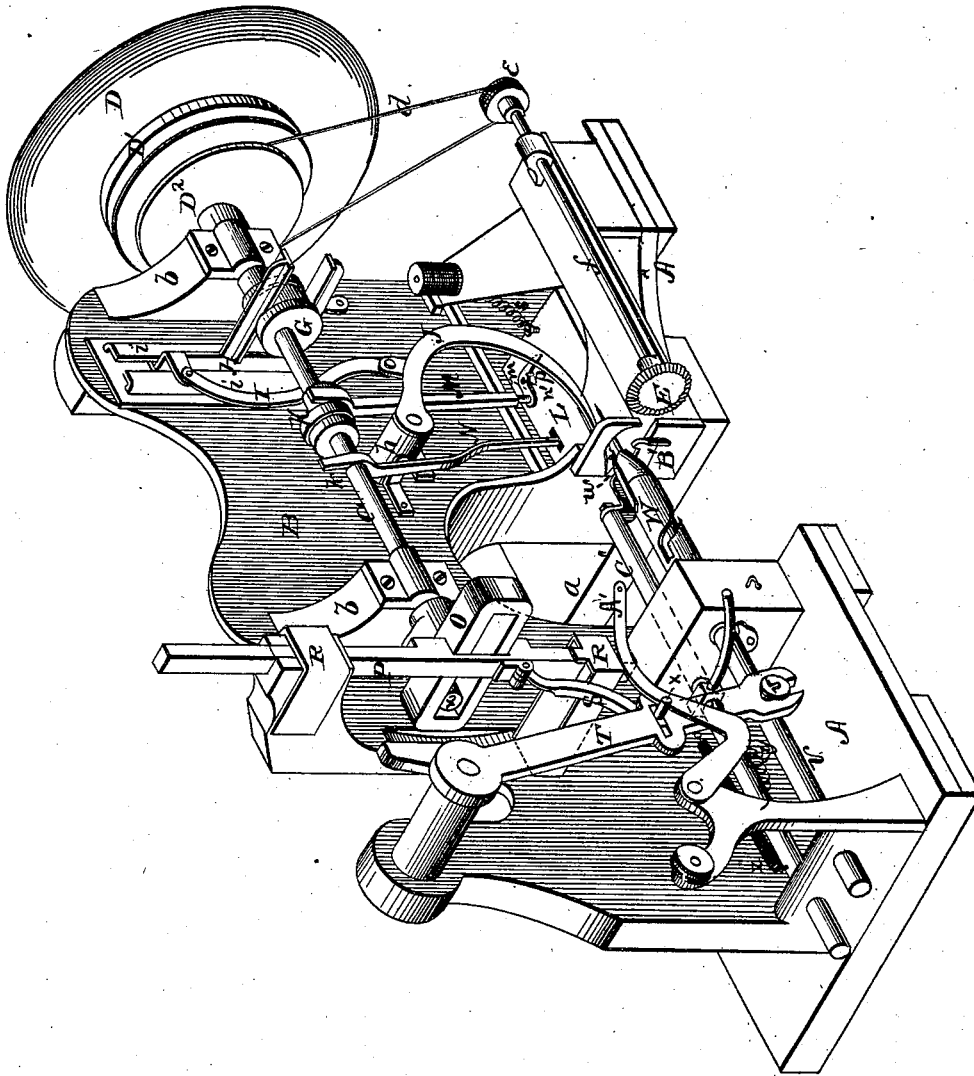


C. F. KNOCH.

MACHINE FOR SEWING FURS.

No. 183,400.

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WITNESSES
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IMPROVEMENT IN MACHINES FOR SEWING FURS.

Specification forming part of Letters Patent No. 183,400, dated October 17, 1876; application filed July 12, 1876.

To all whom it may concern:

Be it known that I, CHARLES F. KNOCH, of New York city, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Machines for Sewing Furs; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for sewing furs and other work with an over-seaming-stitch, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a perspective view of my machine.

The frame of my machine consists of a bed-plate, A, with a vertical plate, B, rising therefrom, and vertical cross-passage *a* through the center of the frame, as shown in the drawing. In boxes *b b*, secured on the front of the plate B, is placed the main driving-shaft C, upon the outer end of which is secured the fly-wheel D. The hub of this fly-wheel is on the inner end formed with two pulleys, D¹ D², of unequal diameter. The larger pulley D¹ is to receive the belt from the band-wheel that drives the machine, while the smaller pulley D² is, by a belt, *d*, connected with a pulley, *e*, on the outer end of a shaft, *f*, which has its bearings in boxes at the front edge of the bed A, to the right of the central opening *a*. On the inner end of the shaft *f* is secured a wheel, E, the edge of which is made beveled on both sides, and both of these beveled sides are serrated or corrugated, as shown. As this wheel revolves it operates to comb or guide the hairs of the furs, to lay them properly out of the way from the seam.

On the shaft C is secured a cam, G, which operates a forked slide, H, placed in vertical guides *i i* on the plate B. To this slide is pivoted an arm, I, which connects with the circular needle J, pivoted to a stud, *h*, projecting forward from the plate B. By the revolution

of the cam G the slide H obtains a vertically-reciprocating motion, and through the arm I it imparts the necessary motion to the needle J. On the shaft C are two other cams, K and *k*, for operating the feed-plate L. These two cams work, respectively, two levers, M and N. The lower end of the lever M is inserted in one end of an elbow-lever, *m*, which is pivoted on a stud, *n*, projecting from the bed-plate A through an elongated slot in the feed-plate. This elbow-lever M works against a pin, *p*, on the feed-plate L, to move the same outward. The lower end of the lever N is inserted in a slot in the feed-plate L, as shown. By these means the feed-plate obtains the necessary movement, and is returned to its place by means of a spring, *s*. On the inner end of the main shaft C is a crank, *t*, which works in a horizontally-slotted bar, O, attached to or formed with a vertical slide, P, that works in guides R R. To this slide is hinged an arm, S, which is pivoted to and operates a lever, T, pivoted at its upper end to a stud projecting from the back plate B. The lower end of the lever T is forked, and straddles a pin, *v*, projecting from the horizontal needle-bar V. The needle-bar passes through a spirally-slotted sleeve, W, to which the twister *w* is attached, and a pin projects from the needle-bar into the spiral slot of the sleeve, for rotating the same by the forward and backward movement of the needle-bar. From the lever T projects a pin, X, which operates the pivoted take-up arm A', a spring, Y, returning said arm to its position.

B' is the presser-foot, attached to a horizontal bar, C', and operated by a spring, *z*.

With this machine the hairs of the fur are combed or guided to lay them properly out of the way from the seam. The frame A B has the vertical cross-passage *a*, with the feed so arranged as to pass the work vertically, and the needle operates horizontally, so that the edge of the seam is in view of the operator, and passes from him vertically. The motions of this machine are continuous, and not intermittent, as in the ordinary shuttle-machines; hence the machine can be made to revolve at a great rate of speed, and with but little noise. This machine produces the same stitch as the well-known American Button-Hole Machine.

In operation the circular needle J carries the thread from the secondary spool over the seam; the twister takes the thread from the eye of the rotary needle, and twists the same around the needle.

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

1. In a machine for sewing furs, in combination with the sewing and feeding mechanism, a device or mechanism, substantially as described, for combing or laying the hairs or fibers down or out of the way for the seam, as herein set forth.

2. The combination of a rotary brush or wheel with the needle and feed, substantially as and for the purposes herein set forth.

3. The combination of the feed, the horizontally-operating needle, the vibrating nee-

dle, and the frame having a vertical cross-slot to pass the work vertically, with the over-seam on top, and exposed to the eye of the operator, substantially as herein set forth.

4. The combination of the driving-shaft with its cams and crank, the vertical sliding bar with vibrating lever, the take-up, needle-bar, twister with its operating mechanism, and the feed with its levers and the vibrating needle, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 13th day of June, 1876.

CHARLES F. KNOCH. [L. s.]

Witnesses:

ERNST C. F. GASTYGER,
JOHN W. STAEBENER.