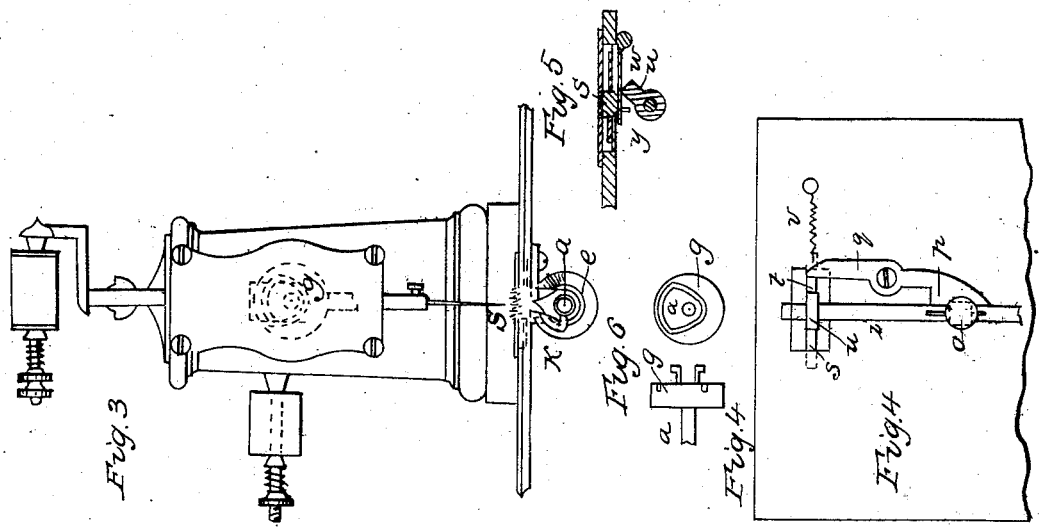
2 Sheets—Sheet 1.

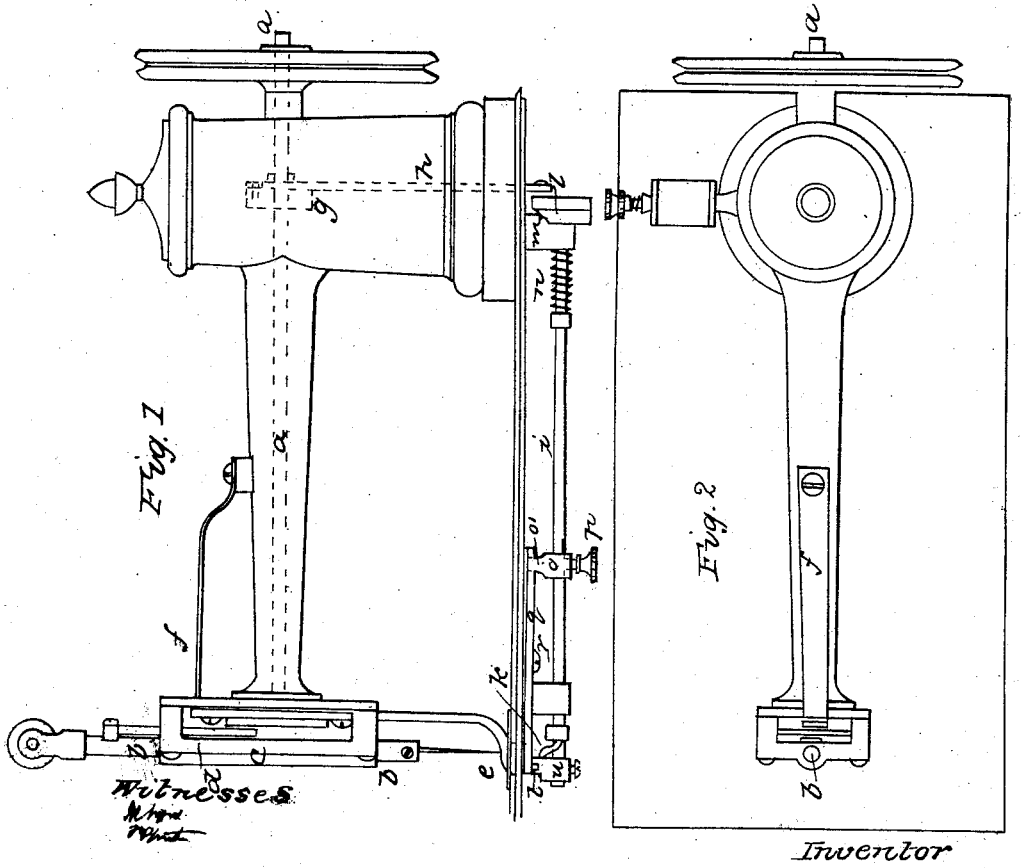
# J. W. BARTLETT.

## Sewing Machine.

No. 46,064.

Patented Jan'y 31, 1865.




Witnesses

Inventor

J. W. Bartlett

J. W. BARTLETT.

Sewing Machine.

2 Sheets—Sheet 2.

No. 46,064.

Patented Jan'y 31, 1865.

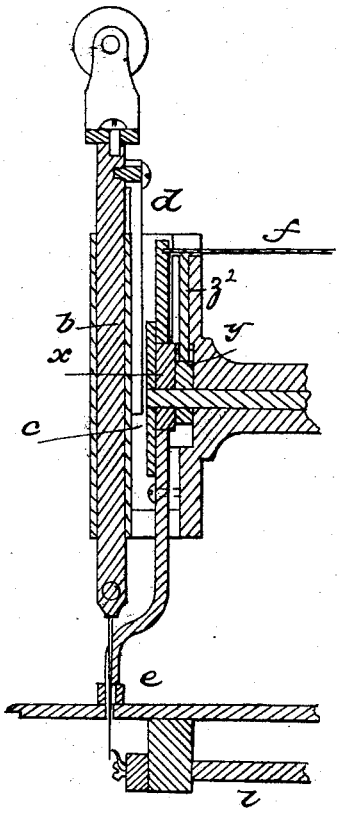



Fig. 7

Witnesses

J. R. Stafford

F. Mant

Inventor

J. W. Bartlett

# UNITED STATES PATENT OFFICE.

JOSEPH W. BARTLETT, OF NEW YORK, N. Y.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **46,064**, dated January 31, 1865.

*To all whom it may concern:*

Be it known that I, JOSEPH W. BARTLETT, of the city, county, and State of New York, have invented new and useful Improvements in Sewing-Machines; and I do hereby declare that the following is a full and exact description thereof.

Figure 1 is a full-size side elevation. Fig. 2 is a plan. Fig. 3 is an end elevation. Fig. 4 is a plan of the feed mechanism. Fig. 5 is a section of the feed mechanism applicable to a one-thread sewing-machine. Fig. 6 shows side and end elevations of the cam *g*. Fig. 7, Sheet 2, is a section showing the feed mechanism as applied above the plate, when it is preferred, for either a one or two thread sewing-machine.

The same letters apply to the respective parts in each figure.

*a* is the driving-shaft, giving motion to the upper needle-rod, *b*, through the crank-pin *c* and connecting-rod *d*.

*e* is the presser-foot, held upon the fabric by the spring *f*.

*g* is a cam, giving motion through the rods *h* and *i* to the under needle or looper, *k*, the rod *i* having also a longitudinal motion of about one-eighth of an inch given it at the same time by the action of the beveled portion of the cam *l* acting against the side of the bearing *m*, *n* being a spring which takes the shaft back as the cam *l* returns.

*o* (see more particularly Figs. 1 and 4) is an adjustable sleeve held by the thumb-screw *p* in a groove upon the shaft *i*, and which, by means of a projection, *o'*, thereon, gives motion to the lever *q*, turning upon the screw *r*, which at the same time imparts its motion to the feed-bar *s* when the opposite end of the lever comes in contact with the pin *t*. The sleeve *o* is capable of being slid in the groove upon the shaft *i*, so as to adjust its position in order to vary the length of stitch.

*u* (see Figs. 1, 4, and 5) is a cam which gives the upward motion to the feed-bar *s*.

*v* is a spring for the purpose of bringing the bar back to its original position.

Fig. 5 is a plan showing more especially a modification of this improved feed mechanism in order to render it applicable to a one-thread sewing-machine, the motion of the shaft *i* being in an opposite direction to the same shaft when used in and for the two-thread sewing-machine, thereby enabling me to omit the lever *q*, spring *n*, and beveled portion of the cam *l;* or I may remove the cam *l*, substituting a disk or crank therefor, the cam *u* performing both the upward and forward motions, and the spring attached to the feed-bar *s* imparts the return motions. The lever or bar *w* is used for the purpose of relieving the feed-bar *s* from the friction of the cam or lever *u*. The lever or bar *w* may, however, be omitted, if preferred, as the machine can be made to work with or without it.

The application of the so-called "upper feed," as shown in Fig. 7, Sheet 2, is the one I originally used upon the machine in place of the under feed. The latter or under feed I however consider preferable, and substituted it, as herein shown.

I do not claim the former or plan of upper feed as new in itself, and only show it as in Fig. 7, Sheet 2, in order to secure it when used or adopted in combination with my other improvements herein shown in place of the so-called "under feed." The presser-foot *e*, having teeth upon its under surface, is actuated by the cam *x*, being for the purpose of giving the presser-foot the necessary forward and backward motions. The cam *y'*, placed upon the shaft *a*, acts against the pin or rod $z^2$, lifting the spring *f* during the backward motion of the feed-rod or presser-foot *e*. All the other parts may be used the same in both kinds of feed.

Having thus described my improvement, I state my claims as follows:

1. The combined sliding and rocking movement of the looper or under needle rod or shaft, when arranged and actuated substantially as set forth.

2. The adjustable sleeve or lever *o*, when constructed and operated substantially as and for the purposes set forth.

3. The sliding and rocking looper or under needle rod or shaft *i*, the adjustable sleeve or lever *o*, the cam or lever *u*, and pin or projection *z*, when combined substantially as set forth.

4. The sliding and rocking looper or under needle rod or shaft *i*, the cam or lever *u*, pin or projection *z*, and feed-bar *s*, when combined substantially as set forth.

5. The presser-foot *e*, cam *x*, as shown and described in Fig. 7, Sheet 2, and sliding and rocking rod or shaft *i*, when combined substantially as set forth.

JOSEPH W. BARTLETT.

Witnesses:

J. R. STAFFORD,

F. PLANT.