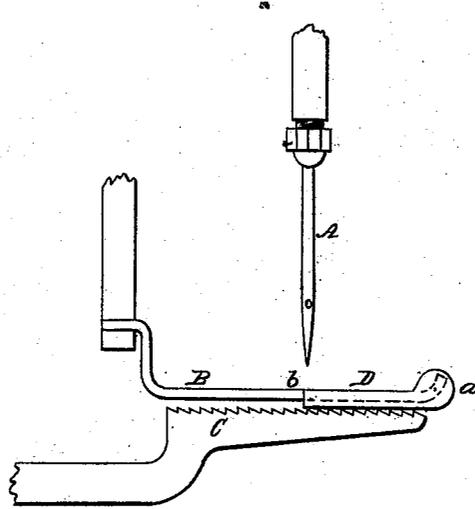


H. S. BROWN.

Gathering Mechanism for Sewing Machines.

No. 42,043.

Patented March 22, 1864.



Witnesses:

John Stone
J. B. Edwood

Inventor:

Henry S. Brown.

UNITED STATES PATENT OFFICE.

HENRY S. BROWN, OF NEW YORK, N. Y., ASSIGNOR TO ALFRED ARNOLD,
OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN GATHERING MECHANISM FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 42,043, dated March 22, 1864.

To all whom it may concern:

Be it known that I, HENRY S. BROWN, of the city of New York and the State of New York, have invented a new and useful Improvement in the Gathering Mechanism of Sewing-Machines; and I do hereby declare that the following is a full and exact description of the construction, arrangement, and operation of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

Before proceeding to particularly describe my invention, I will premise by saying that the mechanism heretofore used for gathering has been so constructed as to make its application to family sewing-machines expensive and inconvenient. My invention is simple, and it may be readily applied to or detached from ordinary sewing-machines, thus enabling them either to gather or to sew a plain seam, at the option of the operator.

The nature of my invention consists, first, in arranging the feeding mechanism—that is to say, that portion of the feeding device and presser-foot which takes hold of and feeds the cloth—in such a position with reference to the stitching apparatus that the cloth shall be fed just past the needle before the cloth is gathered, and beyond the needle left free from the pressure of the foot, so that it can be gathered by the stitching apparatus while in the act of drawing up the loop or forming the stitch; and, secondly, in the employment of a secondary or additional removable presser-foot or shoe capable of being placed upon the presser-foot, so constructed and arranged as to be easily attached to or detached from an ordinary sewing-machine, so that when attached it renders the stitching apparatus capable of gathering in the manner hereinafter described, and when detached of sewing a plain seam in ungathered work.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction, arrangement, and operation, reference being had to the accompanying drawing.

A, B, and C are respectively the needle, presser-foot, and feeding device of an ordinary sewing-machine.

D is the secondary or additional removable presser-foot or removable rest to the presser-foot above mentioned. In this instance it is a piece of metal so formed as to exactly fill the presser-foot, and covering only a portion thereof—say about half its length—and is attached thereto by merely slipping it on and over the end of B; but, if desired, it may be fastened to B by means of a set-screw, the part D to be so constructed and arranged that its lower or bottom side will project below the bottom of B and extend from the point *a* to about the point *b*, as seen in the drawing; or B and D may be dispensed with as separate devices and a single presser-foot so constructed as to operate in like manner be substituted therefor. As the purpose of D is merely to change the position of that portion of the feed mechanism which feeds the cloth in its relation to the position of the stitching apparatus, either of the foregoing modifications, as well as any other mechanical equivalents, may be used or employed for this purpose; but I prefer the arrangement shown in the drawing.

In operating my improved gathering mechanism the cloth to be gathered is placed between the presser-foot or rest D and the feeder C in the same manner that it would be placed in an ordinary sewing-machine for sewing a plain ungathered seam. When put in operation the cloth is clamped between C and D and fed along past the needle a distance equal to the length of cloth which is desired to form a single gather. Then the needle passes through the cloth, and in the act of forming the stitch the thread draws that portion of the cloth which has been fed along past D, and lies loosely between C and B backward a sufficient distance to form the desired gather.

That portion of the feeding mechanism which takes hold of and moves the cloth must be so adjusted as to pass the cloth far enough beyond D to admit of the cloth being pulled back by the thread and thus form the gather. In forming the gather the needle does not penetrate a fold of the cloth, as in other gathering mechanism, but the gather is made by drawing up the cloth between the stitches by means of the pull of the thread. The fullness of the gathers may be regulated by changing either the tension of the thread or the throw of the

feeder, or both, if desired. Though the tension of the thread must depend to some extent on the nature of the fabric to be gathered, it must of course, under all circumstances, be sufficiently tight to draw the cloth backward, as described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The making of gathers by the action of the needle and thread in the manner and by the devices herein described.
2. The gathering of a piece of cloth and fast-

ening the gathers in place by the action of the stitching apparatus of a sewing-machine when the feeding mechanism is arranged and operated relatively to the stitching apparatus substantially as herein described.

3. The presser-foot or rest D, or its equivalent, substantially as herein described, and for the purpose herein specified.

HENRY S. BROWN.

Witnesses:

SMITH E. LANE,
J. B. ELWOOD.