



Figure 26.—WILSON's stationary-bobbin patent model, 1852; a commercial machine was used since Wheeler, Wilson, Co. had begun manufacturing machines the previous year. (Smithsonian photo 45504-B.)

profitable enterprise involving the sewing machine.

Wilson, with his two partners, was occupying a room in the old Sun Building at 128 Fulton Street, when Wheeler, on a business trip to New York City, learned of the Wilson sewing machine. Wheeler examined the machine, saw its possibilities, and at once contracted with E. Lee & Co. to make 500 of them. At the same time he engaged Wilson to go with him to Watertown, Connecticut, to perfect the machine and supervise its manufacture. Meanwhile, Wilson had been working on a substitute for the shuttle. He showed his model of the device, which became known as the rotary hook, to Wheeler who was so convinced of its superiority that he decided to develop this new machine and leave Wilson's first machine to the others, who, by degrees, had become its owners.

Wilson now applied all his effort to improving the rotary hook, for which he received his second patent on August 12, 1851 (figs. 24 and 25). Wheeler, his two partners Warren and Woodruff, and Wilson now formed a new copartnership—Wheeler, Wilson, Company. They began the manufacture of the machines under the patent, which combined the rotary hook and a reciprocating bobbin. The rotary hook extended or opened more widely the loop of the needle thread, while a reciprocating bobbin carried its thread through the extended loop. To avoid litigation which the reciprocating bobbin might have caused, Wilson contrived his third outstanding invention—the stationary bobbin. This was a feature of the first machine produced by the new company

in 1851, though the patent for the stationary bobbin was not issued until June 15, 1852 (fig. 26).

In all reciprocating-shuttle machines a certain loss of power is incurred in driving forward, stopping, and bringing back the shuttle at each stitch; also, the machines are rather noisy, owing to the striking of the driver against the shuttle at each stroke. These objections were removed by Wilson's rotary hook and stationary bobbin. The locking of the needle thread with the bobbin thread was accomplished, not by driving a shuttle through the loop of the needle thread, but by passing that loop under the bobbin. The driving shaft carried the circular rotary hook, one of the sewing machine's most beautiful contrivances. The success of the machine is indicated in an article that appeared in the June 1853 issue of *Scientific American*:

There are 300 of these machines now in operation in various parts of the country, and the work which they can perform cannot be surpassed . . . The time must soon come when every private family that has much sewing to do, will have one of these neat and perfect machines; indeed many private families have them now . . . The price of one all complete is \$125; every machine is made under the eye of the inventor at the company's machine shop, Watertown, Connecticut, so that every one is warranted . . . agreement between Mr. Howe and Messrs. Wheeler, Wilson & Co., so every customer will be perfectly protected . . .⁵⁰

⁵⁰ Ibid. (June 4, 1853), vol. 7, no. 38, p. 298