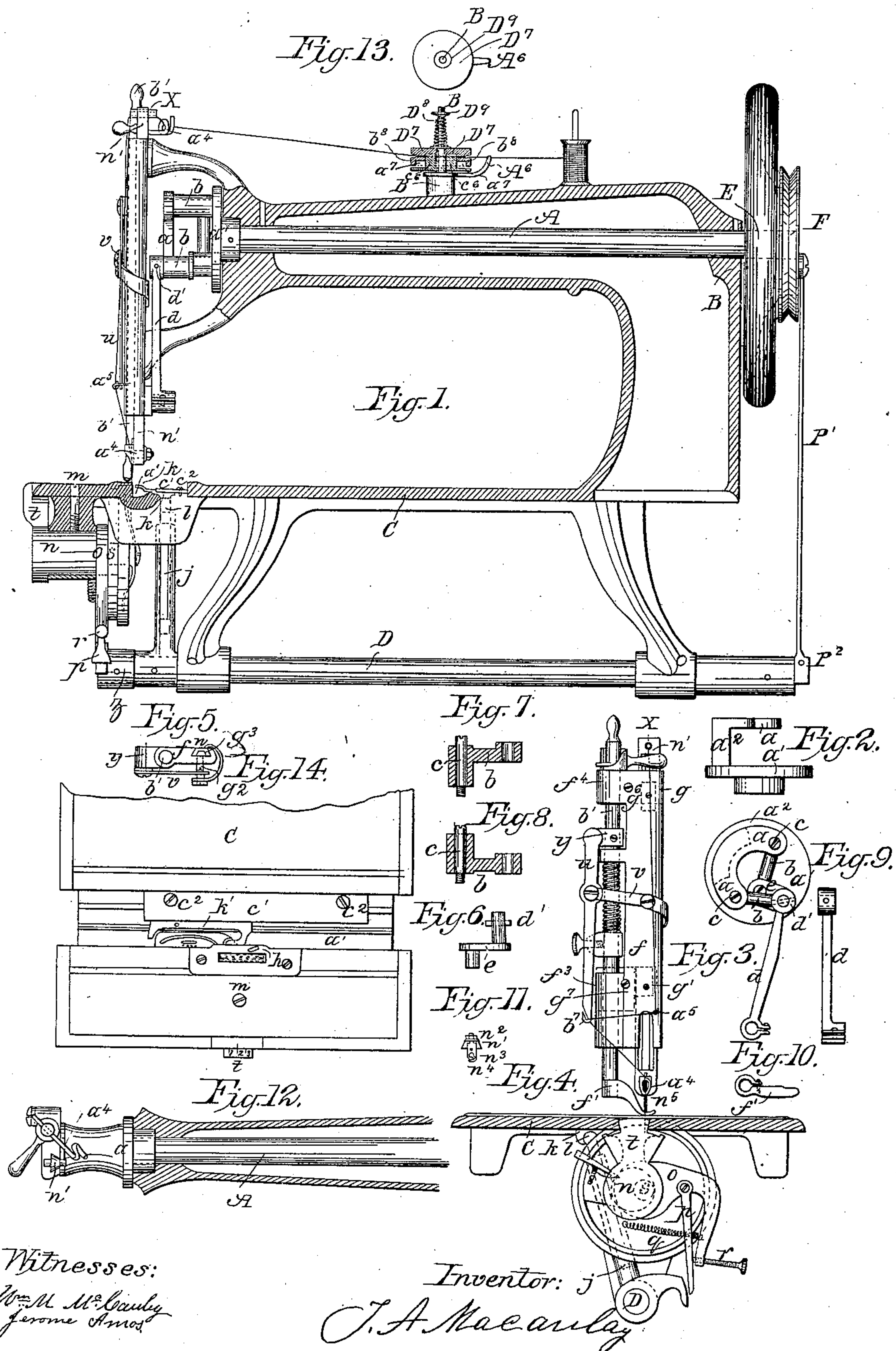


Sewing Machine.

Patented Dec. 6, 1870.



United States Patent Office.

T. A. MACAULAY, OF NORTHAMPTON, MASSACHUSETTS.

Letters Patent No. 109,828, dated December 6, 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, T. A. MACAULAY, of the town of Northampton, county of Hampshire and State of Massachusetts, have invented a new and improved Sewing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates—

Firstly, to an improved construction of the disk-plate which receives the mechanism of a crank-motion, (for which Letters Patent of the United States were granted to me March 1, 1864,) whereby greater durability is obtained, and consists of the projecting wings a^2 and a , Figs. II and III, so arranged that the parts a^1 , Fig. III, form bearings for the pins c , on which the links b of the crank-movement, Fig. III, oscillate.

Secondly, my invention relates to an improved thread-controlling device, and consists of a lever, u , link v , and adjustable fulcrum y , secured to the presser-bar b' , Fig. IV, the needle-bar guide x , and two guides, a^4 a^5 , by which the thread is controlled in making stitches, and the quantity delivered is regulated to suit thick or thin goods. When thick goods are being sewed, the lever u is raised with the presser, and its range of motion changed to draw off more thread, and it is lowered, with thin goods, to deliver a less quantity of thread. The thread-delivery mechanism herein described differs from that shown in my patent of February 9, 1869, only in that the lever u is pivoted to an adjustable block, y , which admits of a nicer adjustment of the thread-controlling mechanism. For getting a yet nicer adjustment of the thread-delivering mechanism, the lever u may be pivoted to another lever, one end of which may be pivoted to any convenient portion of the machine, and made adjustable; the other end to be actuated by the foot-bar as it rises and lowers when thick or thin goods are under it; the controlling lever to be pivoted between the two ends. The object of this last arrangement is, that should the rising of the presser-bar deliver more thread than can be properly controlled, the use of a lever will reduce the action of the thread-lever and deliver less thread than when the thread-lever rises the extent the foot-bar rises.

Thirdly, my invention consists of an improved mode of suspending the feed-wheel, and raising and lowering the same when it is desired to sew thick or thin goods, and consists of a cylindrical block, n , having a pin, s , projecting longitudinally from one end, and located at one side of the center of n .

At the other end of n is a laterally-projecting handle, t , that projects upward to the top of the table, within easy reach of the operator, and is provided with a scale, (see Fig. XIV,) so that the wheel may be accurately raised or lowered.

The feed-raising and lowering device is supported in a bearing or hub projecting from the under side of the bed-plate.

The feed-wheel and its connected devices are supported on the pin s , and when the block n is adjusted it is confined in position by a set-screw, m .

In Fig. IV an end view of the feed-raising device t n s is shown.

The accompanying drawing illustrates the manner in which my invention is carried into effect.

Figure I is a longitudinal vertical view, showing my improved manner of constructing the disk a^1 , the feed-raising and lowering device t n s , and set-screw m , and a side view of the thread-controlling mechanism u v y and guides a^4 a^5 .

Figure II is a top view of the disk-plate a^1 and wing a , the wing being supported on projection a^2 from the disk a^1 .

Figure III is a face view of the same, showing the studs c , supported by the wing a and disk a^1 , and carrying the links b , the crank e , and pitman d .

Figure IV shows a face view of the thread-controlling mechanism u v y , and feed-lowering mechanism t n s .

Figure V is a horizontal section of the face-plate f , showing the link v of the thread-controlling mechanism.

Figure XIV is a vertical view, showing the end of the feed-raising lever t , and the scale to indicate the extent of raising and lowering the same.

I have now particularly described the nature of my invention and the manner in which it may be carried into effect, and claim as my invention, and desire to secure by Letters Patent—

1. The combination, with disk a^1 and wing a , supported on projection a^2 , of the pins and links for operating the needle-bar, substantially as described.

2. The combination, with the presser-bar, of the adjustable block y , lever u , link v , and guides x a^4 a^5 , all substantially as and for the purpose described.

3. The device t n s for raising and lowering the feed-wheel, when constructed as described, and combined with the table and feed-wheel, as set forth.

The above specification of my invention signed by me this 3d day of December, 1868.

T. A. MACAULAY.

Witnesses:

EDM. F. BROWN,
JEROME AMOS.