2 Sheets--Sheet 1.

W. B. SNOW.

Mechanisms for Driving Sewing and Other Machines.

No. 156,383.

Patented Oct. 27, 1874.

Fig. 1.

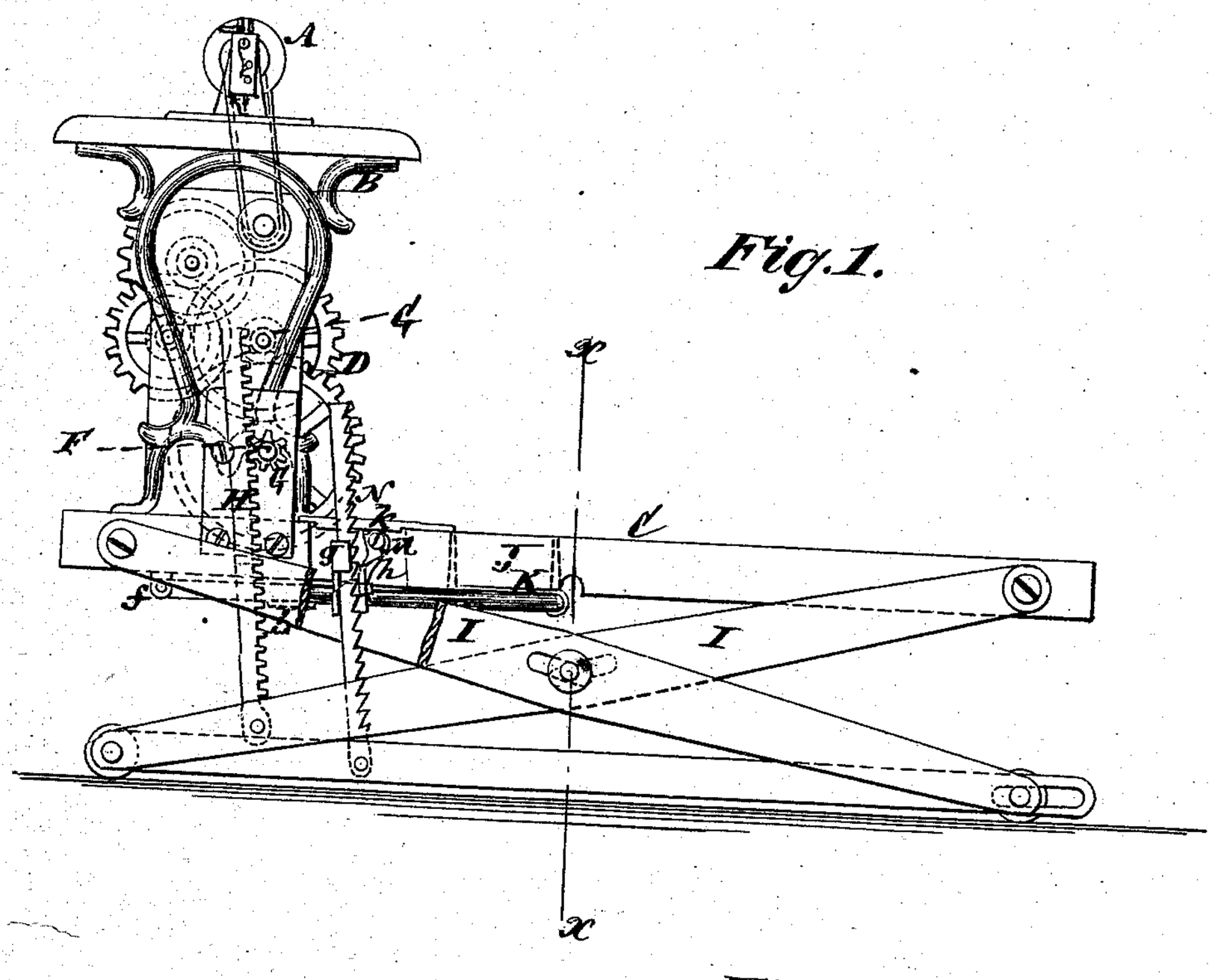
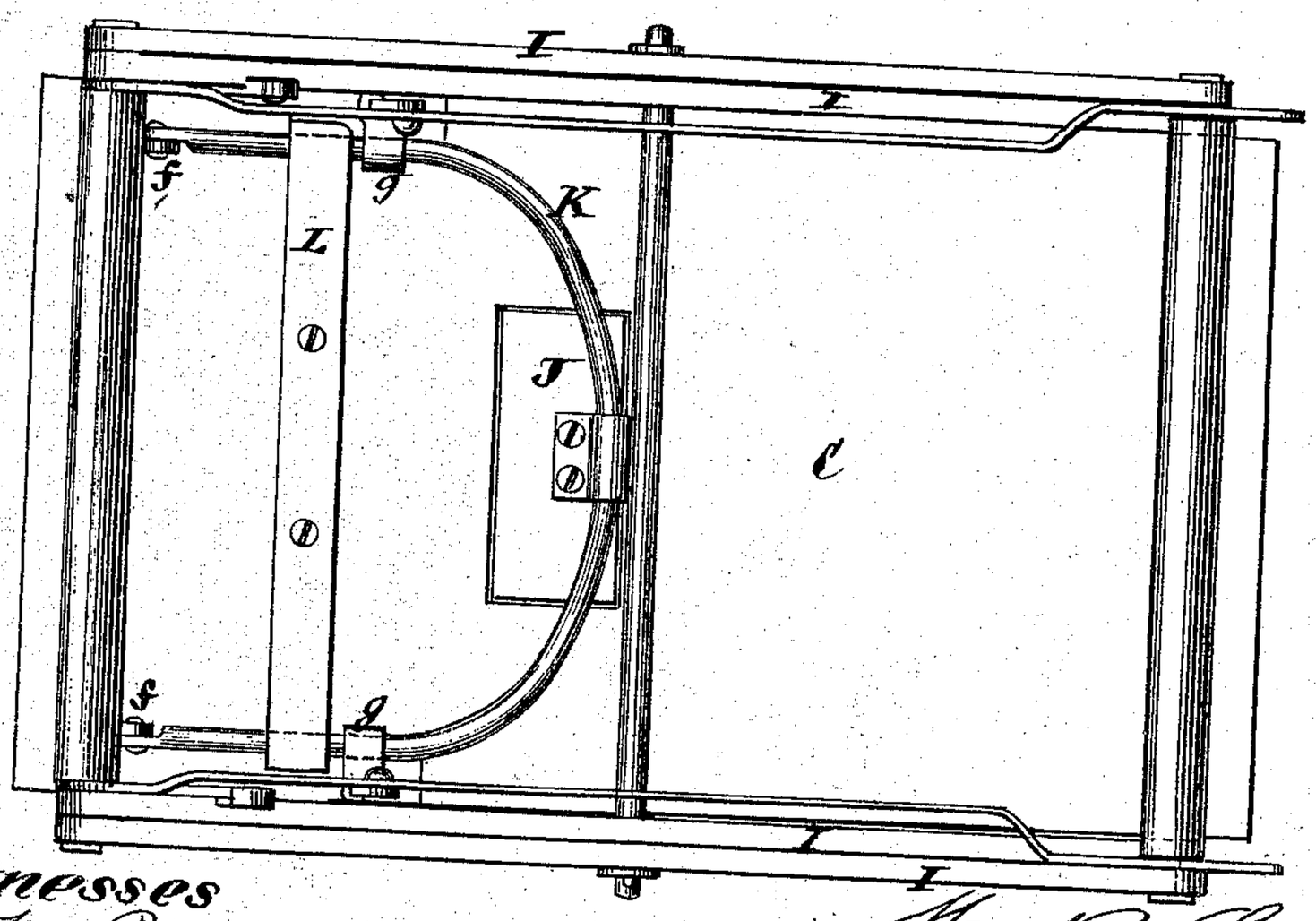


Fig. 2.



Witnesses
John Becker.
Fred Haynes

Wm. B. Snow
by his Attorneys
Brown & Allen

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Fig. 3.

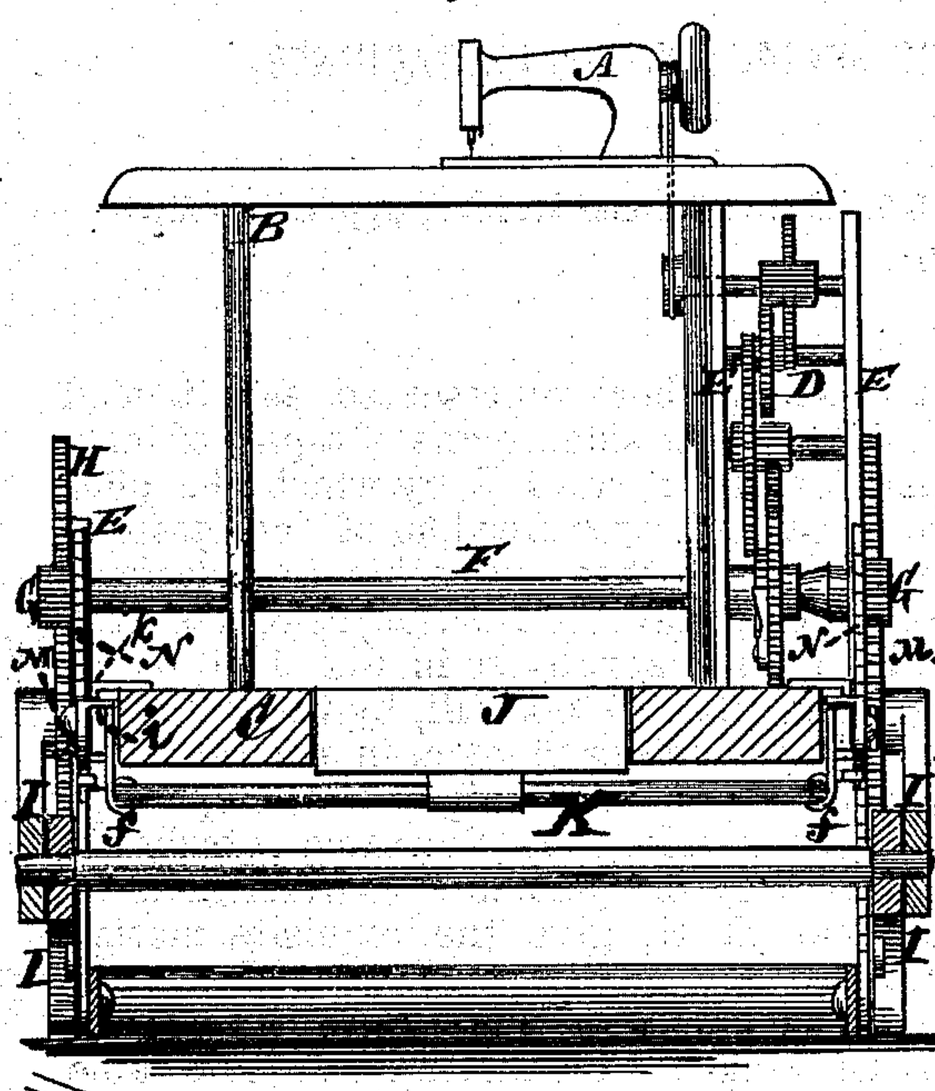


Fig. 4.

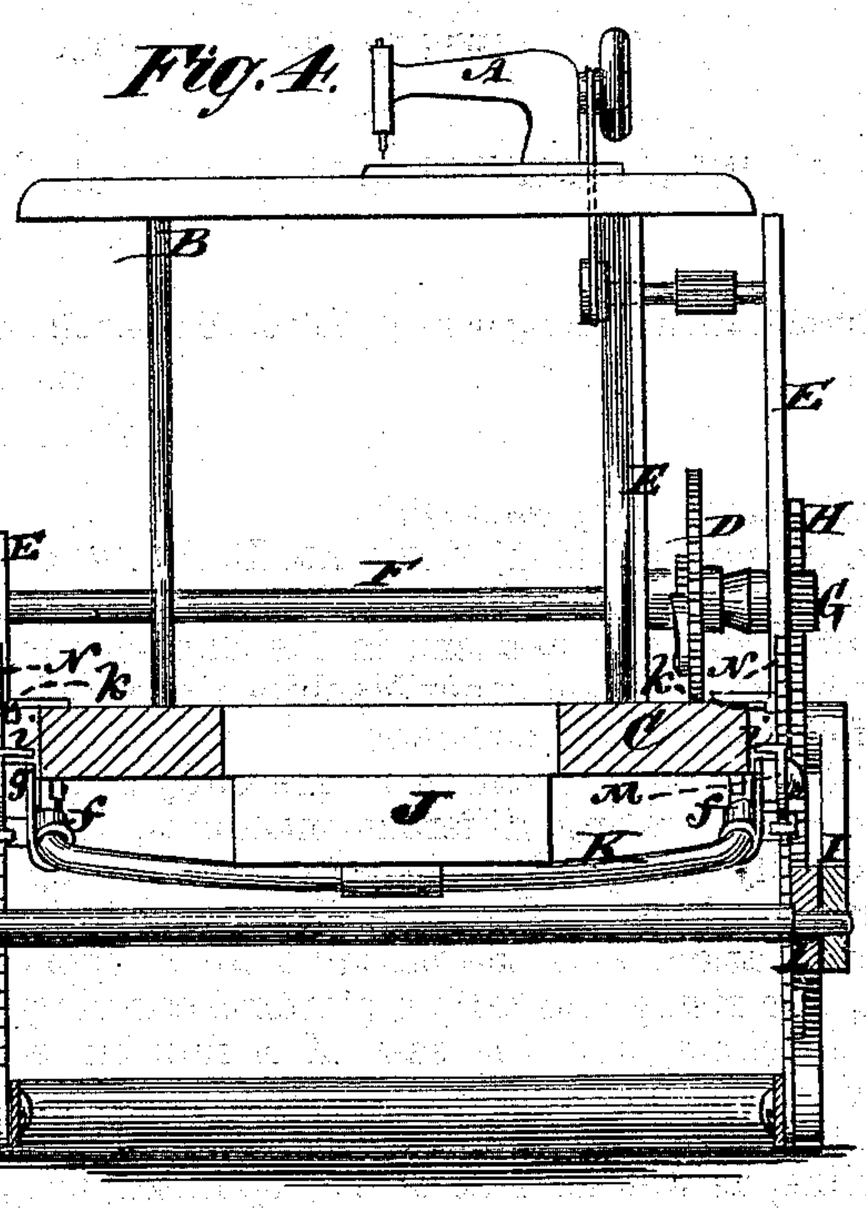


Fig. 5.

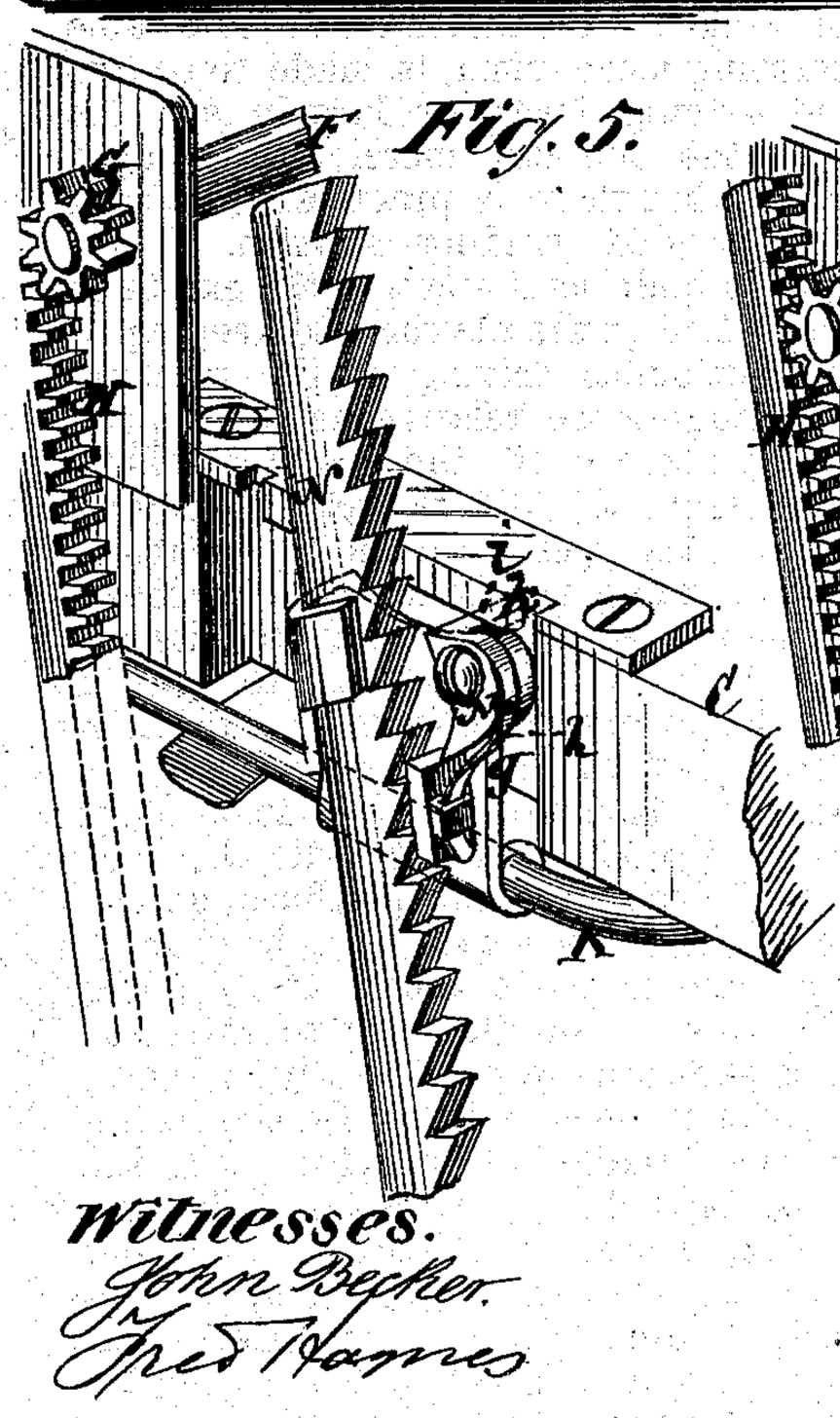
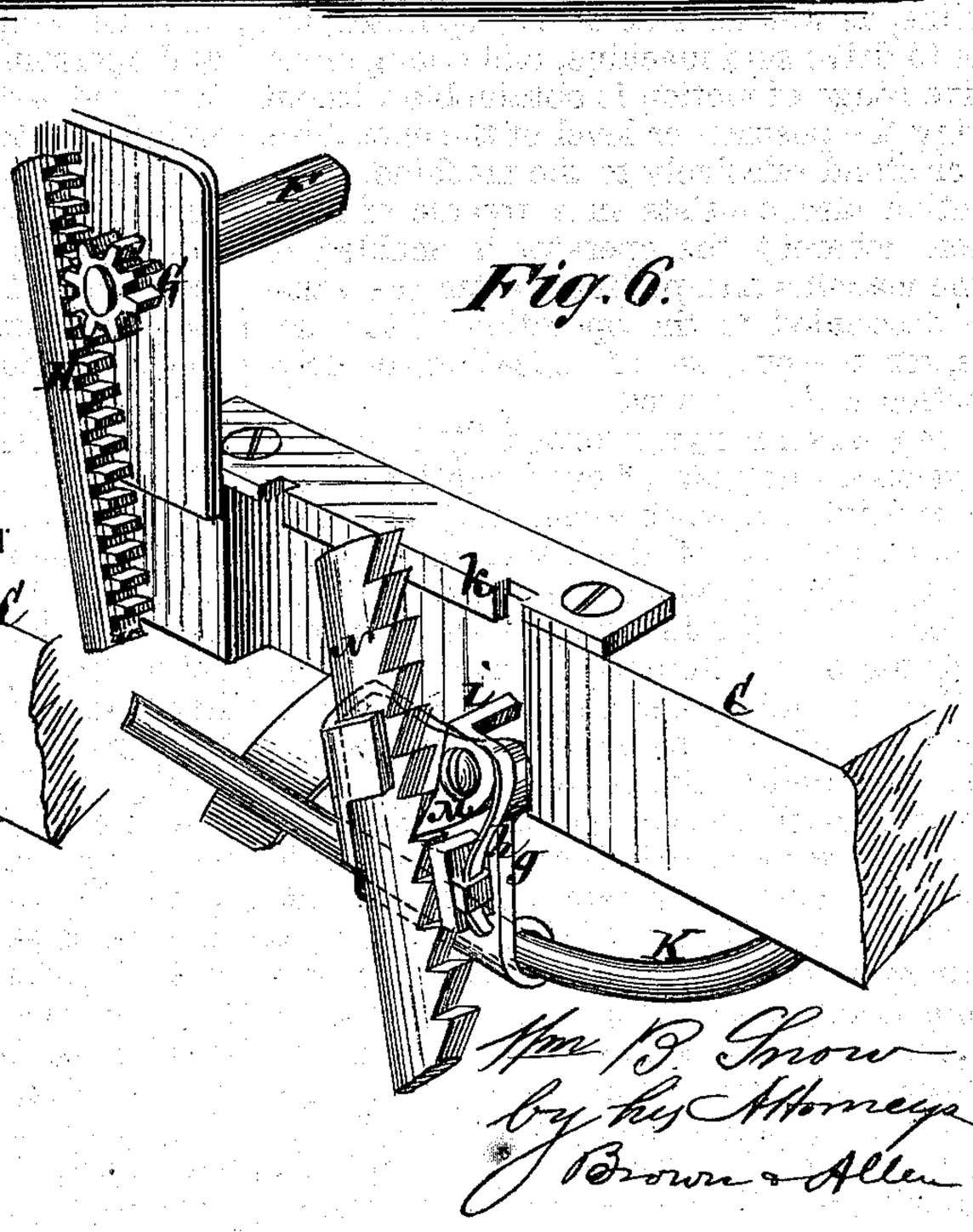


Fig. 6.



Witnesses.
John Becker.
Fred Haynes

Wm B. Snow
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

WILLIAM B. SNOW, OF NEW YORK, N. Y.

IMPROVEMENT IN MECHANISMS FOR DRIVING SEWING AND OTHER MACHINES.

Specification forming part of Letters Patent No. **156,383**, dated October 27, 1874; application filed June 13, 1874.

To all whom it may concern:

Be it known that I, WILLIAM B. SNOW, of the city, county, and State of New York, have invented an Improvement in Mechanism for Driving Sewing and other Machines, of which the following is a specification:

Although this invention is generally applicable to operating different machines, it is principally designed to be used for driving sewing-machines. The invention consists in a combination, with the machine to be operated, of a rising and falling platform carrying said machine, also the seat of or forming a stand for the operator, and gearing connected with the platform, whereby the weight of the machine, as well as that of the operator, are made to drive said machine, and a long or extensive range of motion is obtainable without varying the position or level of the operator's seat or stand relatively to the machine. The invention also consists in a treadle or lever motion, whereby the operator is enabled to lift the machine and platform after the same have descended in the operation of the machine, for the purpose of repeating the driving-action when required.

In the accompanying drawing, Figure 1 represents a side view of my invention as applied to driving a sewing-machine, and Fig. 2 an inverted plan of the rising and falling platform. Figs. 3 and 4 are transverse vertical sections on the line *x x*, showing the operating parts in different extreme positions, and Figs. 5 and 6, perspective view upon a larger scale, of certain devices used to operate the machine and to lift it, and the platform carrying it, back to their normal position.

A is a sewing-machine, and B the table thereof, the same being mounted on a platform, C, and the machine being driven by a speeding-up system of gearing, D, through the instrumentality of the platform, with which said gearing also is connected, and operates in concert with one or more racks that have a fixed or comparatively fixed relation with the platform. Thus, the gearing D is mainly carried by uprights E attached to the platform, the primary driving-shaft F extending across the platform and above it, and having end pinions G G, which gear with upright racks H H that may have a posively fixed relation, but which are here represented as attached below, on either side, to one of a pair of lazy-tongs, levers, or bars I I, by which the platform is carried, with freedom of the latter to rise and fall, so that, supposing the platform C to be in an elevated position, as represented in Fig. 4, and partially so in Fig. 1, it, on releasing a suitable stop, will, by the weight of the machine resting thereon, in addition to or independently of the weight of the operator seated or standing on the same, slowly descend, and by the pinions G G working down the racks H H, give the requisite motion through the speeding-up gearing D to the sewing-machine. In this way it will be seen that the weight of the machine, with its table and operating mechanism, is made to constitute the driving force, or largely so, (the weight of the operator merely being additional,) and that there is practically, under a suitable extended yielding support of the platform, no limit, as it were, to the extent or range of motion of the platform to keep up a long or continuous driving of the machine without changing the relative height or position of the operator to the machine. This, therefore, essentially differs from employing the weight of the operator alone, by means of a rising and falling seat to drive the machine.

After the platform C has completed its descent, or whenever it is necessary to raise it again for the purpose of repeating the driving-action, said platform is lifted or returned to its normal or raised position by the oporator stepping or pressing on a treadle, J, which may be held flush with the platform, as represented in Fig. 3, by means of a bow or lever, K, pivoted to the platform at *f f*, and a spring, L, pressing on the bow to raise the treadle, as shown more particularly in Fig. 2; or a weight may be substituted for the spring to raise the treadle. Connected with the treadle, as, for instance, by means of the bow or lever K, and a slide or strap, *g*, on either side, is a pawl, M, thrown into gear with a fixed upright ratchet-rack, N, by a spring, *h*, whenever the treadle is depressed, as shown in Fig. 4. This gear of the pawl with the rack, or rather pawls and racks, the arrangement being duplicated, or the same on either side, forms a purchase or fulcrum to the lever K,

so that the latter, by the weight of the operator standing on the treadle J, raises the platform C. The operator then takes off his weight from the treadle, which immediately rises again to its level with the raised platform, when a tripping arm or projection, *i*, on either pawl M, striking a stop or ledge, *k*, on the platform, releases and holds the pawls from gear with the rack, whereby the platform and its superincumbent weight are at liberty again to drive the machine.

Instead of independent ratchet-racks N for the pawls M, the racks H H may be utilized for this purpose, the pawls M being suitably constructed to lock therewith, besides which various other changes may be made in the mechanism without changing the characteristic features of the invention.

I claim—

1. The combination of the platform, arranged to rise and fall with the machine, carried by the same, and a train or system of speeding-up gear, for actuation by the weight of the machine and platform during the descent of the latter, substantially as specified.

2. The combination with the rising and falling platform, the machine carried thereon, and a train of gear for driving-motion to the machine, of a treadle or lever motion for raising the platform after its descent, essentially as described.

W. B. SNOW.

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HENRY T. BROWN.