J. BACHELDER.

Sewing Machine.

2 Sheets—Sheet 1.

No. 6,439.

Patented May 8, 1849.

Fig. 1

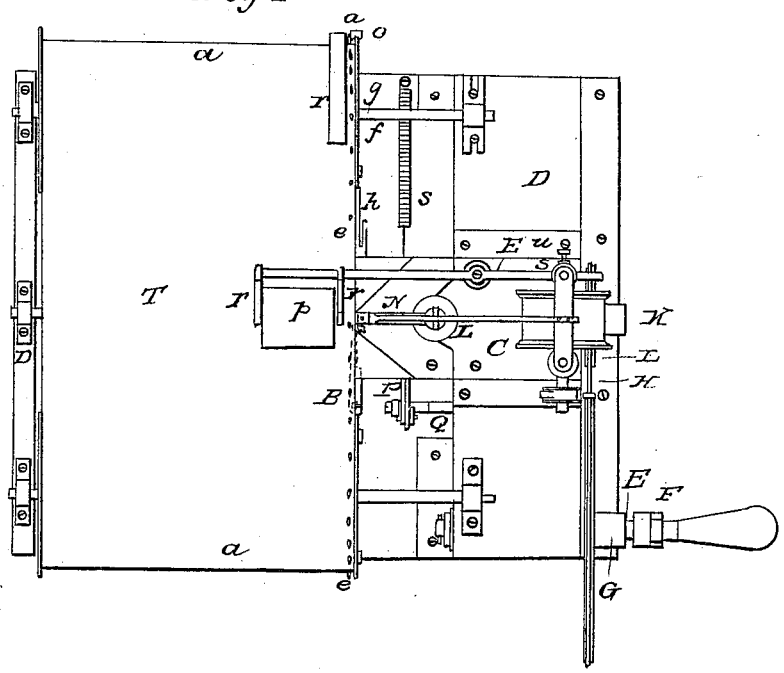
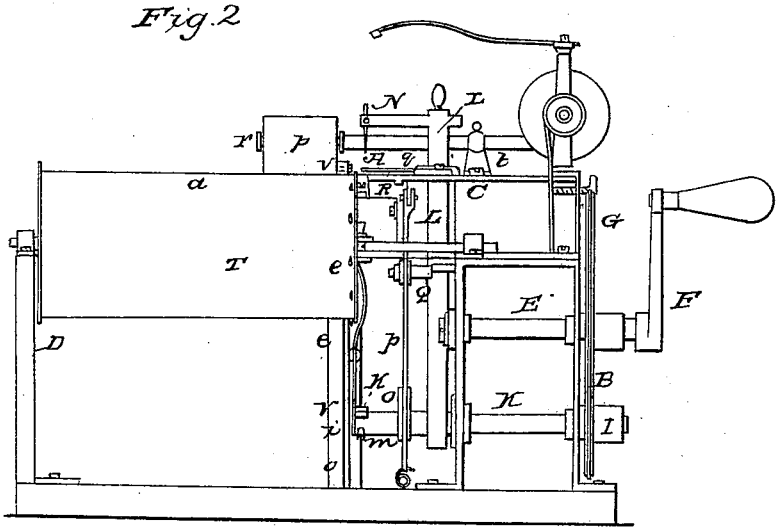


Fig. 2



2 Sheets—Sheet 2.

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Fig. 4

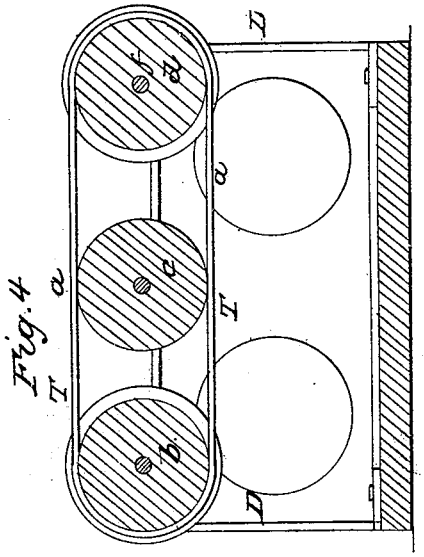


Fig. 5

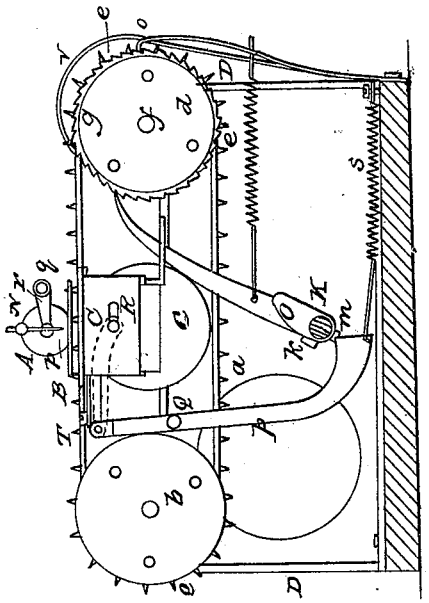


Fig. 7

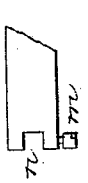


Fig. 6.

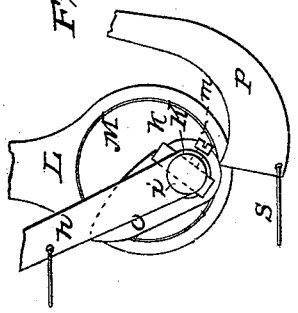
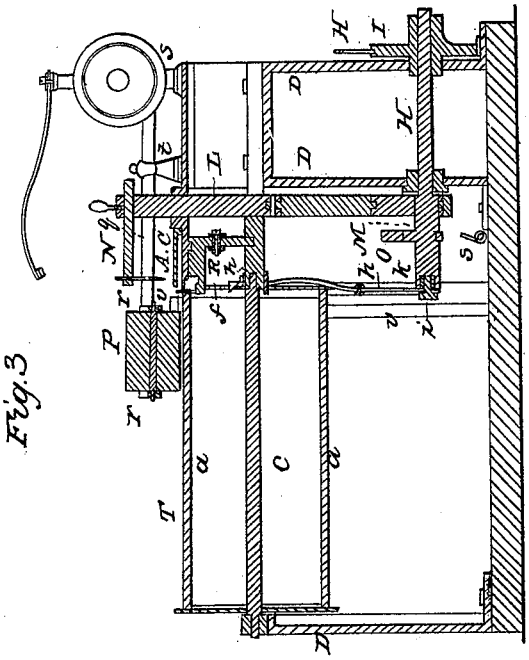


Fig. 3



UNITED STATES PATENT OFFICE.

JOHN BACHELDER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **6,439**, dated May 8, 1849.

To all whom it may concern:

Be it known that I, JOHN BACHELDER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Chain-Stitch Sewing-Machine; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view of my improved sewing-machine. Fig. 2 is a front elevation of it. Fig. 3 is a vertical central and longitudinal section of it. Fig. 4 is a transverse and vertical section taken through the middle of the endless cloth-holder. Fig. 5 is a vertical and transverse section of the machine, the same being taken through the cam which effects the retraction of the stitch-hook, and as if the spectator was looking toward the cloth-holder.

The mechanism for sewing to which my improvement is added does not essentially differ from that known as the "Morey sewing-machine," and which I have understood to have been the joint invention of Charles Morey and Joseph B. Johnson, of the State of Massachusetts. My machine makes the chain-stitch by means of a hook and a needle operating together. My improvement is to be found in the mechanism for supporting the cloth and moving it under the needle with a regular intermittent motion.

In the drawings above mentioned, or in such of them as the same are represented, A denotes the needle; B, the hook, (which in Fig. 1 is exhibited in red lines, as it is covered in the machine by a plate, C;) D, the frame-work of the machine; E, the driving-shaft; F, the crank of said driving-shaft; G, a grooved pulley fixed on the driving-shaft; H, an endless band passing around the pulley and a smaller pulley, I, fixed on the cam-shaft K; L, the needle-slide, which is elevated and depressed by an eccentric, M, and has an arm, N, extended from it for supporting the needle, as seen in the section, Fig. 3.

O is the cam, which in part actuates the stitch-hook. The said cam is fixed on the cam-shaft K and works against a lever, P, which turns on a fulcrum or pin, Q, and is jointed at its upper end to the carriage R of the stitch-hook. The said carriage R supports the stitch-hook on its upper surface. The retraction of the lever P is effected by a spring, S.

I have represented in the drawings various other parts of the sewing-machine which are common to the said Morey sewing-machine, and such as I in no way claim to be any portion of my invention. Those which I have hereinbefore enumerated, as well as others which I have not referred to, but which may be observed in the drawings, I have described or represented merely for the purpose of distinguishing what is old and in common use, and to which my invention or improvement is to be applied.

My improved cloth-holder is seen at T. It consists of an endless belt, *a*, supported by and running around three or any other suitable number of cylindric rollers, *b c d*, disposed with respect to the same and the needle and hook, as seen in the drawings. A series of pointed wires, *e e e*, &c., is fixed in and made to project from the external surface of the cloth-holder, and near that edge thereof which is immediately adjacent to the needle. They (the said wires) may be placed at regular or irregular distances asunder, as occasion may require.

On the shaft *f* of one of the cylindric rollers which supports the endless cloth-holder I affix a ratchet-wheel, *g*. This wheel has an impelling-pawl, *h*, applied to it, the lower end of the said pawl being connected to the end of the crank-shaft by a small crank-pin, *i*, or crank whose position or distance from the axis of rotation of the shaft may be adjusted at pleasure. For this purpose the end of the cam-shaft has a slide, *k*, fitted into a recess made in the shaft and across its end. This slide is held within the recess by a clamp-screw, the crank-pin *i* being made to project from the slide. An end view of the shaft, slide, and clamp-screw is given in Fig. 6, in which *k* is the slide, K the cam-shaft, and *m* the clamping-screw. Fig. 7 is a side view of a portion of the above shaft, showing the recess *n* for the reception of the slide.

By means of the afore-described adjustment the extend of longitudinal movements of the impelling-pawl may be regulated at pleasure, and so as to regulate the length of the stitch.

A spring-catch or holdfast, *o*, is applied to the ratchet-wheel for the purpose of keeping it in place at the expiration of each partial rotation or movement of it by its impelling-

pawl. A heavy pressure-roller, *p*, is placed on the endless belt and over the middle roller, *c*. It is supported by means of a shaft or rod, *q*, and two arms, *r r*, projected therefrom, the said shaft *q* being made to rest and turn loosely in bearings formed in two standards, *s t*, one of which has a clamping-screw, *u*, passed through it for the purpose of clamping the shaft, so as to prevent it from rotating. A curved piece of metal, *v*, is disposed with respect to the endless belt or cloth-conveyer, as seen in the drawings. Its upper end is bent over and down upon the top of the belt in such manner as to cause the cloth, when it is carried toward and against it by the belt, to rise upon and over it (the piece *v*) and from the points of the belt. In other words, the piece *v* frees or separates the cloth from the points after it is sewed. The cloth to be sewed is laid upon the top of the endless belt or cloth-holder T, and pressed down upon the points thereof. The machine being put in motion, the cloth is carried forward, passes under the needle, is sewed, and finally passes up the bent piece *v* and off the belt T.

I do not intend to confine my invention to the use of an endless belt alone, as a revolving circular table or a cylinder may be substituted therefor, the points being inserted in or made to project from the curved surface of either of them.

What I claim as my invention or improvement in the sewing-machine is—

The combination, with the endless cloth-holder, of the curved bar or piece of metal *v*, for discharging the cloth from its points after being sewed, all as described.

In testimony whereof I have hereto set my signature this 27th day of December, A. D. 1848.

JOHN BACHELDER.

Witnesses:

R. H. EDDY,

S. P. RUGGLES.