

A. HARROUN, Jr.
Sewing Machine Attachment.

No. 87,409.

Patented March 2, 1869.

Fig. 1.

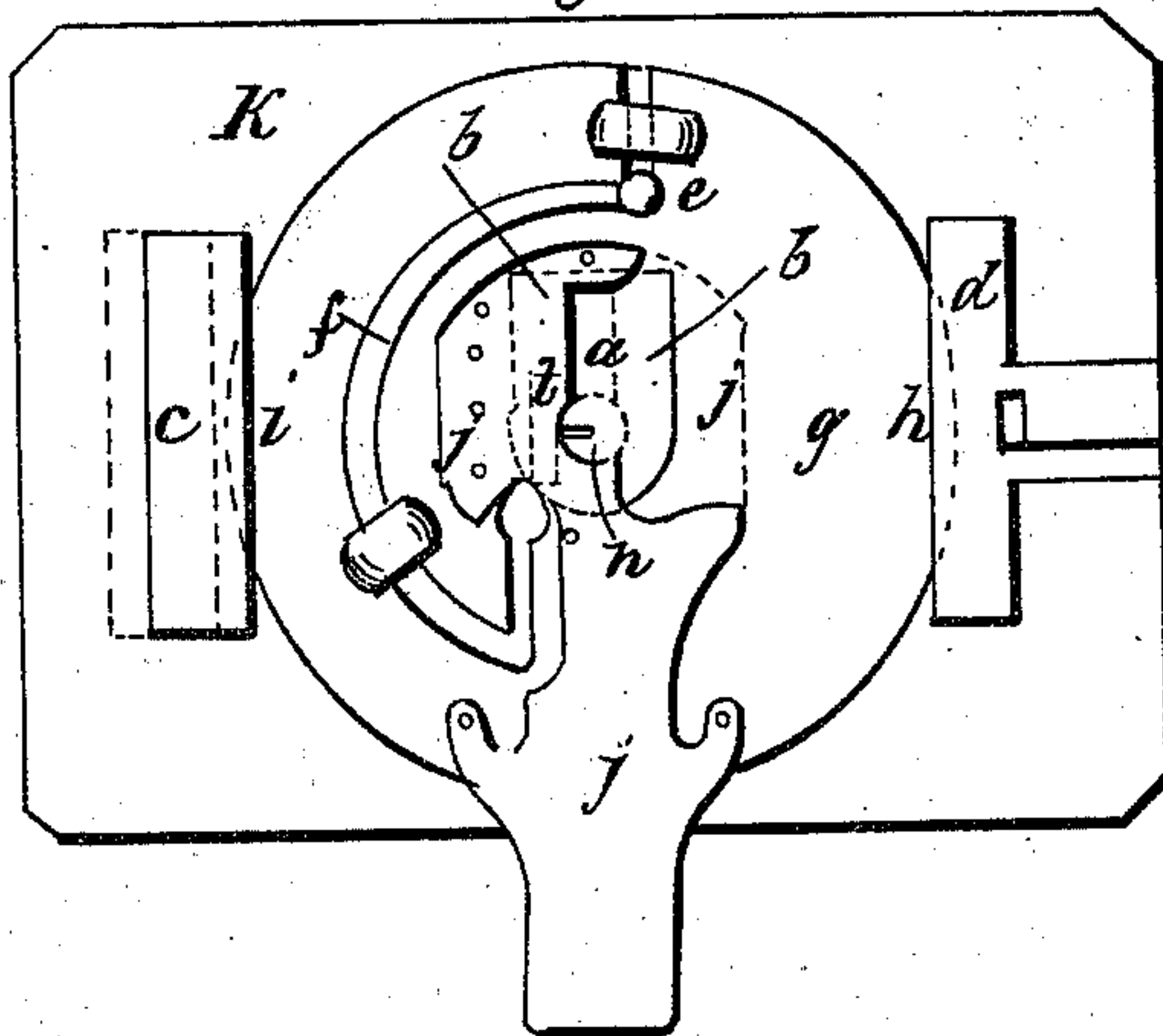
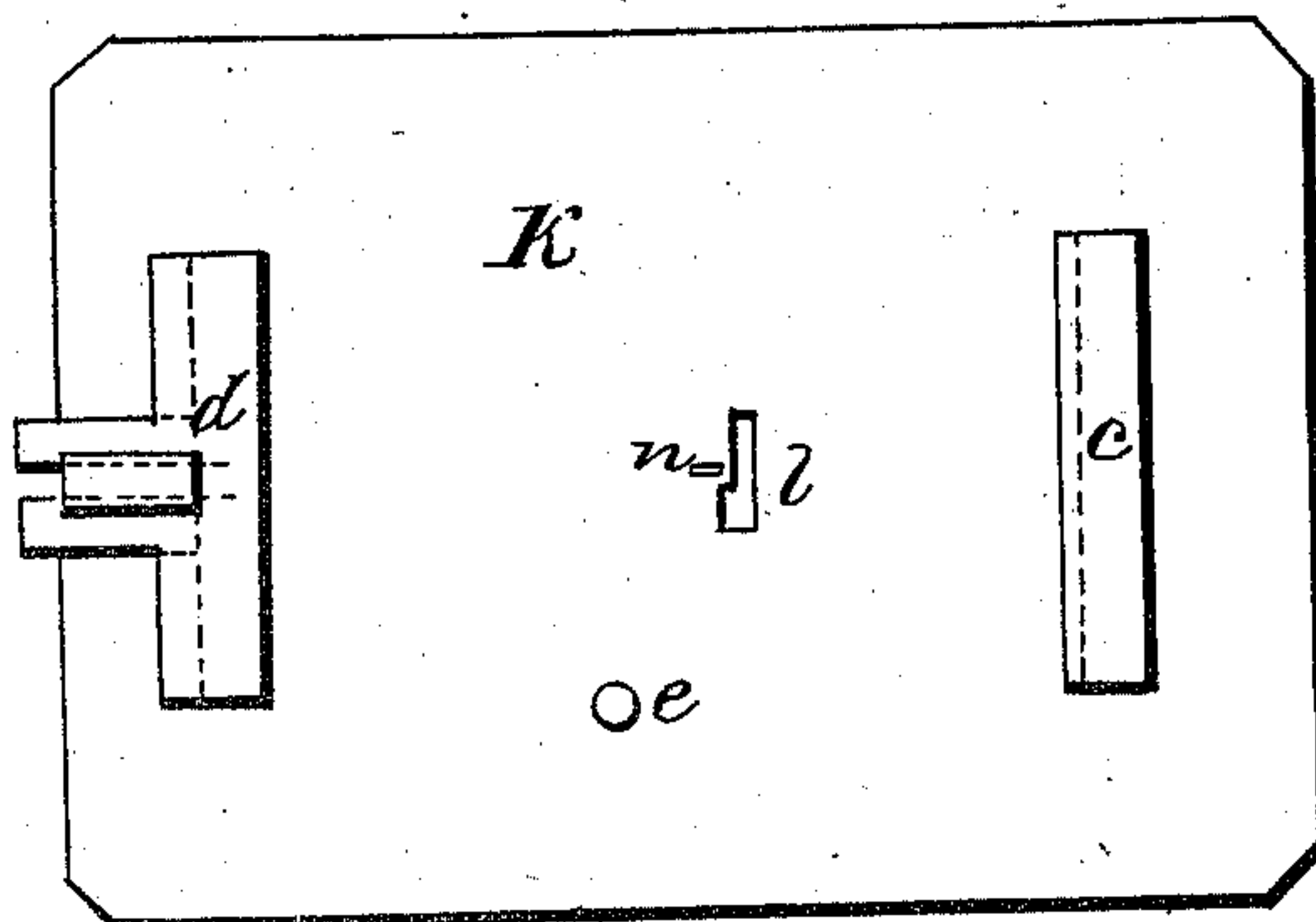


Fig. 2.



Witnesses

Charles H. Goodfellow
Daniel Pinckney

Inventor

Alexander Harroun Jr.

UNITED STATES PATENT OFFICE.

ALEXANDER HARROUN, JR., OF ONONDAGA, NEW YORK.

IMPROVEMENT IN CLOTH-GUIDE FOR SEWING-MACHINE FOR WORKING BUTTON-HOLES.

Specification forming part of Letters Patent No. 87,409, dated March 2, 1869.

To all whom it may concern:

Be it known that I, ALEXANDER HARROUN, Jr., of the town and county of Onondaga, in the State of New York, have invented a new and useful Device or Machine for Holding and Turning the Cloth while Making a Button-Hole; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon.

Figure 1 of the drawing gives an upper-surface view of my machine, when laid upon a sewing-machine, as it would be in use. Fig. 2 represents the part of the sewing-machine upon which it is laid.

One part of my invention consists of a circular plate, of any suitable size, material, and thickness, constructed substantially as hereafter described. This plate is referred to by the letter *g* of the drawings, and is designed to be placed upon a sewing-machine in such a position that the needle will pass down through the central parts of it. For this purpose an opening is made in the center, always as large as the largest button-hole which the machine is expected to make, and sometimes large enough to permit the feed to act upon the cloth instead of acting upon the plate. The letter *a* refers to the opening for the button-hole, and the letter *b* refers to the opening for the action of the feed. This plate is movable, either in straight or circular lines, and is kept in the right direction when operated by a stationary guide upon one side, a movable guide upon the other, and a post placed at a suitable point in relation to the guides.

The letter *c* refers to the stationary guide, the letter *d* to the movable guide, and the letter *e* to the post.

An opening or slot is made in the plate, of a width equal to the diameter of the post, and running from the outside toward the center, and on a line parallel with the straight sides of the button-hole. This slot runs in the above-described direction a distance equal to or greater than the length of the longest button-hole which the machine is expected to make, and at the end of a suitable distance in a straight line it assumes the form of a circle, the center of which is the center of the plate,

and continues thus until nearly a half-circle has been described, when it turns toward the center again upon a line parallel with the slot in its first straight portion, and continues in that direction as far as may be necessary. The slot is referred to by the letter *f*.

The straight portion of the slot moves against the post while one side of the button-hole is being made, the circular part while the head or eye is being made, and the other straight part while the other side is being made.

From the sides of the circular plate, and parallel with the straight parts of the slot, a suitable amount is taken off, for the purpose of changing the position of the cloth while it is being turned during the working of the head or eye. If the head or eye is to be circular, or nearly so, the sides of the plate may be made straight, as at the place referred to by the letter *h*; and if the head or eye is to be made oblong, on a line parallel with the slit of the button-hole, the sides of the plate may be given the form of an enlarged circle, as seen at the place referred to by the letter *i*. Attached to the circular plate, near the edge, and extending over a suitable portion of the center, I use another plate, upon which the cloth-presser or foot of the sewing-machine is to rest, and between which and the circular plate the cloth is held while a button-hole is being made.

I provide one or both of the plates with teeth, if necessary. The last-mentioned plate is referred to by the letter *j*.

The letter *l* refers to the feed-opening of the bed-plate. The letter *n* refers to the opening for the needle.

To operate this mechanism, the button-hole is cut, and the cloth is placed between the two plates, with the button-hole lengthwise of the opening referred to by the letter *a*, Fig. 1, and the end in which the eye is to be made in the center of the circular end of the opening. It is then placed on the sewing-machine, with one side of the circular plate pressed gently against the stationary guide, (indicated by the letter *c*), with the post at the right place in the slot for commencing the button-hole at the end opposite the head or eye.

The pressure of the foot upon the upper plate causes the cloth to be held firmly between it and the plate below.

While the button-hole is being made, the

cloth and holder are moved forward by the feed until the post reaches the end of the first straight part of the slot, which should be at the point for commencing the circular end or eye.

The holder, with the cloth, is then turned around with the hand or any suitable device until the post has reached the end of the circular part of the slot, when the holder and cloth are again moved along by the action of the feed, in a straight line, to the end of the button-hole.

I claim—

The slotted movable plate *g*, having sides, as described, and an opening in the center, the guides *c* and *d*, and the post *e*, when combined and operated substantially as set forth, and for the purpose mentioned.

ALEXANDER HARROUN, JR.

Witnesses:

DANIEL PINCKNEY,
CHARLES H. HODGKINS.