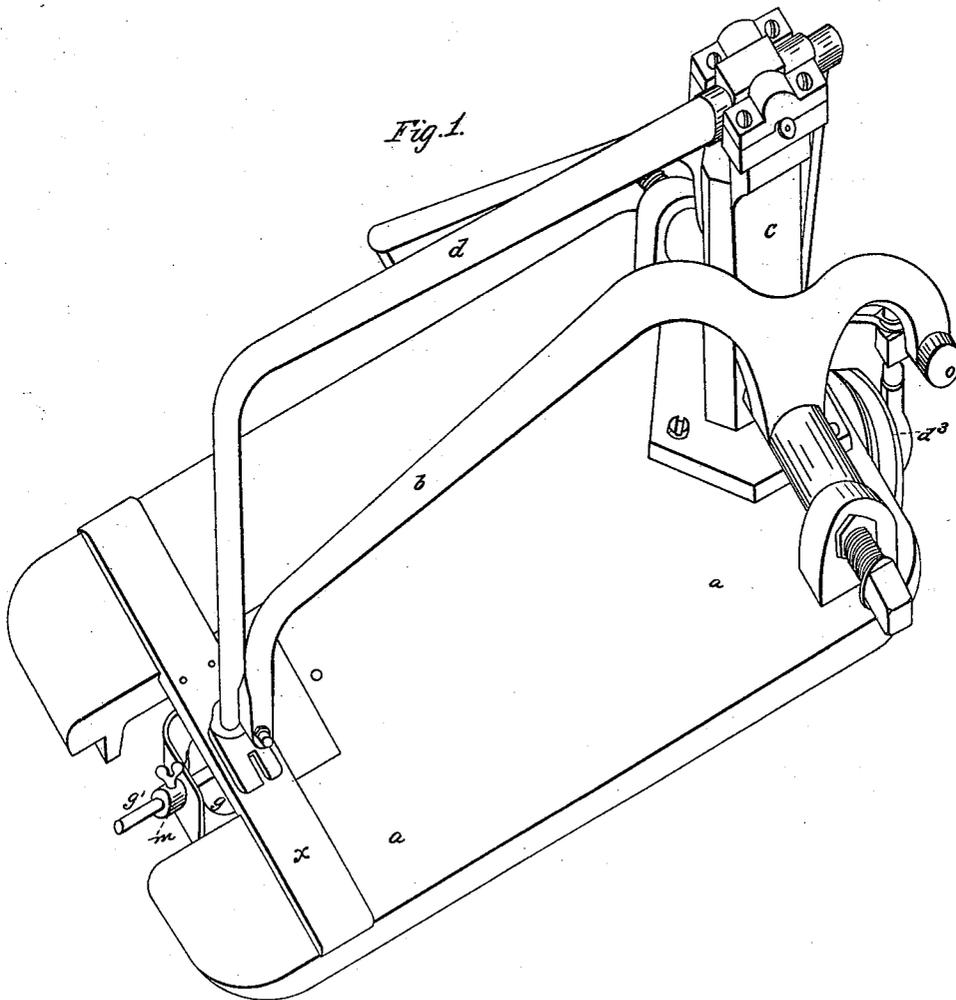


G. S. TAPLEY.  
Sewing Machine.

No. 25,059.

Patented Aug. 9, 1859.



Witnesses:

A. Ford  
H. Wilson

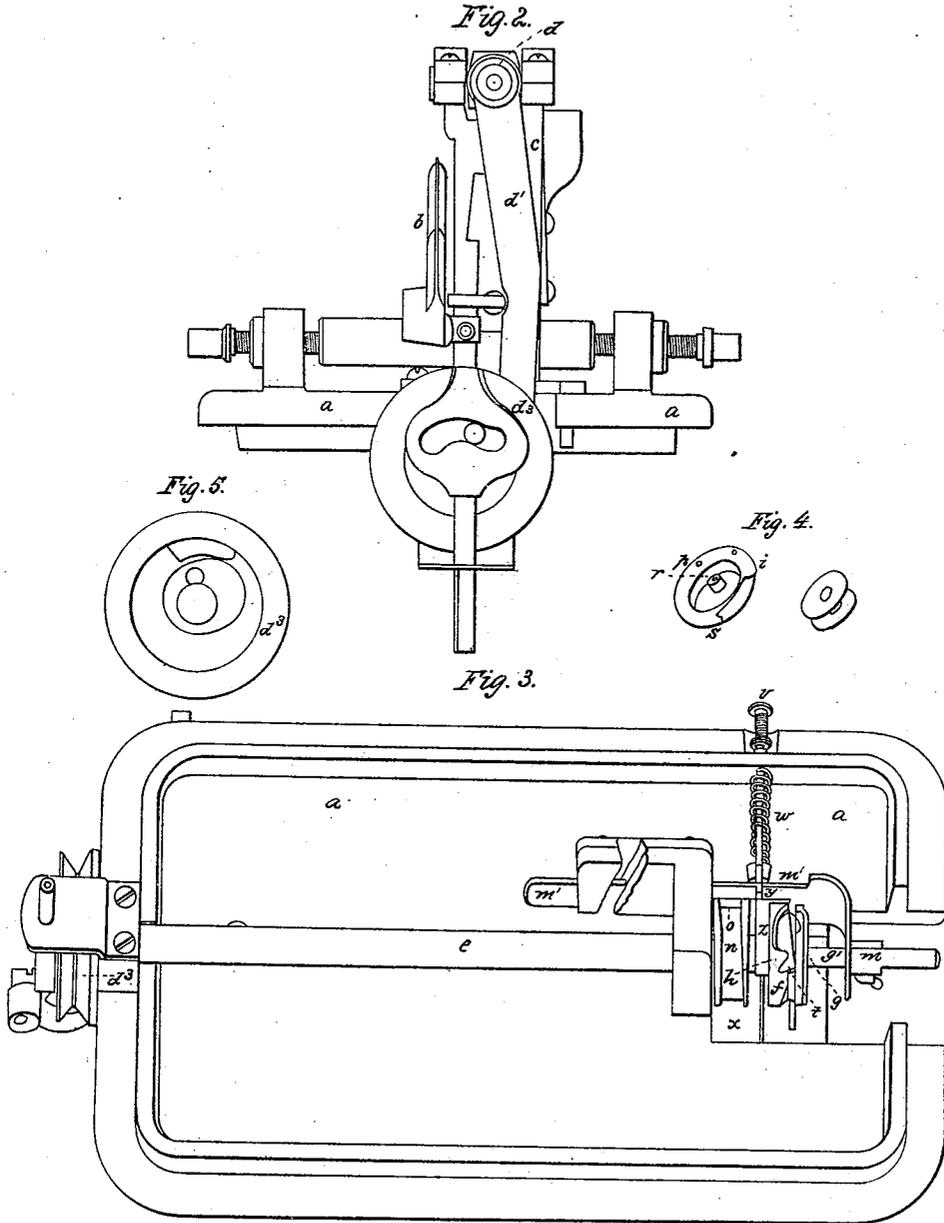
Inventor:

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# UNITED STATES PATENT OFFICE.

G. S. TAPLEY, OF BRISTOL, CONNECTICUT.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 25,059, dated August 9, 1859.

*To all whom it may concern:*

Be it known that I, GEORGE S. TAPLEY, of Bristol, Hartford county, Connecticut, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby describe and ascertain said inventions and their mode of operation, referring to the accompanying drawings, in which—

Figure 1 is a perspective view of the upper side of the machine. Fig. 2 is the machinery at the rear or sewing end of the machine. Fig. 3 is a plan of the under side of the machine. Fig. 4 is the shuttle and spool separated. Fig. 5 is the upper feed-cam.

I will indicate the various parts of my machine, referring to the drawings, without minutely describing the same.

*a* is the table, on the rear end of which there are proper standards to sustain the axis of the needle-arm *b*.

*c* is a high standard, on top of which there is a compound joint, by which the feed-arm *d* is sustained, as clearly seen in Fig. 1. A rear arm, *d'*, (see Fig. 2,) serves to vibrate it by means of the cam *d''*, (seen in Fig. 5,) this cam being on the driving-shaft *e*, and forming also the driving-pulley. The driving-shaft *e* extends under the table to near the front of the machine, and bears on its front end a socket, *f*, to receive the shuttle, there being a notch at *h* in its rim, that receives a projecting boss, *i*, on the shuttle, by means of which the shuttle is made to revolve with the driving-shaft.

*g* is a cup-formed receiver on a line with and opposite socket *f*, for keeping the shuttle in place. The stem *g'* of this cup is held in a socket, *n*, by a set-screw, so as to be brought up into place to hold the shuttle, or back to release it. The socket is affixed to an arm on a slide, *m'*, that slides parallel to the driving-shaft. The movement of this slide *m'* is governed by a cam, *n*, on the driving-shaft, just behind the socket *f*, that has a cam-groove around its periphery, into which a pin, *o*, on the slide *m'* fits.

The operation of these parts is to hold the shuttle tight during a portion of the revolution, so as to produce the necessary friction thereon and allow it a loose play as it casts off the loop. The shuttle has a recess in one

side to receive the spool of thread or silk, the end of which thread passes out through a hole at *p* in the side of the shuttle, and if the tension at this point is to be increased, two or more similar holes are to be made through the rim of the shuttle, to lace the thread through before passing off. From the last hole through which the thread is passed, it runs to the center of the shuttle, through a hole, *r*, in which it passes, and thence off to the work. This carrying the thread to the center is very important to equalize the tension thereof, the thread being guarded from touching the spool after it passes out through, the shuttle or bobbin, especially at the center, which would otherwise cause the spool to bind and deliver the thread with unequal tension. Passing the thread through the center of the spool has before been done, and is therefore not new or claimed as such by me; but passing the thread through the center of the bobbin or shuttle, guarded so as not to touch the spool, and thus leave the spool free, is new and useful.

The needle and other undescribed parts of the machine work like other well-known machines. When the needle descends to its lowest point and commences returning, a hook, the peculiar form of which is delineated at *S*, Fig. 4, catches into the loop, and by its revolution casts it over the shuttle. At the time the hook seizes the needle-loop it is held firm in its position by the pressure of cup *g*; but as it revolves, cup *g* falls back and allows the loop a free and unobstructed passage over the shuttle. This operation is repeated at every stitch.

In order to feed either the upper or lower portion of cloth faster or slower independently of the other portion, I move the upper and lower jaws of the feed independently of each other. The movement of the upper jaw is already described. The lower one consists of a slide-plate, *x*, which slides in the upper surface of the table and flush with it. This plate *x* has a projection downward from the under side, (seen at *y*, Fig. 3,) which is made to press against a cam, *z*, on the driving-shaft. By means of a spring, *v*, this slide has its motion adjustable by a set-screw, *v*, to vary its range, and its movement is entirely independ-

nt of the movement of the upper jaw of the  
eed, but can be made to work in unison with  
; or vary therefrom.

I claim—

1. The movable cup *g* and its appendages,  
or gripping and automatically releasing the  
huttle at intervals, substantially as specified.

2. The construction and arrangement of the  
feed apparatus, as and for the purpose herein  
set forth.

G. S. TAPLEY.

Witnesses:

JAS. W. FRASER,  
A. WORTH.