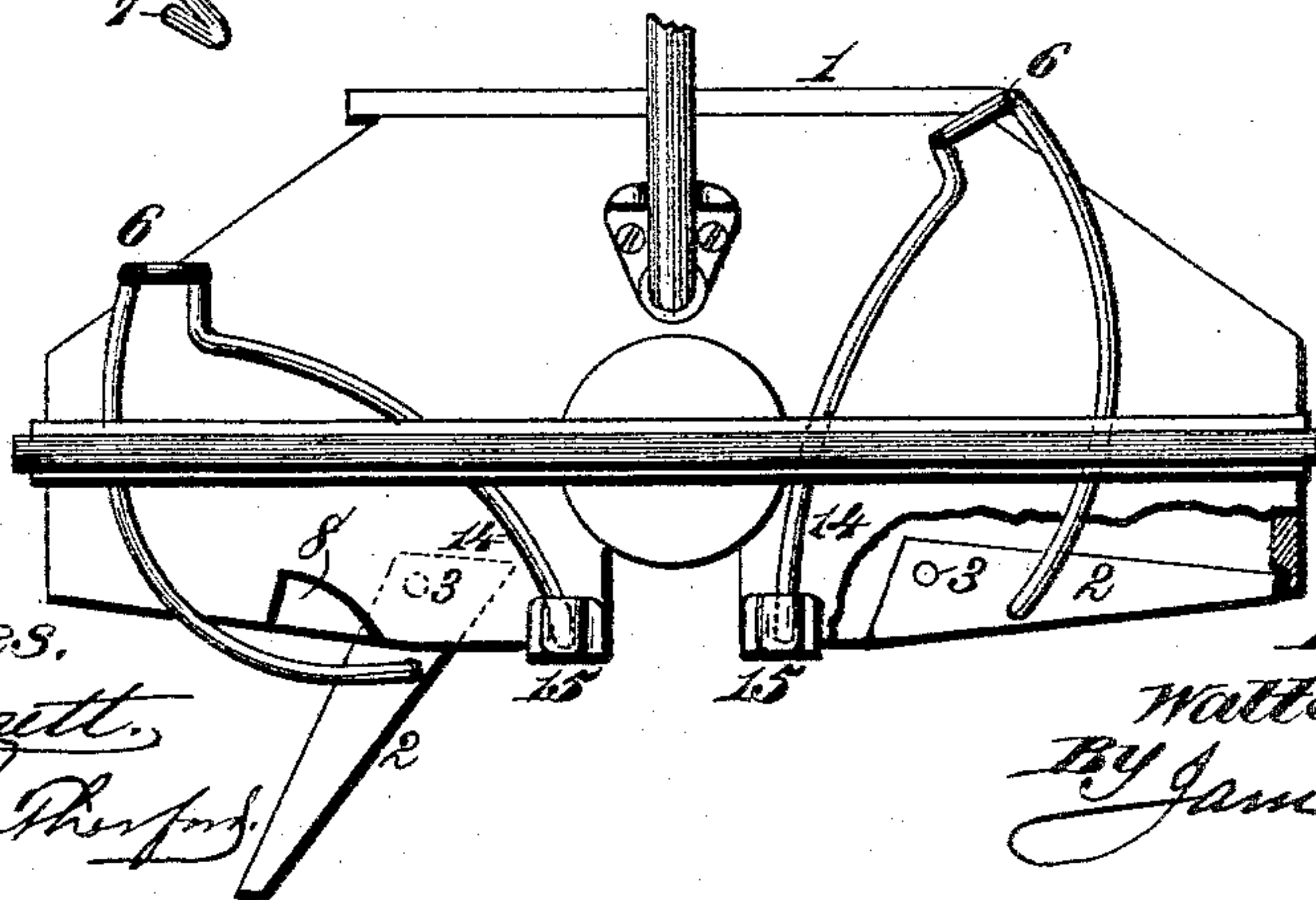


Fig. 4.



Witnesses,

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UNITED STATES PATENT OFFICE.

WALTER J. DREW, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE
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CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 388,768, dated August 28, 1888.

Application filed February 2, 1888. Serial No. 262,723. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. DREW, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Carpet Sweepers, of which the following is a specification.

This invention has for its object to provide novel means for opening and automatically closing the dust pan or pans of a carpet-sweeper, and to provide a novel spring-wire of such construction and so applied that the wire forms in itself a pressure-bar to open the pan by pressing upon the wire, and which, by its inherent elasticity, when relieved of pressure will automatically close the pan.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and definitely pointed out in the claims.

In the accompanying drawings, Figure 1 is an end elevation of a sweeper in which my invention is embodied. Fig. 2 is a top plan view, partly in section, of one end portion of the sweeper. Fig. 3 is a detail perspective of the dumping device removed from the casing. Fig. 4 is an end elevation of a sweeper, showing a slightly-modified construction.

In the said drawings, the reference numeral 1 indicates the sweeper casing or box, which may be of any known or desired form, having a brush-roller, with pans 2 arranged upon opposite sides thereof. These pans are pivotally mounted, in the usual manner, upon pins 3 set in the end walls of the casing.

Upon the exterior face of one of the end walls of the casing is mounted the dumping device, consisting of a single piece of wire bent, as shown in Fig. 3, into two similar angular or V-shaped portions, 4, connected together by a central U-shaped portion, 5, which is bent at or nearly at a right angle to the plane in which the V-shaped parts 4 lie. At the apex of the angle in each of the portions last-named the wire is bent to form a loop or eye, 6, turned outwardly from the angular portion 4, to serve as a rest for the finger of the operator in using the sweeper. At the free ends of the arms 4^a, forming part of the V-shaped portions 4, are inwardly-bent portions 7, which pass through shallow notches 8 in the edge of the end wall

of the casing and engage with openings in the ends of the pans, said openings being removed from the pivotal points 3, upon which the pans turn. The dumping device thus constructed is applied to the end wall of the casing by cutting therein a slot, 9, and inserting the U-shaped central portion, 5, which projects inside the casing. There are many ways in which the parts may be secured in this position; but a simple and inexpensive fastening is formed by extending the plate 10, which contains the bearing 12 for the handle, and bending the prolonged portion 13 inward to enter the slot 9, between the converging arms of the U-shaped portion 5, which impinges upon the edges of the plate, and are held firmly in place. When thus constructed and attached, the dumping device will have two of the arms of the converging or angular portions 4 lying in lines which approximate toward parallelism with the top of the casing, and the "hand-holds" or loops 6 will be near the upper angles of the box in convenient position for operation.

In operating the pans pressure upon the loops 6 will cause them to move through a limited arc, of which the adjacent arm of the U-shaped portion 5 is the center. The pivotal point 7 will also move in arcs, of which the pivot-pins 3 are the centers. In throwing the pans open the pivotal point 7 approaches the point of rigid attachment of the other arm of the V-shaped section by a very limited distance, and thereby the elastic tension to be overcome in throwing the pans open is but little greater than that exerted in holding said pans closed. The inherent elasticity of the portions composing the angularly-bent wire acts to automatically close the pans after such wire is released from the pressure of the fingers.

By the construction thus set forth the dumping devices for both pans are formed of one integral piece of wire. It should be noted, however, that I may construct the device operating each pan in a separate piece or part, as seen in Fig. 4. In this form of construction, instead of fastening the dumping device, as shown in Fig. 1, I may attach one end, 14, of each device at a point, 15, on the end of the sweeper, said point being comparatively near the point of pivotal attachment of the other arm. Aside from the fact that these devices

are constructed in separate pieces, and are each rigidly connected to the casing in the manner set forth, whereby their extremities are brought into comparative propinquity, they are not essentially different from the devices shown in Figs. 1 to 3, inclusive, being each formed in a single piece, having a similar hand-hold and operating in substantially the same manner. It will be noted, however, that by reason of the different location of the point of attachment the ends of the arms shown in Fig. 4 will approach each other as the pan is opened, thereby producing a constant increase in elastic tension.

I may connect the devices shown in Fig. 4 to the casing by angle-plates 15, or in any other suitable manner. It will be seen from the foregoing that I provide an angular spring-wire which in itself forms a pressure-bar to open a pan by pressing upon the wire, and which, by its inherent elasticity, will, when relieved of pressure from the hand, automatically close such pan. It will also be seen that the invention can be used to operate one or two pans of a carpet-sweeper.

What I claim is—

1. The combination, with a carpet-sweeper casing and its pivoted dust-pan, of an angular wire having a fixed point of attachment to the

casing and connected with the pan and forming in itself a pressure-bar to open the pan by pressing upon the wire, and which by its inherent elasticity will automatically close the pan, substantially as described.

2. The combination, with a carpet-sweeper casing and its dust-pan, of an angularly-bent spring-wire secured to the casing and extending from its point of attachment toward the side of the casing and then turned downward and connected to the pan and constituting in itself a pressure-bar to open the pan and by its inherent elasticity automatically closing the pan, substantially as described.

3. The combination, with a carpet-sweeper casing and its dust-pans, of a single piece of spring-wire secured to the casing and angularly bent and extending to and connected at its opposite extremities to the pans to form pressure-bars for opening the pans, and which by their inherent elasticity automatically close the pans, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER J. DREW.

Witnesses:

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