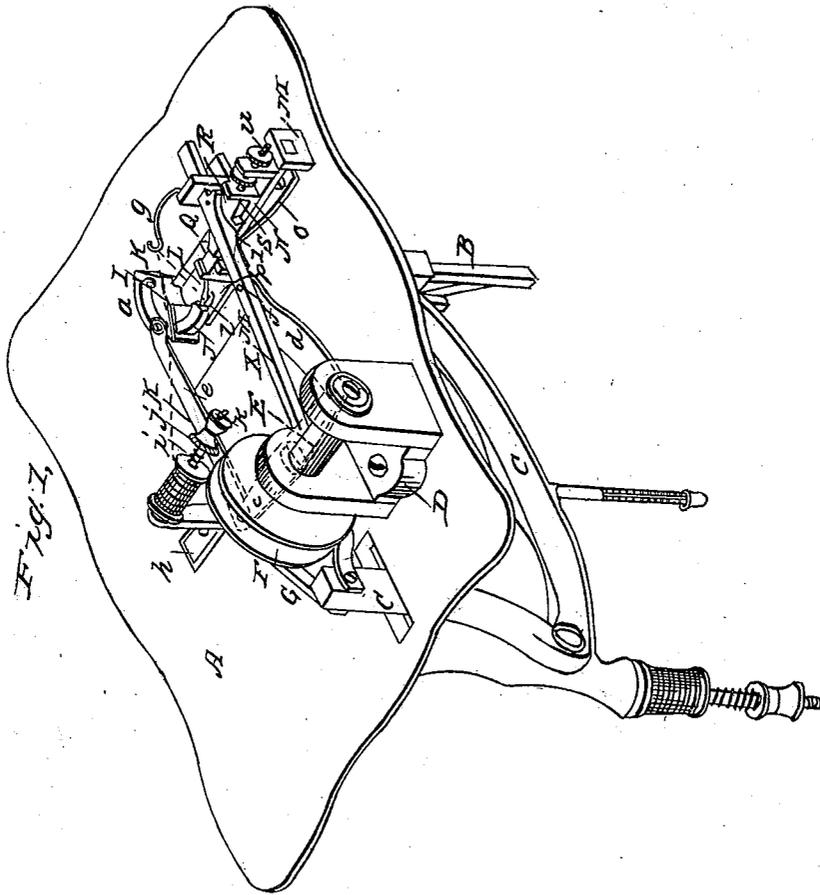


W. G. BUDLONG.

Sewing Machine.

No. 25,946.

Patented Nov. 1, 1859.



WITNESSES:

Amos S. West
George W. Bass

INVENTOR:

William S. Budlong

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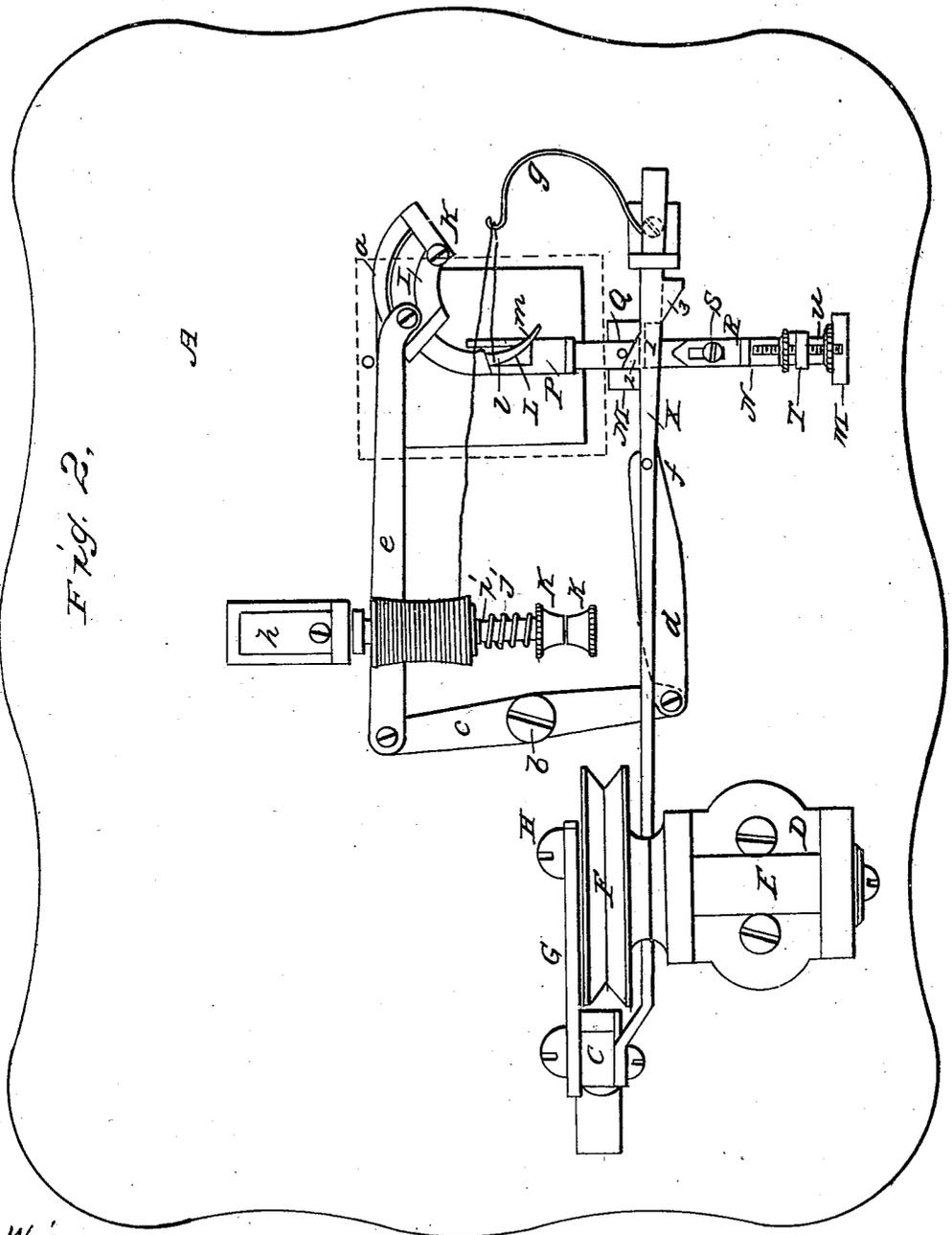


Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM G. BUDLONG, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 25,946, dated November 1, 1859.

To all whom it may concern:

Be it known that I, WM. G. BUDLONG, of Hartford, county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare that the same is described and represented in the following specification and drawings, and to enable others skilled in the art to make and use my improvement, I will proceed to describe the construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

The nature of this improvement in sewing-machines consists in the peculiar construction and arrangement of the movements underneath the bed, so as to produce a machine simple in its arrangement, perfect and rapid in its operation, and at the same time cheap and easily kept in order.

In the accompanying drawings, Figure 1 shows an isometrical view of my improvement, the devices or operating parts upon the upper side of which do not differ materially from many others now in use. Fig. 2 is an under side view, showing the complete arrangement of the operating parts, as herein described.

A is the bed-plate, to which the several parts are secured.

B is the needle-bar.

C is the angle-lever, secured in the usual manner, and operates the needle-bar.

D is a hanger secured to the bed-plate A.

E is the operating-shaft, secured in the hanger D.

F is the driving-pulley, made fast to the end of the shaft E.

G is an arm, one end of which is secured by a screw or pin, H, at a desired point out of the center of the pulley F. The other end is secured to the angle-lever C. Thus the needle-bar, having the needle secured in the lower end in the usual way, is thrown up and down at each revolution of the pulley F.

I is a segment of a circle having a groove turned out nearly in the center thereof, into which is fitted the looper-bar J. The segment I is secured to the plate A by a set-screw, so as to allow the looper L easily and readily to be adjusted to the piercing-needle. It may be thought best, in manufacturing the machines, to attach a slotted arm at the point *a*, made in

a circle struck from the center of the screw *k*, so as to allow it (the segment I) to be more perfectly secured in its place.

M are studs upon the plate A.

N is a feed-bar, one end of which is fitted loosely in the stud M' and the other working in a slot in the stud M.

P is the feeder, secured to the end of the feed-bar N, made in such shape and manner that it will fit into an opening in the plate A and move the work when desired.

O is a spring to keep the feed-bar N or the feeder P down from the work, except when required to move it forward.

Q is a fixed pin in the feed-bar N.

R is a slotted shoe, secured in an adjustable manner upon the bar N by a set-screw, S.

T is a stud secured to the bar N.

U is a screw passing through the stud T, and secured in the shoe R.

V V are nuts upon the screw U and each side of the stud T, the object of which is to nicely adjust the distance between the point of the shoe R and the pin Q on the feed-bar N, by means of which the stitch is regulated.

W is a stud secured to the plate A, having an opening through which one end of the cam-rod X moves. The other end is secured to the angle-lever C. Upon said rod X is secured or may be made adjustable three cams or incline planes, 1 2 3, so that as the rod X moves forward the cam 1 presses the feed up to the work. The cam 2, by means of the feeder P, moves the work along, and as the rod X returns the spring O presses the feeder down from the work and the cam 3 moves it back to its starting-point.

c is a lever secured to the plate A by a set-screw, *b*.

d is an arm, one end of which is secured to the cam-rod X at *f*. The other end connects with the lever *c*.

e is an arm, one end of which is secured to the looper-bar J, the other end to the lever *c*.

g is a thread-tension spring.

h i j k is an arrangement ordinarily employed to hold a spool of thread and give it the proper tension required in letting off the thread.

I have thus described the parts, their connections, and their offices. The thread is first drawn from the spool over the hook end of the spring *g*, thence through the eye in the

looper at *l*, and thence through the eye at *m*, near the point of the looper *L*.

It will be observed that it does not make any difference in the operation of the machine which way the driving-pulley *F* revolves. Now, as the work is placed upon the machine in the usual way and motion is given thereto, the needle (in the needle-bar containing the thread from the spool on the upper side) pierces through the work, the looper enters between the thread and needle while the needle returns upward, the feeder *P* moves the work forward, and the piercing-needle again passes down through the work, between the thread and looper, just forward of the loop formed on the looper by the first descent of the needle, thus successively and with almost incredible certainty and velocity accomplishing the required labor upon the work in hand. The advantage derived by the use of this machine over others

now in use seems too obvious and conclusive to need further remark. To the eye of a practical mechanic it must be at once apparent that they are attractive in their simplicity, rapid, efficient, and durable in their operation.

Having thus described the nature and operation of my machine, what I claim, and desire to secure by Letters Patent, is—

The combination of the adjustable groove-segment *I*, with the looper-bar *J*, fitted loosely therein, feeder arrangement *P Q R*, operating-rod *X*, having cams *1 2 3* secured thereto, and connected by arms *c d e G*, the whole being arranged and operating substantially in the manner as and for the purpose described.

WILLIAM G. BUDLONG.

Witnesses:

AMOS G. WEST,
JEREMY W. BLISS.