

(No Model.)

C. A. VAN ALLEN.
BACK STOP FOR SEWING MACHINES.

No. 287,484.

Patented Oct. 30, 1883.

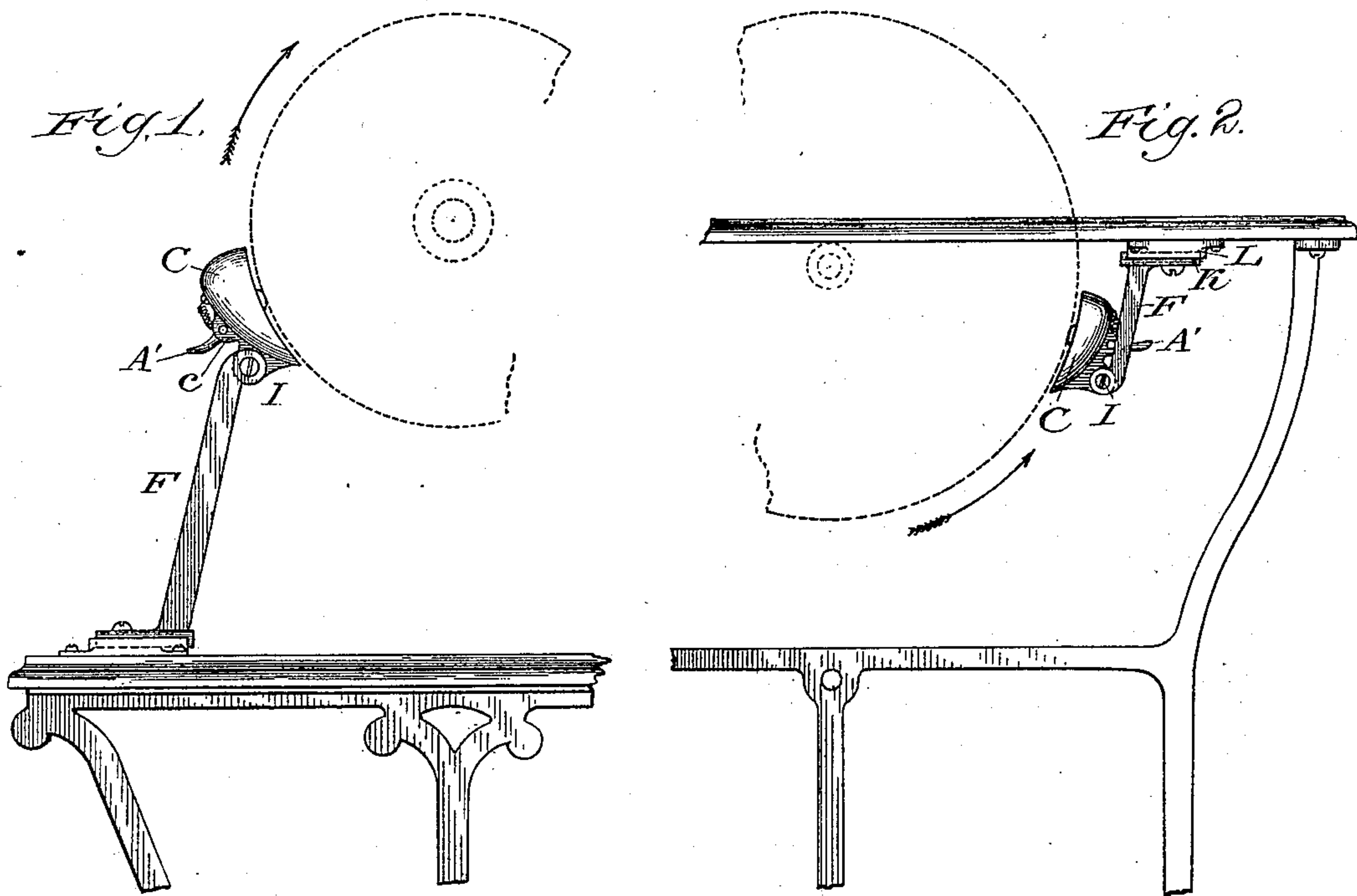


Fig. 4.

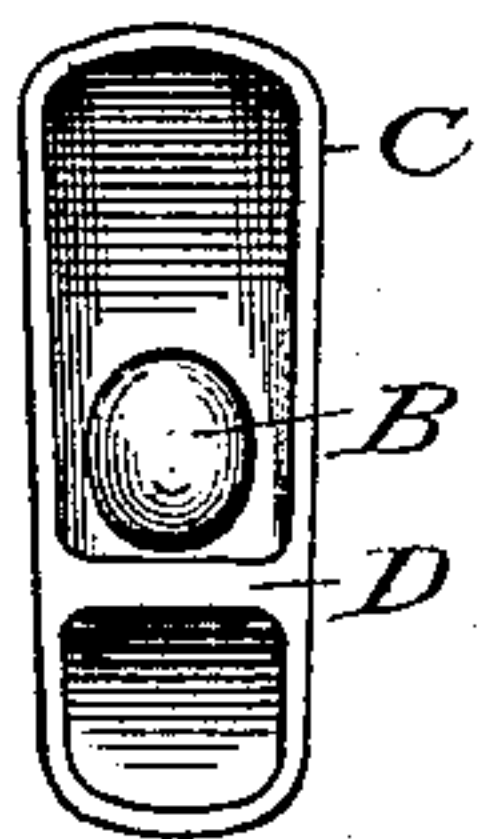


Fig. 3.

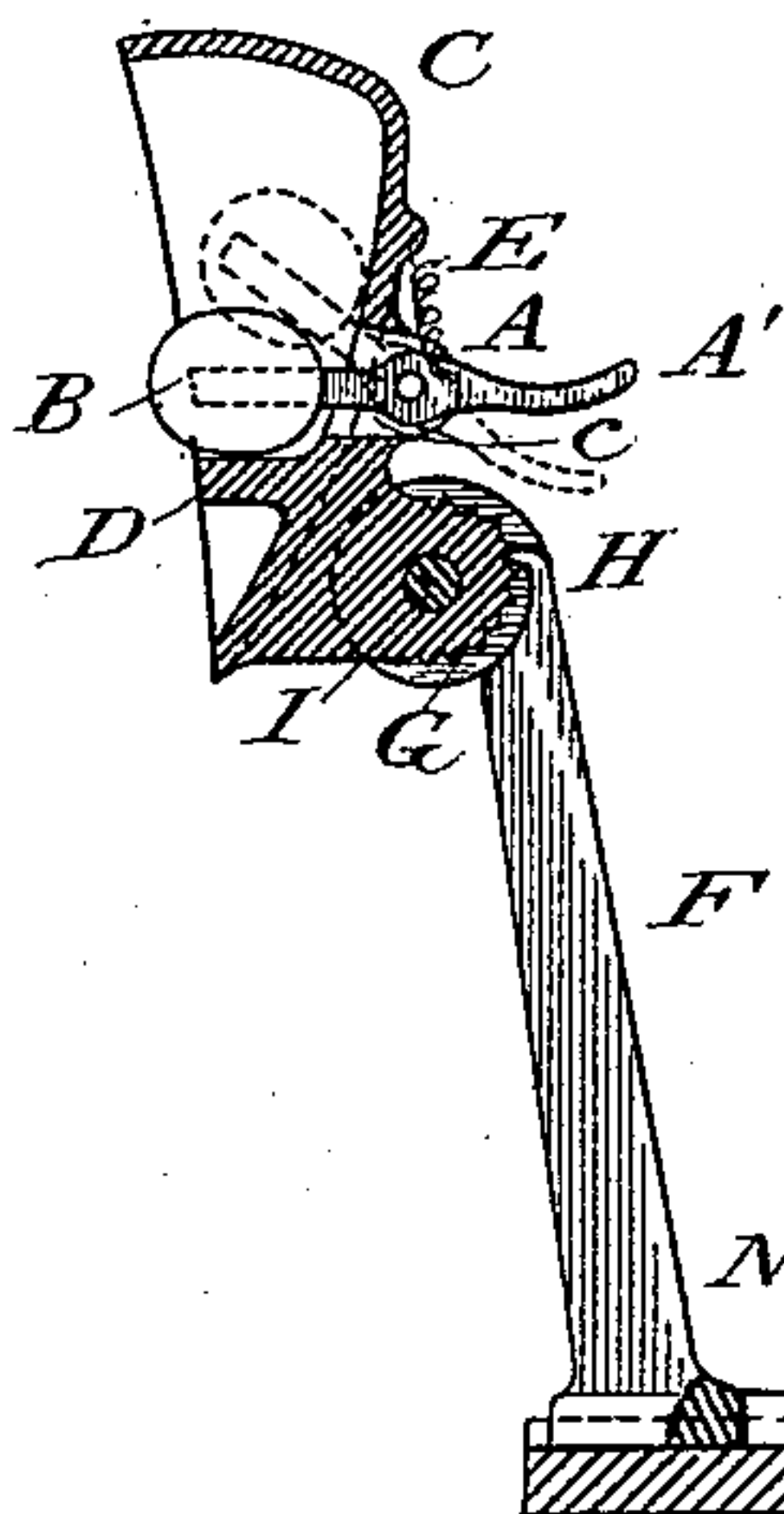
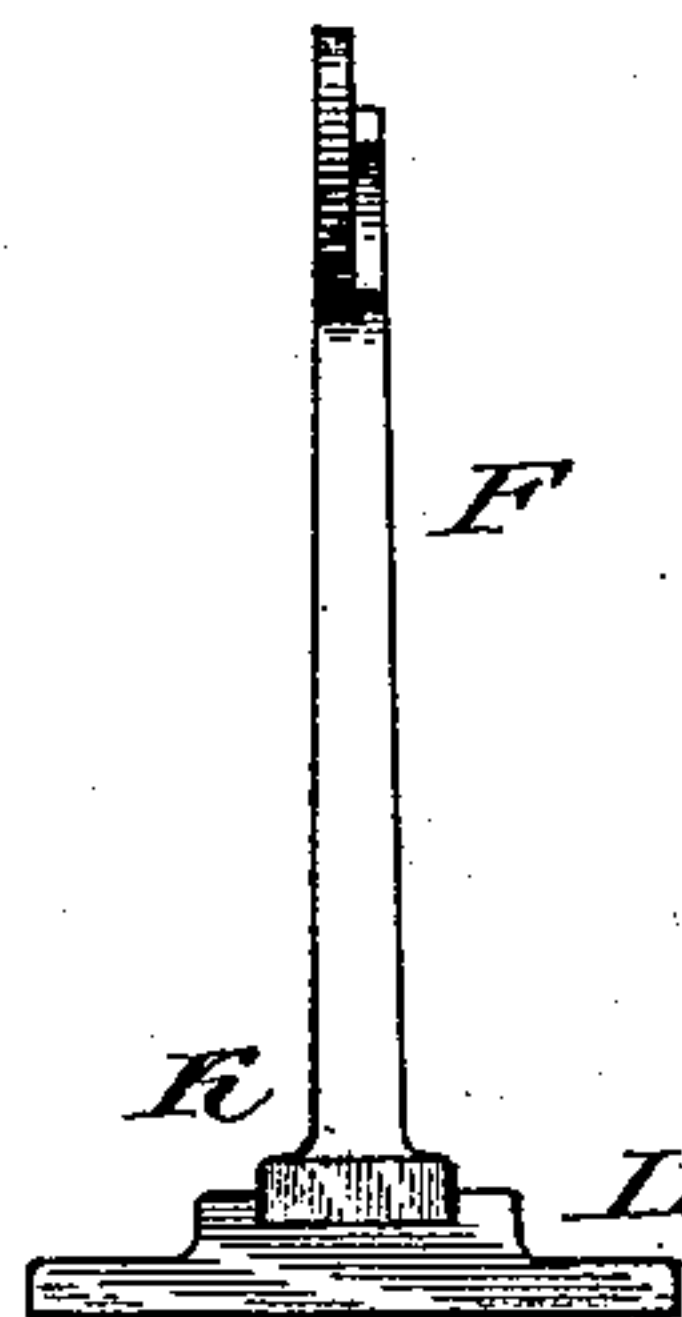


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES A. VAN ALLEN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE VAN ALLEN MANUFACTURING COMPANY, OF SAME PLACE.

BACK-STOP FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 287,484, dated October 30, 1883.

Application filed July 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. VAN ALLEN, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Back-Stops for Sewing Machines, of which the following is a specification.

This invention relates to an improvement in back stops for sewing-machines, heretofore consisting of a vibratory lever provided with an elastic shoe or cushion, and arranged relatively to the hand-wheel of the machine, so that a forward movement of the hand-wheel shall throw off the vibratory stop, while a tendency on the part of the wheel to move back shall automatically actuate the vibratory stop in a reverse direction and bring it to a point where the elastic cushion will be compressed by and held crowded against the face of the wheel, in order to prevent a back motion of the same.

The objects of my invention are to provide means for adjusting the back-stop mechanism at various angles, in order to adapt the same to hand-wheels mounted at various distances above or below a machine-table; also, to adapt the vibratory back-stop to be conveniently thrown and held off from the hand-wheel by hand, whereby the hand-wheel can be turned back when desired; also, to provide means for adjustably supporting the stop mechanism upon the machine-table, whereby the vibratory stop can be set to accommodate hand-wheels of various diameters. These objects I attain by means of the devices illustrated in the annexed drawings, in which—

Figure 1 represents a side elevation of my improved back-stop mechanism arranged upon a machine-table with a portion of the hand-wheel shown in dotted lines. Fig. 2 is a like view with the back-stop mechanism arranged below the table, the hand-wheel in this instance being larger and the standard of the back-stop mechanism being somewhat shorter than in Fig. 1. Fig. 3 is a part vertical section and part side elevation of my improved back-stop mechanism. Fig. 4 is a face view of a hood in which the vibratory stop-lever

is pivoted. Fig. 5 represents an edge view of the means for supporting said hood.

The vibratory back-stop consists of a lever, A, pivoted in a hood or case, and provided upon one end with an elastic cushion; B, which is detachably secured upon the lever in some suitable way—as, for example, the elastic cushion can be provided with a socket in which a notched or toothed end of the lever is received. The hood C is provided in its back with a slot, through which the lever passes, and projecting from said back, at the sides of its slot, are a pair of ears, c, between which the lever is pivoted. This lever is prolonged rearwardly beyond its fulcral point, so as to form a finger, A', projected out from the hood, whereby when it is desired to swing the cushioned end of the lever back in the hood and away from the hand-wheel, in order to admit of the latter being turned back, the operator can press upon the projecting finger end of the lever, and thereby cause its shoe or cushion to be swung back in the hood, as indicated in dotted lines, Fig. 3.

The stop mechanism is adjusted relatively to the hand-wheel, so that the cushioned end of the vibratory stop-lever shall normally rest lightly upon the face of the wheel. When the wheel is turned forward, it will throw off the stop, and hence there will be no impediment to its forward rotation. Any tendency, however, on the part of the wheel to turn backward will, by reason of the frictional contact of its face with the stop-cushion, swing the lever, so as to project the cushion out from the hood and bring it close up to the face of the wheel, thereby compressing the elastic cushion and crowding it against the wheel.

In order to arrest the movement of the vibratory lever when it is substantially on the dead-center, and thereby effectually hold the hand-wheel against a back motion, the hood is provided with a fixed stop, D, against which the elastic cushion will be held by the hand-wheel during any tendency of the wheel to turn backward. A light spring, E, connected with the lever and the hood, is employed for normally holding the cushioned end of the stop-

lever upon the hand-wheel, so that the stop-lever shall at all times be in readiness to arrest the back movement of the wheel.

As a means for adjusting the vibratory back-stop, so as to adapt it for wheels of various heights or diameters, the hood carrying the vibratory stop-lever is adjustably connected with a standard, F, whereby the hood can be adjusted in the arc of a circle, and hence set at such angle or inclination as the size or position of the hand-wheel may require. To such end the hood is formed or provided with a fixed ratchet or part-circular line of ratchet-teeth, G, with which a fixed pawl or tooth, H, upon the standard is maintained in engagement by means of a screw, I, adapted to secure the hood upon the standard. The ratchet-teeth are conveniently formed on a flat lug projecting rearwardly from one end of the casing and adapted to fit against a flat end of the standard, the screw being passed through these meeting parts of the hood and standard, and adapted, when tightened up, to bind the said parts together. Where it is desired to adjust the back-stop mechanism relatively to the hand-wheel, the screw I can be loosened and the hood turned to the proper angle, so as to bring the fixed tooth or pawl on the standard in engagement with the rack at the required point, after which the hood and standard can be again secured together by tightening up the screw. In order to adjust the stop mechanism upon the machine-table, so as to place it in position for wheels of various diameters, the standard is provided with a slotted base-plate, K, arranged to slide in a groove formed in a bed-plate, L, that is adapted to be secured by screws or other suitable means to the table. A set-screw, M, passes through slot N in the base portion of the standard, and is screwed into the plate that is secured to the table, whereby by loosening the screw the standard can be shifted and then secured by tightening up the

screw. The standard can vary in length to suit the occasion, and can be arranged above the table, as in Fig. 7; or it can depend from the under side of the table, as in Fig. 2.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A vibratory back-stop for the hand-wheels of sewing-machines, having an axial adjustment independent of its pivot, and arranged so as to be adjusted at various angles, whereby it can be set for wheels of various heights or diameters, substantially as described.

2. A vibratory back-stop for the hand-wheels of sewing-machines, carried by a support which is adjustably secured upon the machine, substantially as and for the purpose described.

3. The vibratory back-stop lever pivoted in a hood, and having at one end an elastic shoe and at its opposite end a finger which projects from the hood, whereby the lever can be operated by hand when it is desired to allow the hand-wheel to be turned back, substantially as described.

4. The hood carrying a vibratory back-stop lever and adjustably connected with a support by means of a pawl and ratchet, and means for securing said members in their adjustment, substantially as described.

5. The standard supporting a back-stop mechanism and provided with a slotted base, which is adjustably secured by a set-screw to a plate adapted to be secured to a machine-table, substantially as described.

6. A back-stop mechanism for sewing-machines, adjustably secured upon a standard, which is in turn adapted to be adjustably secured upon a machine-table, substantially as described.

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Witnesses:

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