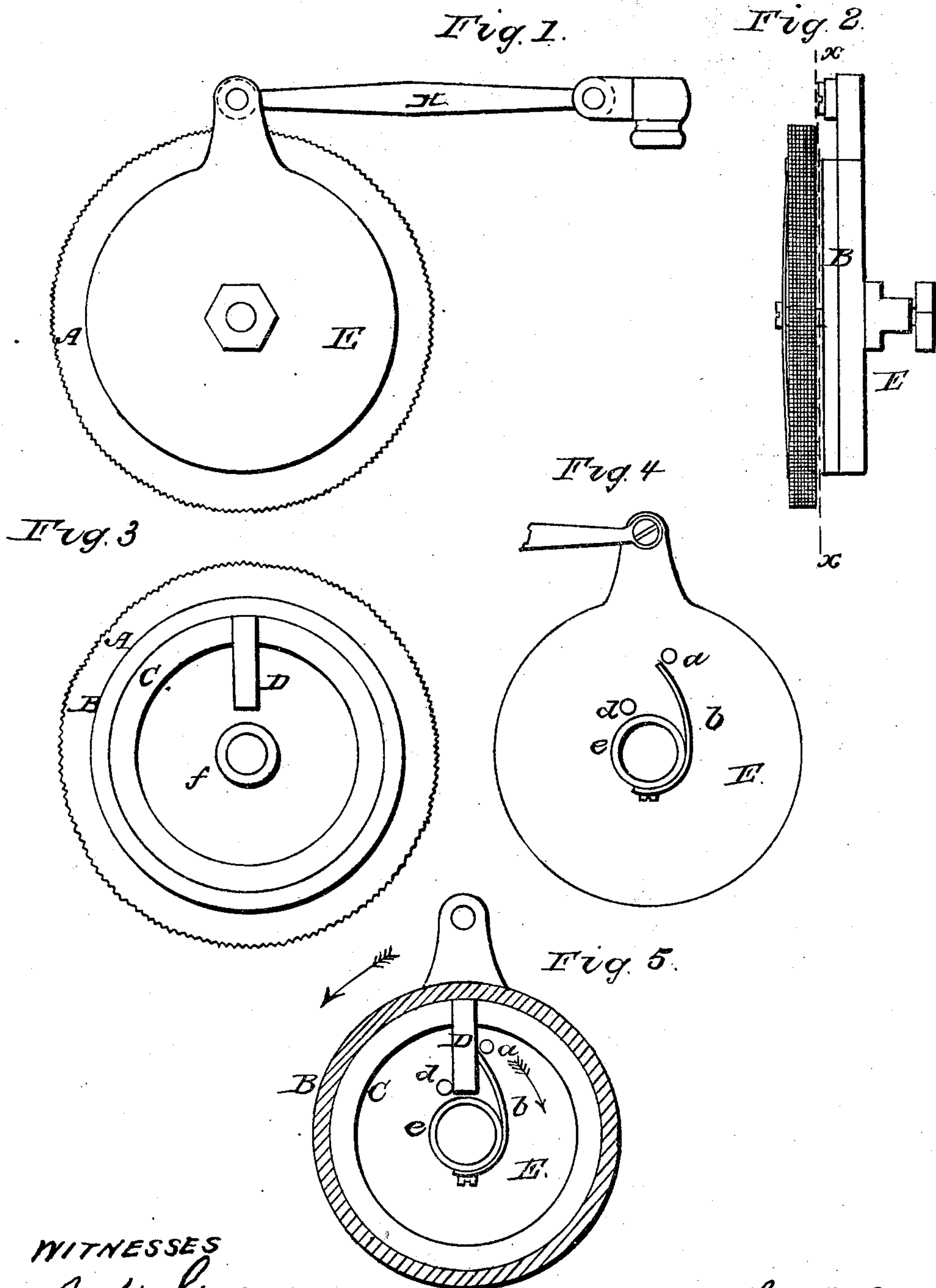


G. M. PRATT.  
Sewing-Machine Feed.

No. 89,501.

Patented April 27, 1869.



WITNESSES

J. H. Shrimony  
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Inventor

By His Attorney  
John E. Earle

# United States Patent Office.

GEORGE M. PRATT, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO FINKLE AND LYON MANUFACTURING COMPANY, OF SAME PLACE.

Letters Patent No. 89,501, dated April 27, 1869.

## IMPROVEMENT IN FEED-WHEELS FOR 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, GEORGE M. PRATT, of Middletown, in the county of Middlesex, and State of Connecticut, have invented a new Improvement in Sewing-Machine Feed; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view;  
Figure 2, an edge view;  
Figure 3, the feed-wheel;  
Figure 4, the working-plate, turned the one from the other; and in  
Figure 5, a sectional view, on line *xx* of fig. 2, looking toward the working-plate.

This invention relates to an improvement in that class of feed for sewing-machines commonly known as wheel-feed; and

The invention consists in the arrangement upon the wheel of a frictional ring, set within a flange on the feed-wheel, the said frictional ring being cut, and a lever inserted into the cut, so that by the movement of the lever, the ring is expanded, so as to clamp the feed-wheel and move it with the lever, and yet so that when the power which thus moved the lever is released, the ring will turn freely within the flange on the feed-wheel, without moving the said wheel.

In order to the clear understanding of my invention, I will fully describe the same, as illustrated in the accompanying drawings.

A is the feed-wheel, of the usual form.

Upon one side, I form a flange, B, and into this fit a ring, C, cut so as to receive a lever, D, and so that when in the position seen in fig. 3, the diameter of the ring is so nearly the same as the inner diameter of the flange B that the ring will turn freely therein.

On to the flange B, I place a plate, E, which covers the ring C.

A sleeve, *f*, on the said plate, setting over a corre-

sponding sleeve, *f*, on the wheel, forms a bearing, to permit the free turning of the plate E.

On the plate E are arranged two pins *a* and *d*, one of which is placed upon either side of the lever D, as seen in fig. 5, and a spring, *b*, on the said plate bears against the lever D, below the pin *a*.

The plate E is connected by a rod, H, to the usual mechanism for operating the feed, so as to impart a reciprocating movement to the plate E.

The operation is as follows:

When the plate is moved in the direction of the red arrow, the pin *a* bears against the lever and spring below it; therefore moving the plate has no effect upon the lever D, further than to carry the said lever and ring C, with the plate, without moving the wheel A.

When the plate E is moved in the opposite direction—that is, in the direction of the black arrow—then the pin *d* strikes the lower end of the lever D, the spring *b* acting as a fulcrum, and the lever is turned slightly, which causes an expansion of the ring C, so as to bind it into the flange B, and turn the wheel A with the plate.

As the ring completely fills the flange B, the slightest movement of the lever D expands the ring sufficiently to hold the wheel.

There is, therefore, practically, no lost motion, and the movement may be of the smallest possible extent, and increased by the ordinary means of adjustment, thus producing, practically, a positive wheel-feed.

Having described my invention,

What I claim as new and useful, and desire to secure by Letters Patent, is—

In combination with the wheel-feed of a sewing-machine, the ring C, within the flange B, combined with the lever D and wheel E, with the pins *a* and *d*, and spring *b*, operating substantially as set forth.

GEO. M. PRATT.

Witnesses:

J. H. SHUMWAY,  
A. J. TIBBITS.