



Figure 6.—CHAPMAN'S SEWING MACHINE, first eye-pointed needle, 1807. (Smithsonian photo 33299-K.)

considered unimportant to this study, must be included because of its use of the eye-pointed needle, the needle that was to play a most important part in the later development of a practical sewing machine. The earliest reference to the use of a needle with an eye not being required to be passed completely through the fabric it was stitching is found in a machine invented by Edward Walter Chapman, for which he and William Chapman were granted British patent 3,078 on October 30, 1807. The machine (fig. 6) was designed to construct belting or flat banding by stitching together several strands of rope that had been laid side by side. Two needles were required and used alternately. One needle was threaded and then forced through the ropes. On the opposite side the thread was removed from the eye of the first needle before it was withdrawn. The second needle was threaded and the operation repeated. The needles could also be used to draw the thread, rather than push it, through the ropes with the same result. While being stitched, the ropes were held fast and the sewing frame and supporting carriage were moved manually as each stitch was made. Such a machine would be applicable only to the work described, since the necessity of rethreading at every stitch would make it impractical for any other type of sewing.

Another early machine reported to have used the eye-pointed needle to form the chainstitch was

invented about 1810 by Balthasar Krems,⁹ a hosiery worker of Mayen, Germany. One knitted article produced there was a peaked cap, and Krems' machine was devised to stitch the turned edges of the cap,¹⁰ which was suspended from wire pins on a moving wheel. The needle of the machine was attached to a horizontal shaft and carried the thread through the fabric. The loop of thread was retained by a hook-shaped pin to become enchainned with the next loop at the reentry of the needle. Local history reports that this device may have been used as early as 1800, but the inventor did not patent his machine and apparently made no attempt to commercialize it. No contemporary references to the

⁹ ERICH LUTH, *Ein Mayener Strumpfwirker, Balthasar Krems, 1760-1813, Erfinder der Nähmaschine*, p. 10, states that the machine used an eye-pointed needle. WILHELM RENTERS, *Praktisches wissen von der Nähmaschine*, p. 4, states that Krems used a hooked needle. Renters probably mistook the hooked retaining pin for the needle.

¹⁰ Dr. Dahmen, Bürgermeister of Mayen, stated in a letter of October 8, 1963, that the original Krems machine was turned over to the officials of Mayen by Krems' descendants about the turn of the century. He verified that the machine used an eye-pointed needle. About 1920 the machine was placed in the Eifelmuseum in Genovevaburg; some of the unessential parts were restored. The machine now at this museum is the one pictured in Luth's book. A replica of the machine is in the Deutsches Museum, Munich, Germany.