

(No Model.)

2 Sheets—Sheet 1.

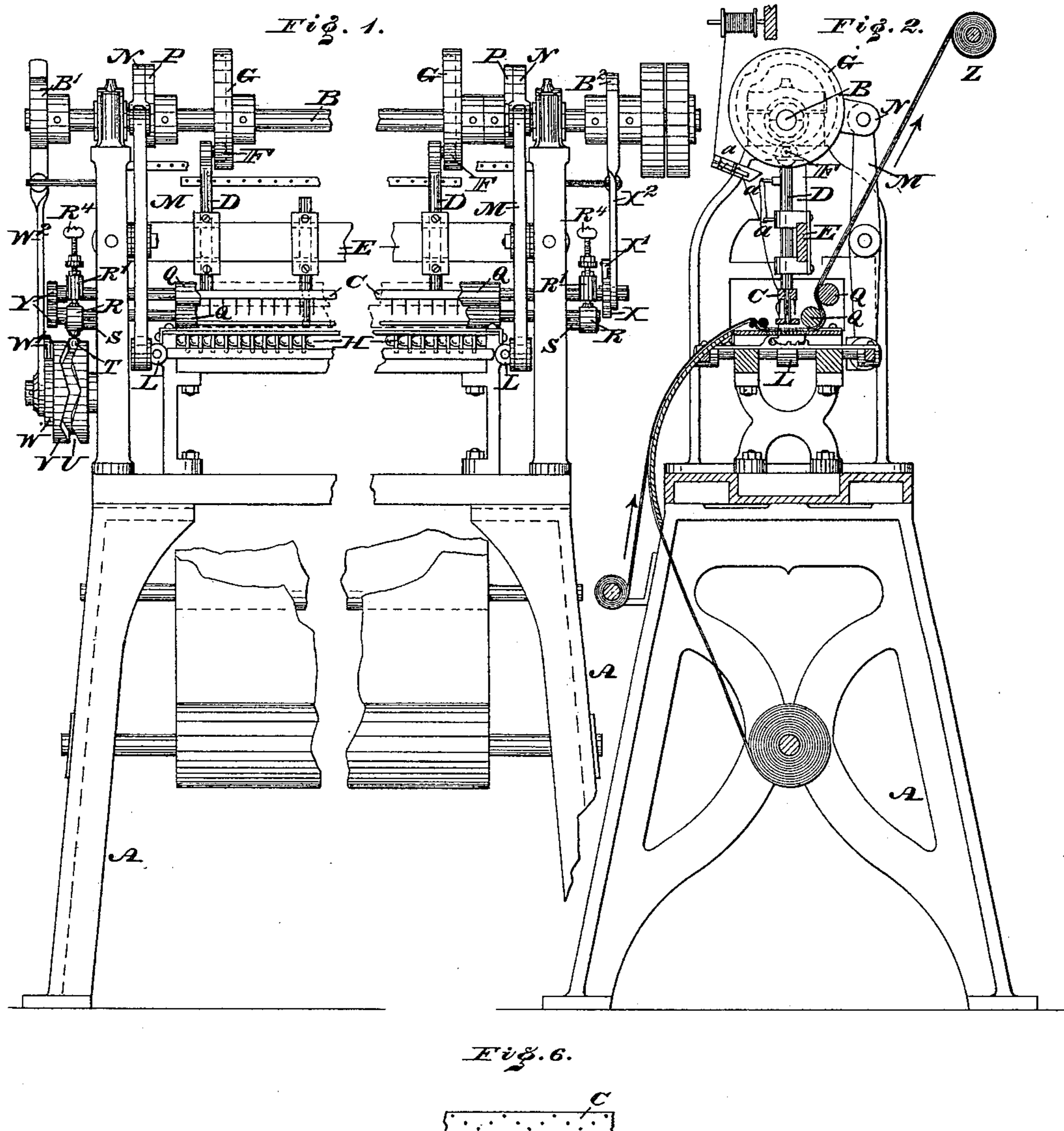
I. DEUTSCH, Dec'd.

J. DEUTSCH, Administratrix.

QUILTING MACHINE.

No. 354,049.

Patented Dec. 7, 1886.



WITNESSES:

L. Douville
H. F. Kircher

INVENTOR:

Ignatz Deutsch, Dec'd.
Jennie Deutsch, Administratrix
BY *John Diederichsen* ATTORNEY.

(No Model.)

2 Sheets—Sheet 2.

I. DEUTSCH, Dec'd.

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Fig. 3.

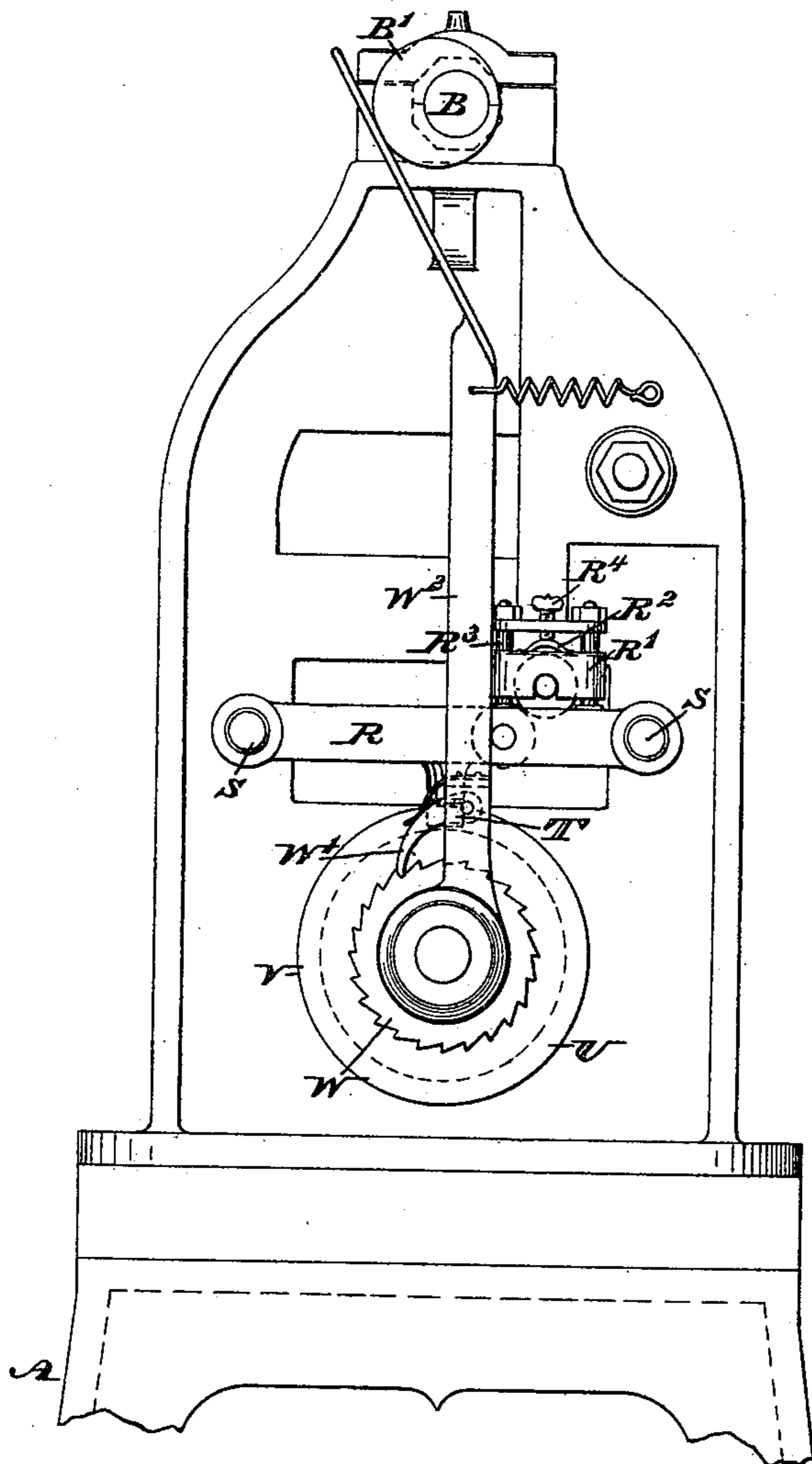


Fig. 4.

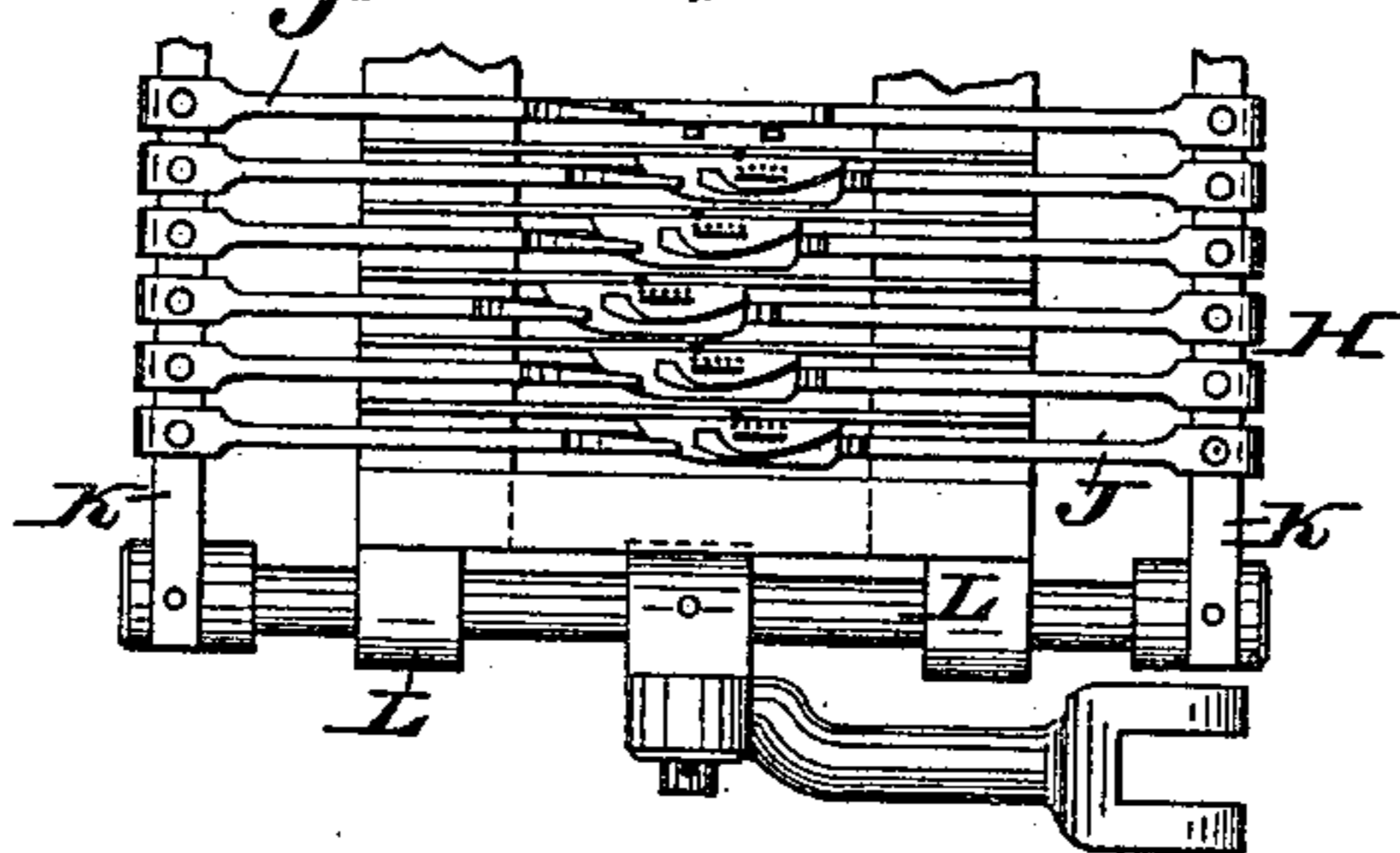
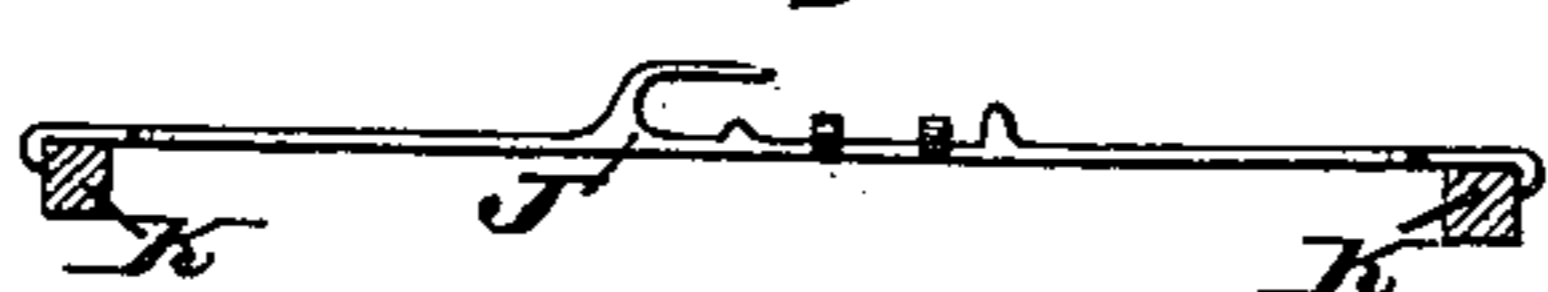


Fig. 5.



WITNESSES:

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INVENTOR:
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UNITED STATES PATENT OFFICE.

JENNIE DEUTSCH, OF PHILADELPHIA, PENNSYLVANIA, ADMINISTRATRIX
OF IGNATZ DEUTSCH, DECEASED; SAID ADMINISTRATRIX ASSIGNOR OF
ONE-HALF TO BENJAMIN B. ABRAHAMS, OF SAME PLACE.

QUILTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 354,049, dated December 7, 1886.

Application filed February 27, 1886. Serial No. 193,425. (No model.)

To all whom it may concern:

Be it known that IGNATZ DEUTSCH, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, invented a new and useful Improvement in Quilting-Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of a quilting-machine embodying the invention. Fig. 2 represents a vertical section thereof. Fig. 3 represents a side elevation of a portion at a right angle to Fig. 1 on an enlarged scale. Fig. 4 represents a top or plan view of the shuttle-carrier and connected parts. Fig. 5 represents a side elevation of the shuttle-carrier. Fig. 6 represents a bottom plan view of a portion of the needle-bar.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists of improvements in quilting-machines, as will be hereinafter fully set forth, and specifically pointed out in the claims.

25 Referring to the drawings, A represents the frame of the machine. B represents the main shaft, which is mounted on the upper part of said frame and driven by any suitable power.

30 C represents the needle-bar, which carries numerous needles, which are arranged in zigzag form, said needle-bar being connected with arms D, which are guided in the cross-bar E of the frame, and provided at their upper ends with rollers or studs F, the latter entering 35 grooves of eccentrics G, said arms D and the needle-bar being provided with suitable guides for the threads, as at *a*. The eccentrics G are secured to the shaft B, whereby the needle-bar is positively operated in both directions.

40 H represents the shuttle-carrier, consisting of a number of shuttle-carriers, J, which are secured to a frame, K, whose side pieces are guided in eyes L, which are supported on the frame A below the cloth-plate of the machine.

45 Connected with the frame K are swinging arms M, which are mounted on the frame A and pivoted to yokes N, which encircle eccentrics P, secured to the main shaft B.

Q Q represent feed-rollers, which are lo-

cated one above the other and mounted on 50 bearings R, the latter being freely supported on rods S, attached to the frame of the machine, so that the feed-rollers are permitted to move laterally. Depending from one of the bearings R is a roller, T, which enters a 55 zigzag groove, U, in a wheel, V, which is mounted on the frame of the machine. Connected with the wheel V is a ratchet, W, with which engages a pawl, W', which is hung from an arm, W², freely mounted on the shaft of 60 said wheel and engaged by an eccentric, B', on the shaft B, by which provision the wheel V is rotated, and intermittent motions in opposite directions are imparted to the feed-rollers. 65

The shaft of one of the feed-rollers has connected with it by a feather-joint a ratchet, X, with which engages a pawl, X', hung from an arm, X², freely mounted on said shaft and engaged by an eccentric, B², on the shaft B, by 70 which provision intermittent rotary motion is communicated to said feed-roller, which is geared to the other roller, as at Y, and thus both rollers receive rotary motions. The shuttles are located on the carriers in zigzag 75 order, to accord with the arrangement of the needles.

It will be seen that when the material or fabric of which a quilt is made is passed over the cloth-plate and between the feed-rollers the 80 sewing or quilting is accomplished, and as the feed-rollers move from side to side the material or fabric is similarly moved, and thus the rows of stitches are in zigzag order, the quilt as made being wound on a roll or drum, Z, 85 properly located and mounted.

Owing to the zigzag arrangement of the needles and shuttles and the lateral motions of the feed-rollers, as has been stated, the adjacent rows of stitches, each of which is zigzag or 90 serpentine, cross each other, thus intertwining the rows and forming beautiful effects. The style of the stitches may be further varied by changing the shape of the groove U of the wheel V. 95

The boxes R' of the upper feed-roller have pressing against them springs R², said boxes being fitted in standards R³, rising from the

bearings R. Thumb-screws R^4 pass through the connecting cross-bar of said standards and bear against the springs R^2 , by which provision the pressure of the feed-rollers on the quilt 5 may be conveniently and correctly adjusted.

The shuttle-carrier is formed with lugs, between which the shuttle is fitted, the shuttle resting on the top of the carrier, by which provision the bottom of the shuttle is removed 10 from the base of the shuttle-race and guarded from friction and wear.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

15 1. In a quilting-machine, the needle-bar C, carrying needles, in combination with the shuttle-carriers J, the means, substantially as described, for imparting motion to said needle-bar and shuttle-carriers and geared feed-rollers 20 Q, the bearings R, having pendent roller T, the wheel V, having zigzag groove U, and mechanism, substantially as described, intermediate of said wheel V and main shaft B for imparting rotary intermittent motion in op- 25 posite directions to said wheel V, all substantially as and for the purpose set forth.

2. In a quilting-machine, the needle-bar C and the guide-rollers Q, in combination with means, substantially as described, for impart- 30 ing a lateral motion thereto and mechanism for imparting an oscillating motion to said rollers, said mechanism consisting of the ratchet X, slidingly mounted on one of the shafts of said rollers, the arm X^2 , having one end 35 freely mounted on the same shaft as the said ratchet X, and carrying pawl X' , and the eccentric B^2 , engaged by said arm X^2 and mounted

on the shaft B, with means to rotate the same, all substantially as and for the purpose set forth. 40

3. In a quilting-machine, the needle-bar C, in combination with a cloth-plate, the rollers Q, having bearings R freely mounted on rods connected to the frame of the machine, and a tension device for said rollers Q, consisting of 45 the boxes R' , the springs R^2 , the standards R^3 , rising from the bearings R, and a cross-bar secured to the said standards and provided with the screw R^4 , adapted to bear against the said spring R^2 , all substantially as described. 50

4. In a quilting-machine, the shuttle-carriers J, secured to a frame, K, having shuttles thereon, in combination with guides L, secured to the frame of the machine, and the arms M, pivotally attached to yokes and the frame K, the 55 said yokes engaging with cams or eccentrics secured to the shaft B, all substantially as and for the purpose set forth.

5. In a quilting-machine, the needle-bar C, carrying needles, and having means, substan- 60 tially as described, for imparting a rising and falling motion to said bar, in combination with shuttle-carriers having means for imparting a reciprocating motion thereto, and cloth-rollers 55 and means for imparting a lateral motion to the same, all substantially as and for the purpose set forth.

JENNIE DEUTSCH,
Administratrix of the estate of Ignatz Deutsch,
deceased.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.

It is hereby certified that in Letters Patent No. 354,049, granted December 7, 1886, upon the application of Jennie Deutsch, of Philadelphia, Pennsylvania, administratrix of Ignatz Deutsch, deceased, for an improvement in "Quilting-Machines," an error appears in the printed specification requiring correction, as follows: In line 25, page 2, the word and reference letter "wheel V" should be stricken out and the words *feed-rollers* inserted instead; and that the Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 11th day of January, A. D. 1887.

[SEAL.]

D. L. HAWKINS,
Acting Secretary of the Interior.

Countersigned:

R. B. VANCE,
Acting Commissioner of Patents.