W. B. SWIFT.

Silk-Cleaning Apparatus.

No. 217,247. Patented July 8, 1879.

FIG. 1

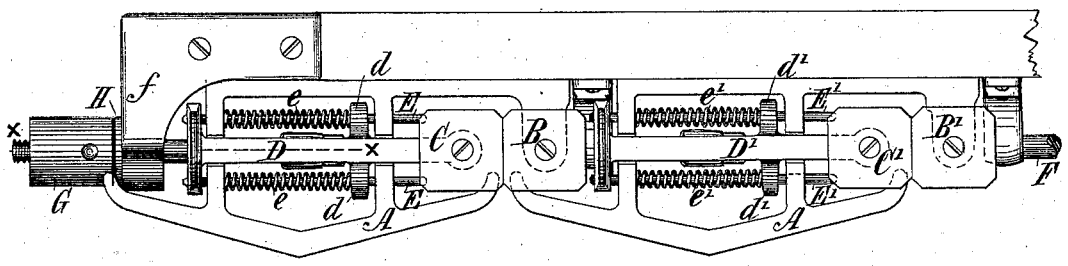


FIG. 2

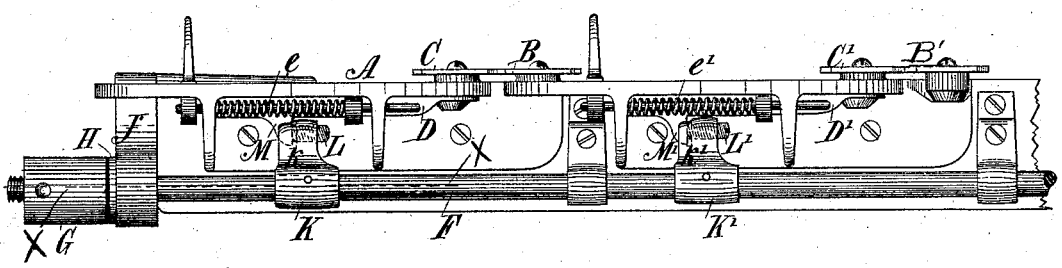
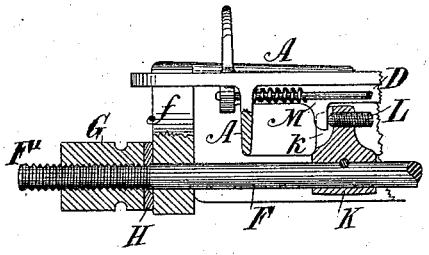


FIG. 3



Witnesses.

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WILLIAM B. SWIFT, OF MONTREAL, QUEBEC, CANADA.

IMPROVEMENT IN SILK-CLEANING APPARATUS.

Specification forming part of Letters Patent No. **217,247**, dated July 8, 1879; application filed November 9, 1878.

To all whom it may concern:

Be it known that I, WILLIAM BREWSTER SWIFT, of the city of Montreal, in the district of Montreal and Province of Quebec, Canada, have invented certain new and useful Improvements in Apparatus for Cleaning Silk; and I do hereby declare that the following is a full, clear, and exact description of the same.

Before proceeding to describe the nature of my invention it may be well to allude briefly to the apparatus at present in use for the purpose. This consists of a series of metal plates or knives, arranged in pairs, (between the edges of which the silk passes while being wound from one bobbin to another,) one knife of each pair being firmly secured to the frame of the machine, and the other one mounted on a movable bar, arranged so as to be acted upon by a turn or set screw operated by a spanner or wrench, for the purpose of increasing or diminishing the distance between the knives for the various sizes of silk. This arrangement necessitates the adjustment, separately, of each pair of knives, which, besides being a very long operation, renders it almost impossible to make the gage correspond exactly.

To obviate this is the object of my invention, which gives simultaneous action to the whole of the movable knives in one row of the frame, and may be described as the arrangement of the bar or shaft, over which the silk runs loosely on bearings, and cutting on one end of it a screw-thread, upon which works (against a washer or shoulder) a sleeve or nut, operated by any usual means, so as to move the bar longitudinally in either direction, upon it being firmly secured blocks having threaded through them screws which press against lugs projecting from the bars in which the movable knives are mounted.

For fuller comprehension, however, of my invention, reference must be had to the annexed drawings, in which similar letters indicate like parts, and where—

Figure 1 is a plan view of part of the frame. Fig. 2 is a front view of the same. Fig. 3 is a section on line X X, Fig. 1.

A is a frame, preferably of metal, and of the form shown in the drawings, or any other suitable configuration, securely attached to the main frame of the apparatus, B B′ being plates or knives carried rigidly thereon, and arranged in pairs with similar plates C C′. These latter plates are mounted on bars D D′, carried in the frame, and secured against lateral and vertical movement by means of rods or spindles E E E′ E′, secured in lugs *d d d′ d′*, projecting at right angles to the bars on either side, and passing through the frame, as shown, springs *e e e′ e′* keeping the movable knives C C′ pressed up against the fixed ones B B′, with which they are coupled at the desired distance apart.

The means for adjusting this distance are as follows: F is the rod or shaft over which the silk runs, as in the present machines, but carried loosely in suitable bearings *f*, secured to the main frame, and having one end screw-threaded, as shown in Fig. 3 at F′, upon this being placed a sleeve, G, which may be either, as in the drawings, perforated, or in any other way adapted to be turned by a spanner or wrench, H being a loose washer against which it works, or, if desired, a shoulder formed on the bearing.

The sleeve G is so made and perforated that the spanner or wrench used to turn it, and thus operate to vary simultaneously the thoroughfares, must be of a peculiar construction and act as a master-key, to be always kept by the superintendent, so that any interference with the simultaneous adjustment, which can easily be done when the device (such as a thumb-screw) used for that purpose is within the control of the operative, may be rendered impossible.

Upon this shaft F are mounted, as shown more particularly in Figs. 2 and 3, blocks K K′, bored to allow of the passage through them of the shaft, to which they are rigidly secured. These blocks project out on one side of this shaft, and have formed in them threaded openings to receive screws L L′, the points of which impinge against lugs M M′, projecting downward from the bars D D′, the meeting surfaces of these lugs and the screws L L′ being contained within grooves *k k′* formed in the blocks, as shown.

The manner in which the contrivance just described is operated can be so easily understood from the drawings and foregoing description that it is only necessary to observe

that by turning the sleeve G on the screwed end F′ of the shaft F this shaft is drawn outwardly or moved inward, thus imparting, through the blocks K K′, secured to it, and screws L L′, carried thereon and acting upon the lugs M M′, a simultaneous and equal movement to the bars D D′, upon which the movable knives are mounted, giving by this one operation an exactly corresponding and like distance between each movable knife and the fixed one to which it is coupled.

By the use of the screws L L′, I provide also for the independent adjustment of the plates C C′, as it will be seen that by turning the screw L the plate C will be moved in one direction or the other without changing the position of plate C′. The plate C′ may be adjusted in the same manner by the screw L′ without changing the position of plate C.

The arrangement whereby the meeting-surfaces of the screws L L′ and lugs M M′ are contained within the grooves of the blocks K K′, secured on the shaft F, renders it nearly impossible for the operative to force any foreign substance between them to alter the gage of the plates.

Having thus described my invention, what I claim is as follows:

In an apparatus for cleaning silk, the combination, substantially as before set forth, of a series of separate fixed cleaning-plates, a corresponding series of separate movable cleaning-plates arranged in the same plane, slide-bars for supporting said movable plates, the means for simultaneously adjusting all the movable plates, and set-screws for separately adjusting the several movable plates.

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Witnesses:
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