

French Worsted Drawing

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(A Series of Articles on French Worsted Spinning)

M. G. B. INTERSECTING GILLS.

Each set of fallers in the M. G. B. gill box, Fig. 108, consists of 27 elements, the faller being $\frac{1}{4}$ in. thick, $1\frac{1}{8}$ in. high over all, and a working height of $\frac{3}{4}$ in.

The row of pins are set in the center of the faller for working ordinary wools, and set to one side for short wools, Fig. 109.

The working zone of the pins is formed by 16 fallers of each set, or a total of 32 fallers. They operate with a progressive penetration of the layer of wool for a part of the

working distance. The working zone is shown at Fig. 109, *acoo'*. The progressive penetration takes place from *o* to *o'* by the inclination of the slides *Ch*. From *o'* to *a* the fallers move in a horizontal direction, so that the compression of the fibers is uniform throughout the area *aca'o'*.

The pitch of the working screws is uniform, that of the return screws gradually decreases in order to bring the faller into a vertical position in order to facilitate its entrance into the thread of the corresponding screw where it should enter. Other characteristics of this gill box are as follows:

The direct and reverse motions of the trumpet *K'*, which, instead of being driven by a cord and grooved pulley, is driven by a horizontal gear-rack 1 fastened to the carriage *T* and driving the pinion 2 fixed to a gear 3 driving pinion 5 of *K'* by connection through 4. This positive drive ensures equal movements of the trumpet forward and backward.

The cams on the screws are oiled by automatic devices in order to prevent the soiling of the machine by the spreading of the oil over the various parts, and to make sure of a constant lubrication to prevent wear of the machine.

Fig. 110 shows the can gill box built by Martinot

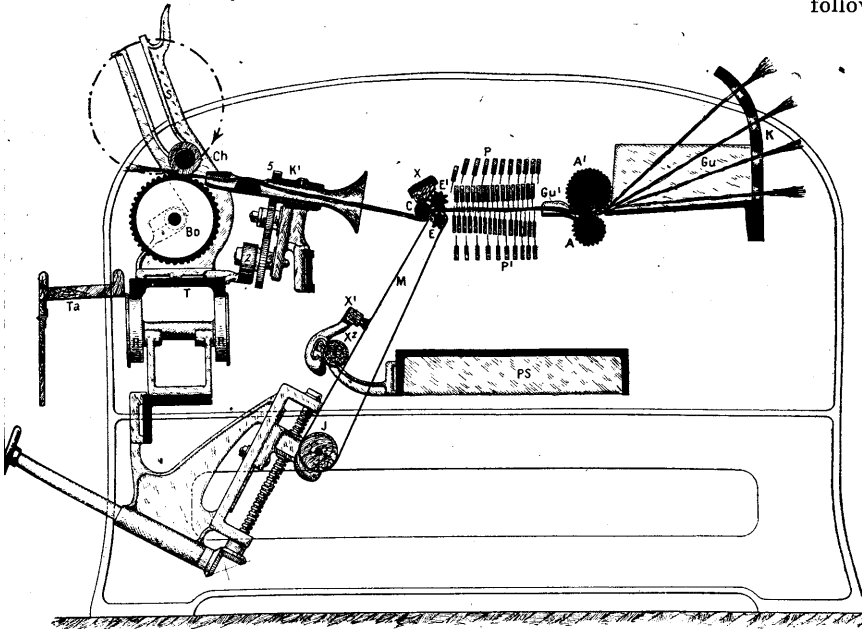


FIG. 108.—THE M. G. B. GILL-BOX.

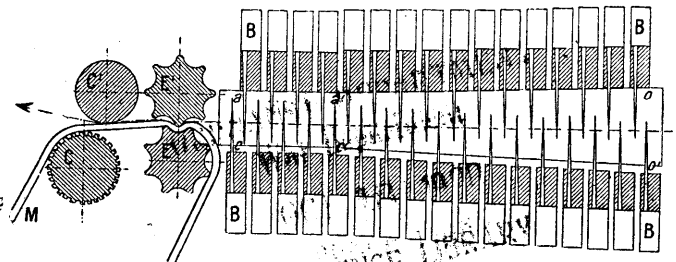


FIG. 109.—FALLERS FOR M. G. B. GILL-BOX.

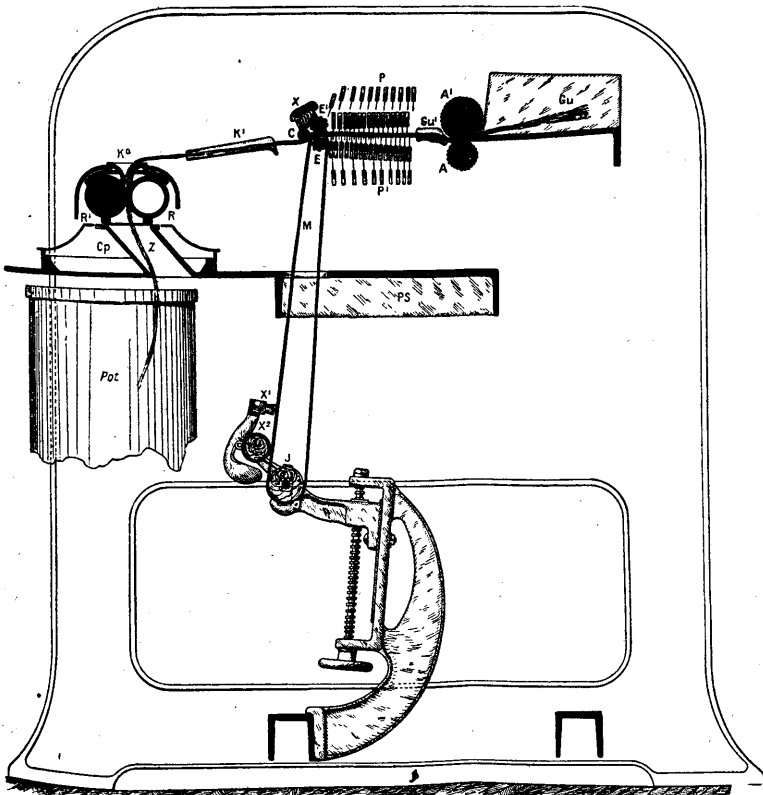


FIG. 110.—MARTINOT AND GALLAND GILL-BOX.

and Galland. The sliver is run into the can as follows: The stationary, flat funnel *K'* reduces the volume of the sliver and guides it to the funnel *K''*, which condenses it into a round sliver or ribbon under the action of the drawing rolls *R R'*. From these rolls the sliver is carried through the passageway *Z* of the can cover *Cp*. The passageway *Z* has a planetary motion which lays the sliver in spirals superimposed in the can. This facilitates its withdrawal in good condition, even when the wool is short.