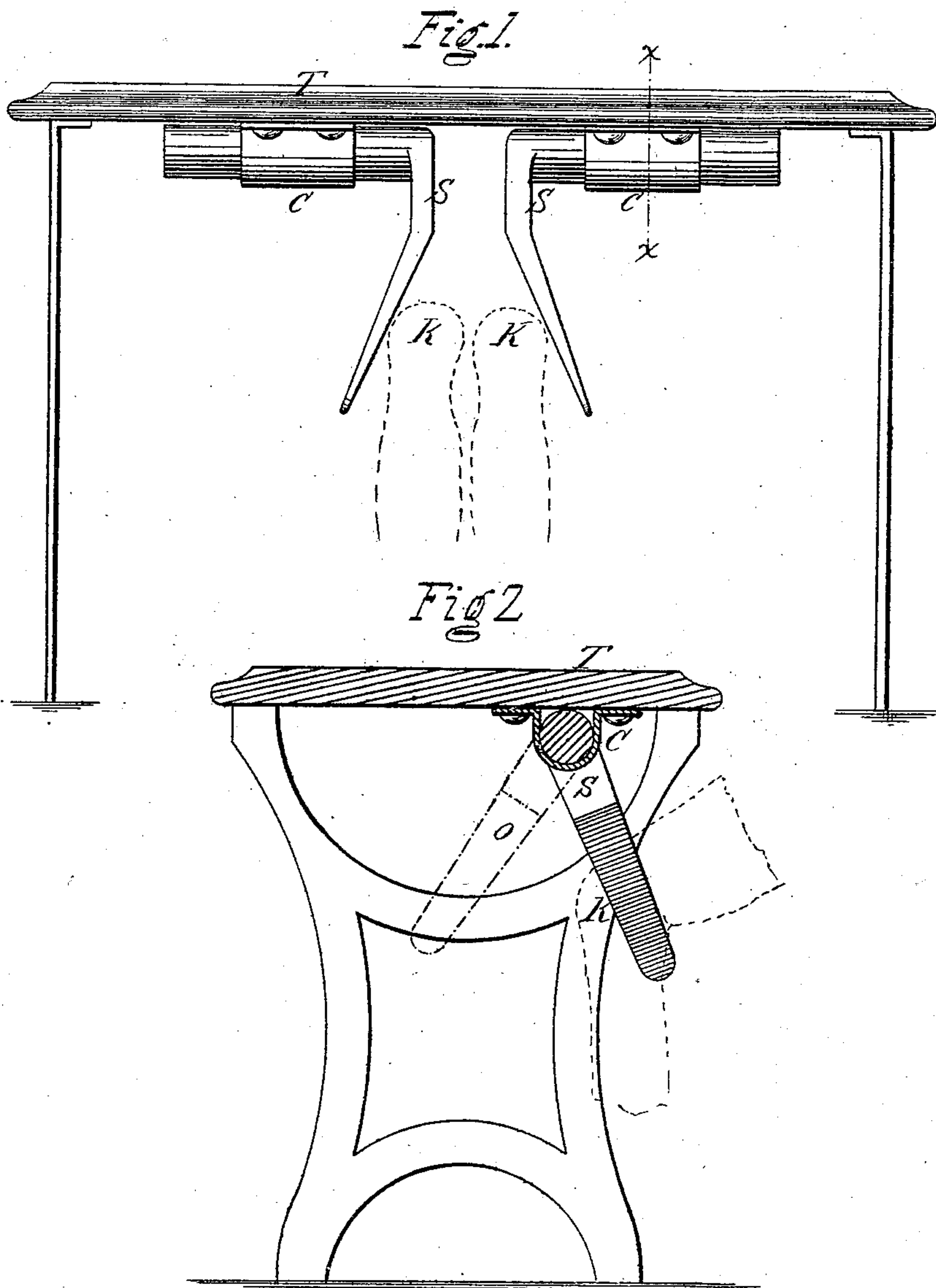


F. E. MILLS.

Improvement in Knee-Brace for Sewing-Machines.

No. 126,152.

Patented April 30, 1872.



Witnesses.

L. W. Slooby
Wm. Wattenberg

Inventor.

Francis E. Mills,

UNITED STATES PATENT OFFICE.

FRANCIS E. MILLS, OF NEW YORK, N. Y., ASSIGNOR TO "MILLS TREADLE MANUFACTURING COMPANY," OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN KNEE-BRACES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 126,152, dated April 30, 1872; antedated April 18, 1872.

SPECIFICATION.

I, FRANCIS E. MILLS, of the city and State of New York, have invented a Knee-Brace for Sewing-Machines, of which the following is the specification:

In working a sewing-machine or other machinery driven with both feet upon a treadle the knees of the operator have a tendency to fall apart, and it requires considerable muscular effort with most persons to preserve the requisite parallelism of the limbs, and when the machine "runs hard" the weight of the limbs is sometimes insufficient to prevent the feet lifting partially off the treadle. My invention consists in making a movable knee-brace or support in such a form, and to be attached to the machine in such a manner, that it may be brought against the knees or limbs so as to prevent their tendency to fall apart, and also enable the operator, when necessary, to bring an additional pressure upon the treadle. It is more particularly useful in machines operated by treadles pivoted opposite the ankle-joint, but may be used on others. The form of this knee-brace will depend upon what part of the frame of the machine it is to be fastened to. It may be attached by its lower end to some of the lower portions of the machine, in which case it would be brought entirely over the knees and the two sides united at the top. But the most convenient form for use, and the one which I prefer, is to make it of two separate and similar parts or pieces of iron or other metal, having the general form shown at S in the accompanying drawing, forming a part of this specification, and fasten these two parts on the under side of the table of the machine, as shown in Figs. 1 and 2 in said drawing. The horizontal portion of each piece being cylindrical in shape, about one inch in diameter, and five or six inches long, is held tightly in a clamp or half thimble, which is screwed to the under side of the table. The part projecting downward is flattened to a tolerably thin blade, is about nine inches long, and when

the two pieces are fastened to the table in the manner shown the lower ends diverge, as represented in Fig. 1, and stand from ten to twelve inches apart, more or less. Though clamped tightly enough to stand in any position they are turned, they may be forced nearer together or further apart whenever it is desired. When it becomes necessary to bring additional pressure on the treadle they may be brought so near together as to bind the feet to the treadle; and if it should be preferred the two parts may be connected by a strap passing directly over the knees. When not in use the blades may be turned back under the table out of the way. When used they are brought forward against the outside of the knees, or against the limbs a little back of the knees.

Reference to the drawing accompanying this specification and making part of the same.

Figure 1 is a longitudinal section of a table-top, T, of a sewing-machine, cut vertically through the point C, Fig. 2, showing the knee-brace S S fastened to the under side of the table with the clamps C C. Fig. 2 is an end view of the table-top, showing the knee-brace S and the clamp C. The dotted lines K K denote the position of the knees of the operator in reference to the knee-brace S S. The dotted line O shows the position of the knee-brace when turned back out of the way.

Similar letters indicate the same parts in the two figures.

Claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

A knee-brace, made and operating substantially as for the purposes described.

FRANCIS E. MILLS.

Witnesses:

L. W. SLOAT,
WM. WATTENBERG.