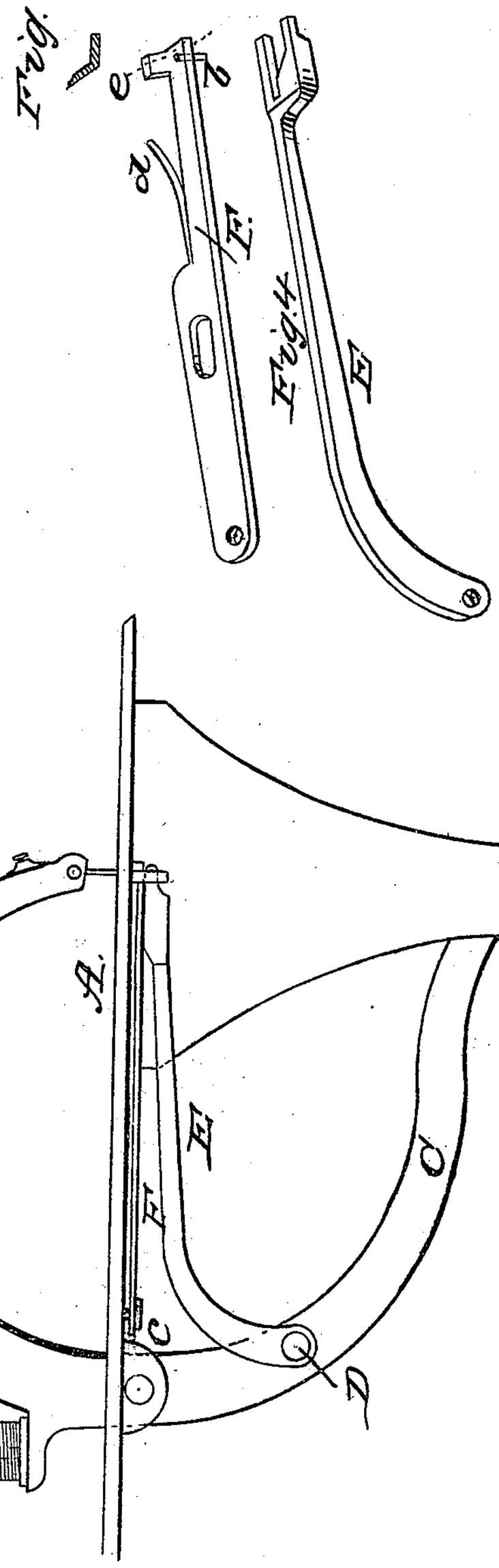
J. O'NEIL.

Sewing Machine.

No. 14,141. Patented Jan. 22, 1856.



UNITED STATES PATENT OFFICE.

JNO. O'NEIL, OF XENIA, OHIO.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 14,141, dated January 22, 1856.

To all whom it may concern:

Be it known that I, JOHN O'NEIL, of Xenia, in the county of Greene and State of Ohio, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents an elevation of so much of a sewing-machine as illustrates a mode or manner of attaching and operating the improvement which I have made. Fig. 2 represents the feeding-arm (for moving the material along to the sewing apparatus) detached. Fig. 3 represents a section through the feeding-arm, taken at the line *x x* of Fig. 2. Fig. 4 represents the lever which operates the feeding-arm, also detached.

Similar letters, where they occur in the several drawings, denote like parts.

The nature of my invention relates exclusively to the device for feeding the cloth or other material to be sewed to the sewing apparatus; and it consists in a chisel-edged piece of metal or other suitable material, operated as will be explained.

In the feeding of the material to a sewing-machine, as at present practiced, many difficulties present themselves, inasmuch as the material is always double, and the feed is made by friction on one side only of this doubled material, which causes one piece of the cloth to slip or crimp on the other piece. In attempting to remedy this evil by holding the two pieces together by friction above and below, another equally objectionable feature presents itself—viz., the inability to turn the material so as to sew a curved seam, as these holding devices must be far enough from the sewing-point to allow the parts that form the stitch to operate. If an attempt is made to turn the cloth at the sewing-point while it is held at another point by the feeding apparatus, the cloth must be crimped or stretched, which makes inequalities in the sewing. When the feed is made by a needle, as in a two-needle machine, if the material be heavy it strains the needle, and if it be light the needle draws upon a single thread of the fabric, which stretches it at that point, particularly when drawing oblique to the warp and weft of the fabric.

My object has been to contrive a feed that will bring the double cloth evenly up to the needle, and yet allow the cloth to be turned without crimping or stretching, so as to sew a curved seam as well as a straight one. This I have accomplished by what I term a "chisel-edged feeding-arm," which takes sufficient hold on the cloth to prevent it from stretching in the direction in which it is being fed under the needle, but admits of its being readily turned without folding or crimping.

The machine which I have represented is in its general construction similar to that patented to J. B. Woodruff on the 3d and 10th July, 1855, though my improvement is applicable to any other form of construction, and may be applied underneath or over the table, so as to feed from the under or upper side of the material, as may be preferred.

A represents the table, B the needle-arm, and C the shuttle-arm, which arms may be vibrated in any of the well-known ways.

At a point, D, on the shuttle-arm is pivoted the lever E, which is forked at its forward end and provided with a cam-plane, *a*, that strikes against a pin or stud, *b*, on the feeding-arm F, which is pivoted to the table at *c*, and moves said arm laterally to feed up the cloth. The spring *d* on the feeding-arm F throws said arm back when the stud *b* is released from the cam *a*.

e is the chisel-edged point or piece on the end of the feeding-arm F. This point projects through an opening in the table against the cloth, catching against several of the warp or weft threads at a time, and by its throw carries up the material with the most perfect regularity without slipping or crimping or forcing one fold of the cloth faster than the other.

The particular form of the chisel-edge is seen in Fig. 3. It is sharp enough to catch and hold without cutting the material. As before stated, this chisel-edge may be placed over the table and feed against the upper fold of the material, and may be operated from any of the moving parts of the machine.

Having thus fully described the nature of my invention, I would state that I do not claim a feeding device which penetrates the cloth or involves the use of a pointed feed-bar, or one divided into a number of points; nor do I claim a roughened surface of any kind; but

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

The broad chisel-edged piece *e*, which takes hold of several of the warp or weft threads, and thus feeds along the material without piercing or penetrating the cloth when such edge is of sufficient width to catch or hold several threads of the fabric being sewed, substantially as set forth.

JOHN O'NEIL.

Witnesses:
A. B. STOUGHTON,
THOS. H. UPPERMAN.