

(No Model.)

J. H. MUNSON.

BUTTON HOLE SEWING MACHINE.

No. 248,197.

Patented Oct. 11, 1881.

Fig. 1

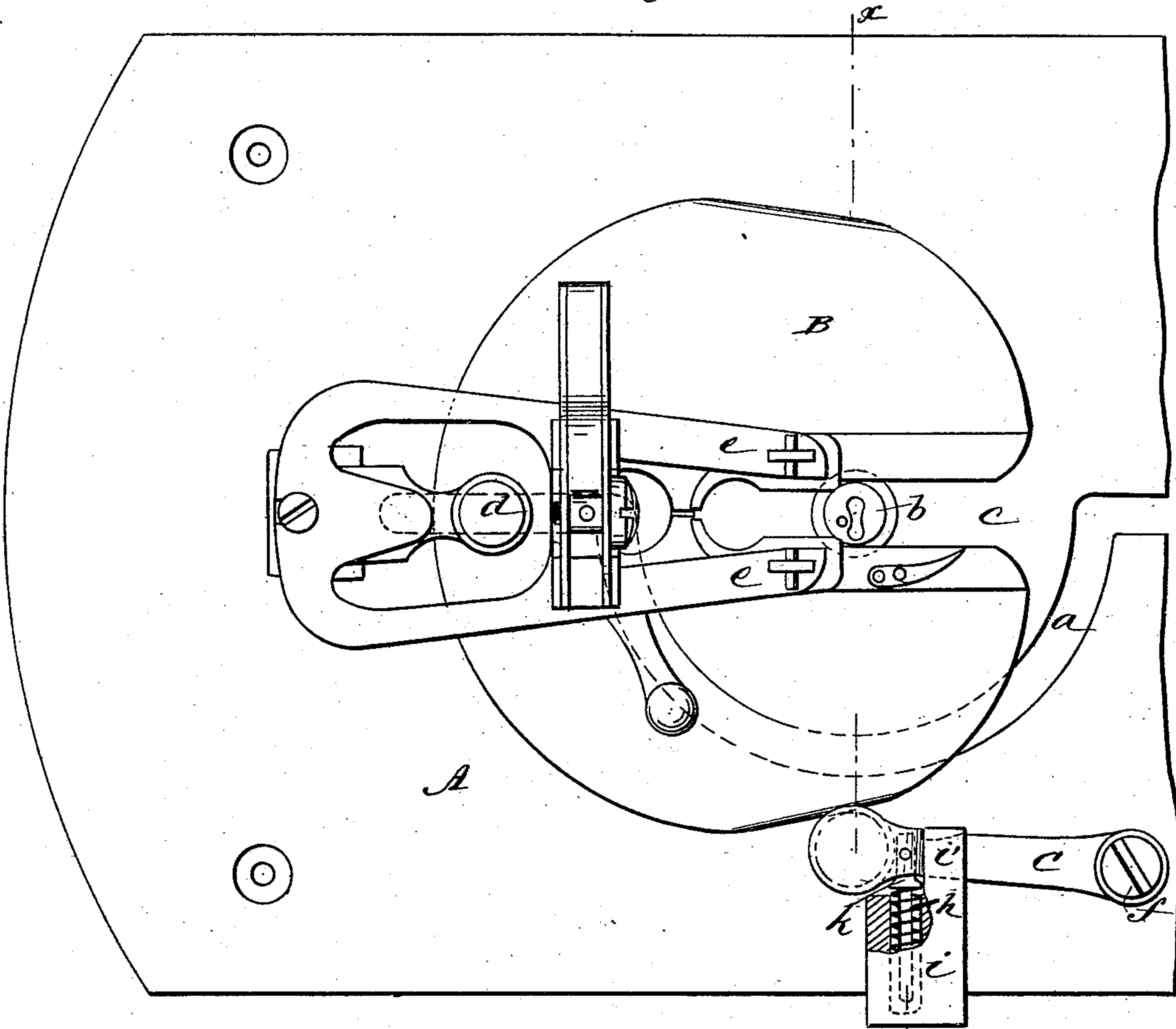


Fig. 2

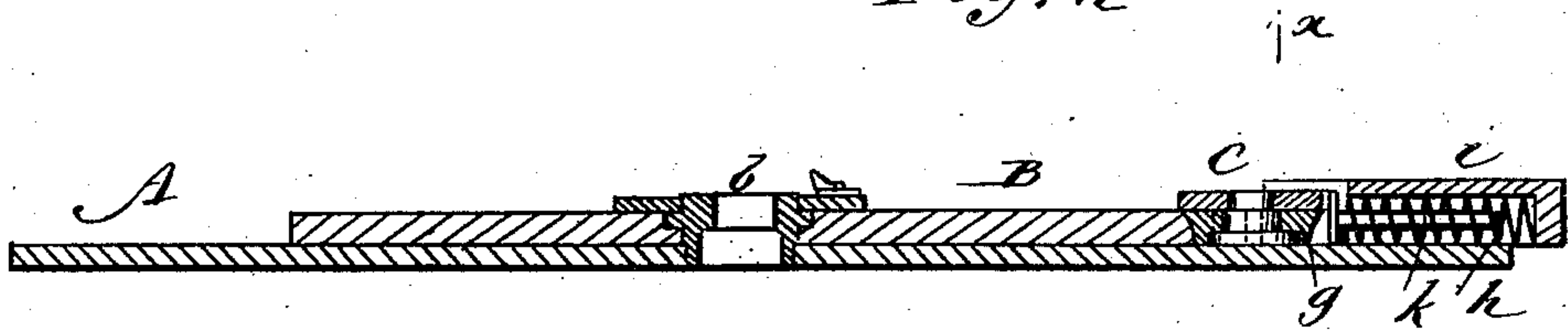
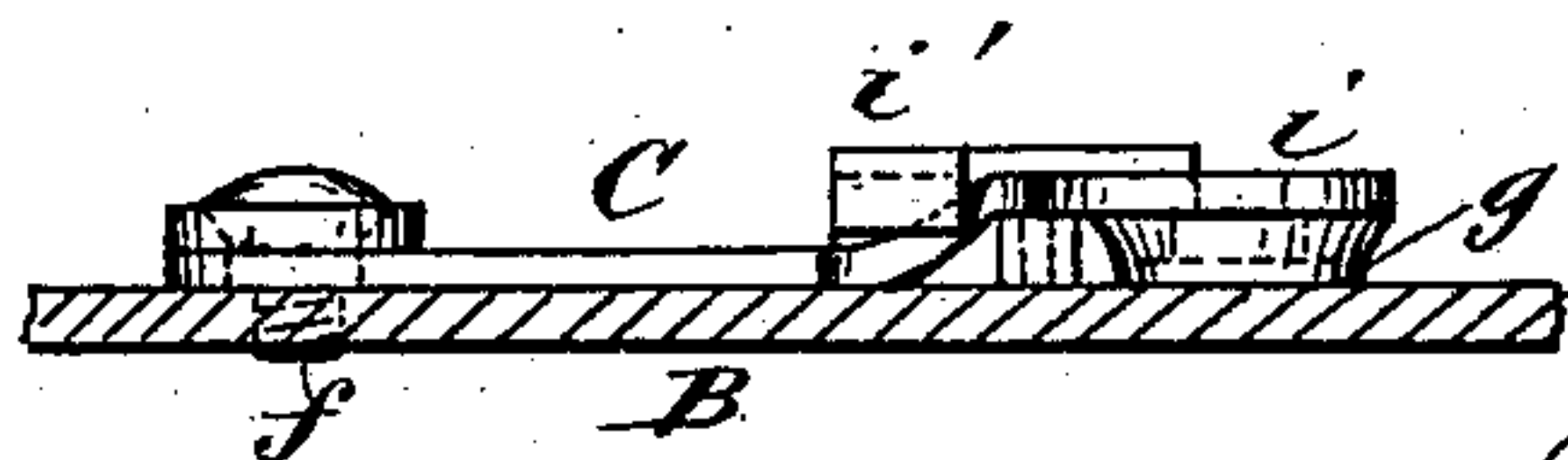


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN H. MUNSON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO GEORGE H. WYATT AND FRANK B. BURT, BOTH OF SAME PLACE.

## BUTTON-HOLE SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 248,197, dated October 11, 1881.

Application filed January 5, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. MUNSON, of the city, county, and State of New York, have invented a new and useful Improvement in  
5 Devices for Applying Friction to the Cloth-Carrying Plates of Button-Hole Sewing-Machines, of which the following is a full, clear, and exact description.

In machines for sewing button-holes a carrier-plate is used for holding, carrying, and  
10 guiding the goods, such plate being fitted to slide and turn on a button through which the needle passes in its reciprocation. A friction-spring bearing on the edge of the plate is used  
15 also to hold the plate during its movement and prevent unsteadiness; but such springs are liable to break as heretofore made and applied, on account of the pressure which gradually increases as the work advances. This difficulty  
20 is partially remedied by fitting the spring so that it does not touch the plate until after the sewing has commenced; but in that case the plate is unsteady and the sewing irregular at the commencement of the button-hole.

The object of my invention is to avoid the inconvenience and expense of the breaking of such friction-springs, and at the same time  
25 apply the requisite friction to the carrier-plate before the sewing commences; and to that end my invention consists in a friction arm and  
30 spring of novel construction and arrangement, as hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a partial plan view of the bed of a button-hole  
35 sewing-machine and its imposed parts with my improvement applied. Fig. 2 is a transverse section on line *xx* of Fig. 1; and Fig. 3 is a side elevation, showing the friction-arm.

Similar letters of reference indicate corresponding parts.

A is the bed-plate of the machine, formed with guide-slot *a*, and fitted with a button, *b*, that is slotted for the needle to pass.

B is the carrier-plate, having slot *c*, with  
45 grooved sides, for engaging with a projecting flange on button *b*, and fitted with a pin, *d*, engaging with guide-slot *a*. The plate B carries

the clamping-arms *e* and other parts for holding the goods; but these, being of well-known construction, do not need special description. 50

C is the friction-arm, attached to plate A by a pivot-screw, *f*, and fitted at its moving end with a friction-roller, *g*, that is forced toward plate B by a spiral spring, *h*, contained in a socket-piece, *i*, that is fixed on the bed-plate. 55 The arm C is placed in such position that the roller on its outer end bears on the side of the carrier-plate and presses the plate toward button *b* in a direction at right angles to the first or straight movement of the plate B, and the  
60 side of the latter comes in contact with the roller on the arm before the ends of arms *e* reach the slot in button *b*, as shown in Fig. 1, so that the spring acts before the sewing commences. 65

The socket-piece *i* is formed with a lug, *i'*, projecting over arm C, and also, as shown in Fig. 3, in front of the arm, to limit its forward movement by the action of the spring *h*. The spring is around a pin, *k*, that is pivoted to  
70 the under side of arm C, and the spring is held between a flange on pin *k* and the bottom of the hole in plate *i*, so that it is sustained and prevented from twisting. With a spiral spring fitted in this manner the required pressure  
75 can be obtained without risk of breakage, the arm can be made as strong as required, and the proper working of the machine is facilitated. The pressure of the spring is light at the first movement and increases as the arm is  
80 forced outward by the plate; but such pressure is evenly distributed in the coils of the spring and is always in a nearly straight line.

Having thus described my invention, I claim as new and desire to secure by Letters Patent— 85

In button-hole machines, the pivoted arm C, spring *h*, pin *k*, and socket-piece *i*, combined together and with the sliding carrier-plate B and bed A, substantially as and for the purposes set forth.

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Witnesses:

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