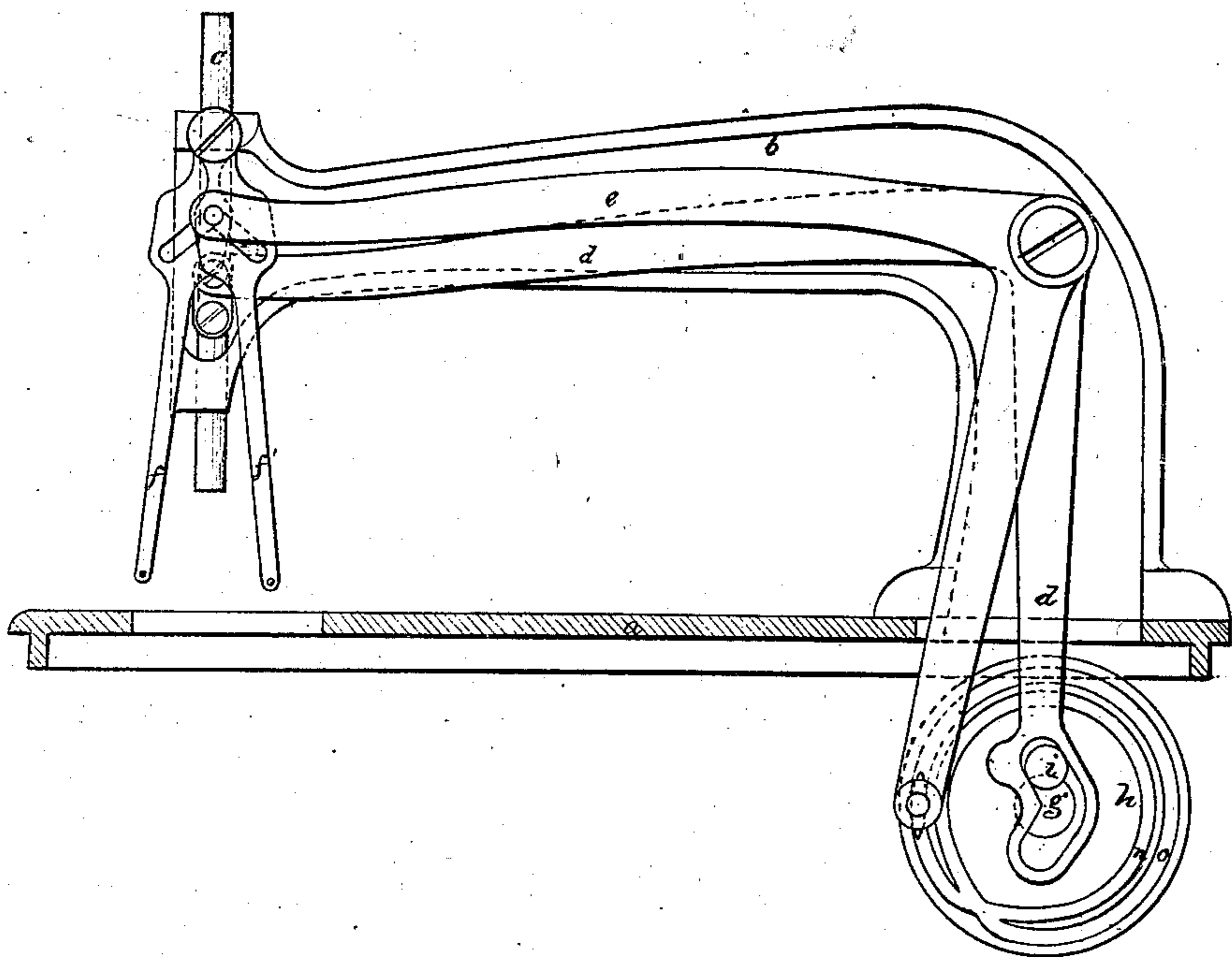


J. J. COBB.  
SEWING MACHINE.

No. 103,984.

Patented June 7, 1870.



*J. J. Cobb*

Witnesses { *P. B. Crosby*  
*C. Warren Brown*

# United States Patent Office.

JAMES J. COBB, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 103,984, dated June 7, 1870.

## IMPROVEMENT IN SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JAMES J. COBB, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Sewing-Machines; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

This invention consists in an improved arrangement of parts in that class of sewing-machines making use of braid, cord, or gimp-carrying arms, which vibrate across each other and across the path of the needle, so as to deliver upon the surface of the cloth or other material the braid, cord, gimp, or other suitable material, to be there secured as an ornament by the stitches made by the sewing mechanism, and so as to resemble embroidery to a desirable degree, said arrangement simplifying the construction and reducing the cost of the parts, by which each arm is made to move once across the path of movement of the needle to each double reciprocation of the needle-bar.

This has heretofore been accomplished, as shown in the patent No. 52,374, of July 18, 1862, to Amos H. Boyd, by the arrangement of a secondary shaft, driven, by gearing from the main shaft, at half the speed of the main shaft; said secondary shaft carrying a cam, which operates the lever by which the vibrating arms are moved, to properly lay the gimp or other material on the surface to which it is to be sewed.

In my invention I retain the lever which operates the vibrating carrying-arms, but, instead of placing a cam on a secondary shaft to work said lever, I make use of a peculiar cam located on the main shaft, which produces the desired times and extent of movement of the vibrating carrying-arms through said lever, and saves the expense and fitting of the said secondary shaft and its hangers, and the gear thereon, and the pinion on the main shaft.

My invention is illustrated in one view, which is a

sectional side elevation of so much of a machine as is necessary to show my improved arrangement.

*a* represents the bed of the sewing-machine.

*b*, the goose-neck, which guides the needle-bar *c* and supports the lever *d*, which works the said bar, the lever *e* which works the carrying-arms *f f'*, and the said arms.

The main shaft *g* is rotated by any means common in sewing-machines.

On said shaft is fixed the disk *h*, carrying the crank-pin *i*, which, in its rotations, gives the requisite times and extent of movement to the needle and needle-bar, inasmuch as it is embraced by a suitably formed inclined slot in the end of the short arm of lever *d*, in the manner shown in the patent referred to.

In one side face of the disk *h* are formed two cam-grooves, *n* and *o*, concentric with the axis of rotation for the most of the distance around the disk, but having, each, for a portion of angular distance, an outward and an inward inclination or throw, at the juncture of which the two grooves blend partially, so that a movable elongated double-pointed shoe, pivoted on the end of the short arm of lever *d*, will, as the disk *h* is rotated, pass from one cam-groove into the other, and thus will vibrate lever *d*, which carries at the end of its long arm a pin, *s*, which projects into inclined slots cut in the arms *f f'*, which carry cord, &c.

I do not claim any of the parts described, separately considered, as each of them has been used prior to my invention.

I claim the double-grooved cam-disk *h*, arranged on the main shaft *g*, and provided with the crank-pin *i*, when combined with and operating the levers *d* and *e* to effect the desired relative movements of the needle-bar and arms *f f'*, substantially as and for the purpose specified.

J. J. COBB.

Witnesses:

C. WARREN BROWN,  
M. W. FROTHINGHAM.