

J. Q. ADAMS  
Sewing-Machine.

No. 92,138.

Patented July 6, 1869

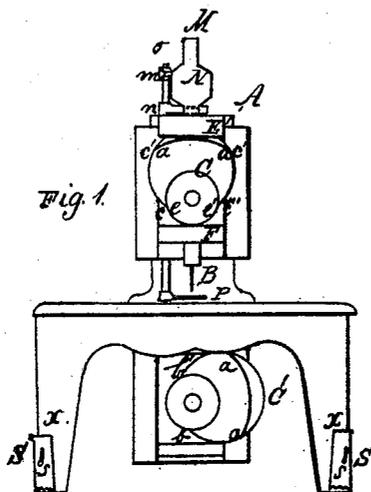


Fig. 2



Fig. 3

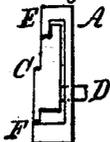


Fig. 4

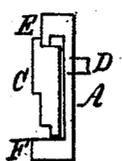
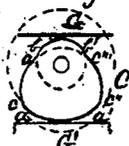


Fig. 5



Witnesses

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## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 92,138, dated July 6, 1869.

*To all whom it may concern:*

Be it known that I, JOHN Q. ADAMS, of North Brookfield, in the county of Worcester, State of Massachusetts, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of a sewing-machine, showing my improvements; and Figs. 2, 3, 4, and 5 show some parts hereinafter more particularly to be described.

My invention relates to mechanism for imparting motion to sewing-machines.

It is well known that in most machines the motion of the needle and awl carrier is not a simple vibrating motion, but has more or less rest or stop at one or both ends of its motion, and this is effected by various devices more or less complex and difficult of construction, and the wearing of them in parts is very difficult or impossible to compensate for practically without entire renewal.

My invention is calculated to produce the desired motion with a rest at one or both ends of any desired length, and the construction is such that the parts can be turned in a lathe, the working-surfaces being circles or parts of circles and the bearing ones the same or straight, and the wear is easily compensated on that account.

In Fig. 1 is shown a slide, A, carrying an awl or needle, B, and by its projections E and F receiving motion from the cam C, which is fast on the shaft D. (See Figs. 3 and 4.)

Fig. 3 shows a section of the slide and cam in the same position as in Fig. 1—that is, with the slide at rest at the upper end of its motion. The surfaces  $a a'$  and  $b b'$  are both concentric with the shaft, and the surfaces  $c c'$  and  $c'' c'''$  are parts of a circle eccentric to the same.

It will be seen that the eccentric surface is continued from  $c'$  to  $c''$  a part of its thickness. This is so made for the purpose of having the slide rest only at one end of its motion, the piece E being lipped, as shown in Fig. 3, to

bear on the surface  $a a'$ , making a rest, while at the opposite end of the stroke or motion the piece F bears on the eccentric, as shown in Fig. 4, the intermediate position being shown at C', Fig. 1. At Fig. 5 is shown the form adapted to produce a motion with a rest at each end, the dotted lines showing the full circles corresponding to the parts used, G G' being the surfaces receiving motion, and which are easily adjusted to compensate for any wear. At M is a stem attached to the slide A and carrying a cam, N, and at O is a vibrating rod, extending down and having the thread-carrier P attached to its lower part. At  $m$  and  $n$  are arms adjustable on the rod O and operated by the cam N, Fig. 2 showing a plan of their relative positions, one arm resting on the stem and the other on the cam alternately, thus giving motion to the rod O and carrier P. At S S are slides with their lower ends serrated and held by screws at  $s s$ , their operation being, when the machine is placed on the bench, that the slides are driven down and the screws tightened, thus keeping it in place.

I have shown the cam C as made of separate parts for simplicity of construction. This, it is evident, is not essential, but may be varied, and rolls may be substituted for the straight or bearing surfaces in such cases as may be best without departing from the principles of my invention.

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

1. The combination, with the projections E F on the needle-carrier, of the cam C, composed of parts of an eccentric circle  $c c' c'' c'''$  and concentric circles  $a a' b b'$ , when constructed and operating substantially as set forth and described.

2. The combination of the cam N, arms  $m n$ , thread-carrier P, stem M, and the slide A, or its equivalent, when constructed and operating in the manner and for the purposes set forth.

JOHN Q. ADAMS.

Witnesses:

F. C. THAYER,  
J. G. ARNOLD.