

**Sew'ing-ma-chine'**

**Feed.** The device or devices for moving the cloth or other material intermittingly forward or past the needle. They may be subdivided as follows, namely:—

*Clamp.* Two parallel bars or jaws, material confined be-

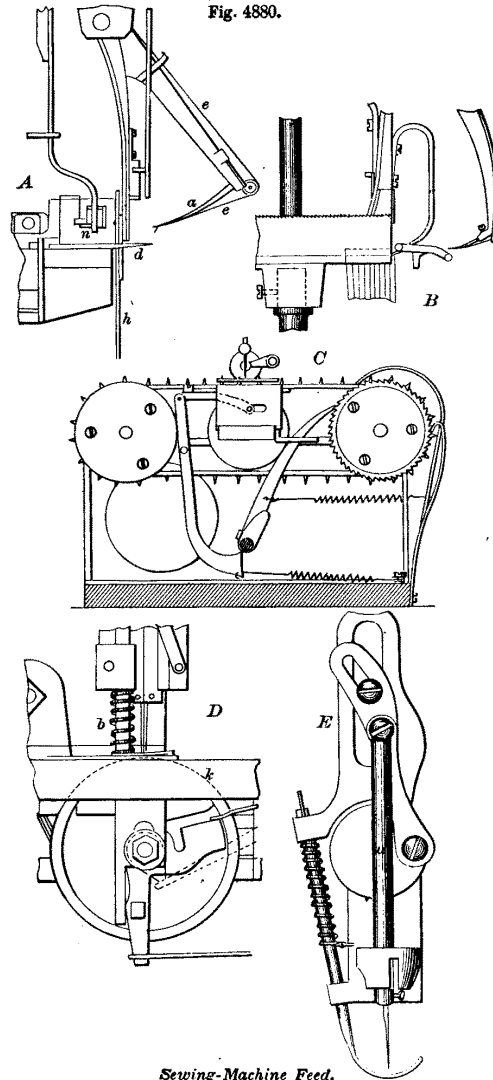
tween them, and moved by pawl or pinion engaging teeth or clamp. See patent to Greenough, February 21, 1842 (Fig. 4848).

*Baster, or Pin-Plate.* A flat, horizontally moving plate, with sharp pins projecting from one edge. Material crowded on these pins and carried by plate. See patent to Howe, September 10, 1846. In Fig. 4880, *A* shows this feed: the needle *a* vibrates in a vertical plane, carrying the upper thread *e*; *d* is one of the points projecting from the edge of the baster-plate, which traverses horizontally across the path of the needle, and carries the cloth *h*, which is suspended from the row of points *d*, one only of which is shown by this side elevation. *n* is the shuttle-mover. In both these cases a seam longer than the clamp or plate cannot be sewn without stopping the machine and readjusting the clamp or plate and cloth.

*Pin-wheel, or Bolt.* A ring, disk, or endless belt, moved intermittingly forward in one direction, and provided

with pins to enter and move the material for a seam of any desired length without stopping. The rotating-pin surface may move horizontally about a vertical axis and sustain and move material, as in patent to Blodgett and Lerow (*B*), October 2, 1849, or may move about a horizontal axis and carry the material over a horizontal cloth-supporting surface, as in patent to Bacheider (*C*), May 8, 1849. When pins are used it is difficult to sew other than a straight seam.

*Wheel-feed.* A wheel with periphery roughened or serrated, projecting through a slot in a cloth-supporting surface, and engaging and moving the material. See Singer, August 12, 1851.



Sewing-Machine Feed.

In *D* the rough-surfaced wheel is shown at *k*. The material is pinched between the wheel and the presser-foot *b*, and advanced by an intermittent motion in the intervals of the downward strokes of the needle.

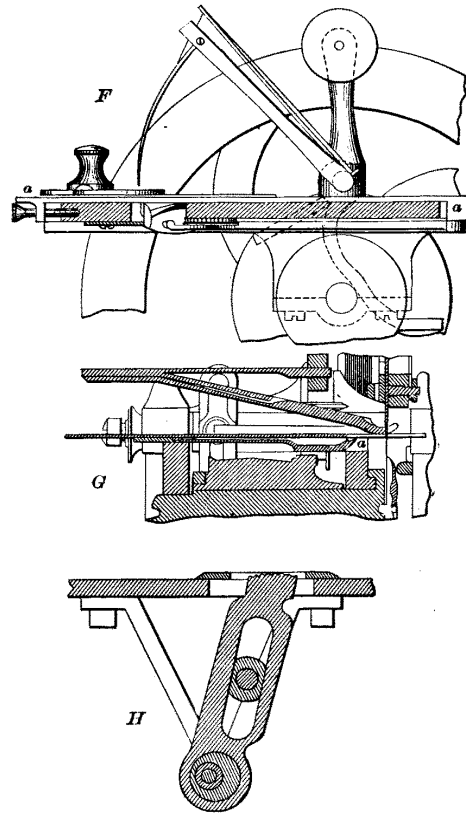
*Needle, or Aicl.* A reciprocating needle or awl, vibrated when in the material (see patent to Johnson, March 7, 1854), or moved horizontally through a horizontal movement of the block or head in which the needle or awl reciprocates. See patent to Townsend, April 8, 1862, or McLean, 1869, shown at *E*, in which the needle-bar *a* is oscillated.

*Two-motioned.* A horizontally reciprocating rough-surfaced dog or plate *a* engages the material at all times, carries it intermittently to the needle, and while the needle is in the material moves back to take a new stroke. See Wilson, November 12, 1850, shown at *F*.

*Four-motioned.* A rough-surfaced dog or plate *a*, so moved

as to rise against the material, move horizontally, fall from the material, and move back to its original position. See Wilson, June 15, 1852. See *G*, Fig. 4881. Commonly used in most

Fig. 4881.



Sewing-Machine Feed.

sewing-machines. *H* is a modification of this, in which the path of motion is elliptical instead of quadrangular.

*Thread.* A plate or arm pressing against the thread next to and moving the material forward. See patent to Stedman, November 27, 1855.

*Upper feed.* A feeding device located above the cloth-supporting surface and engaging upper side of material. See patent to Wickersham, April 19, 1853.

Each of the above has numerous minor subdivisions of detail, but the number of kinds of feed in actual use is quite limited.