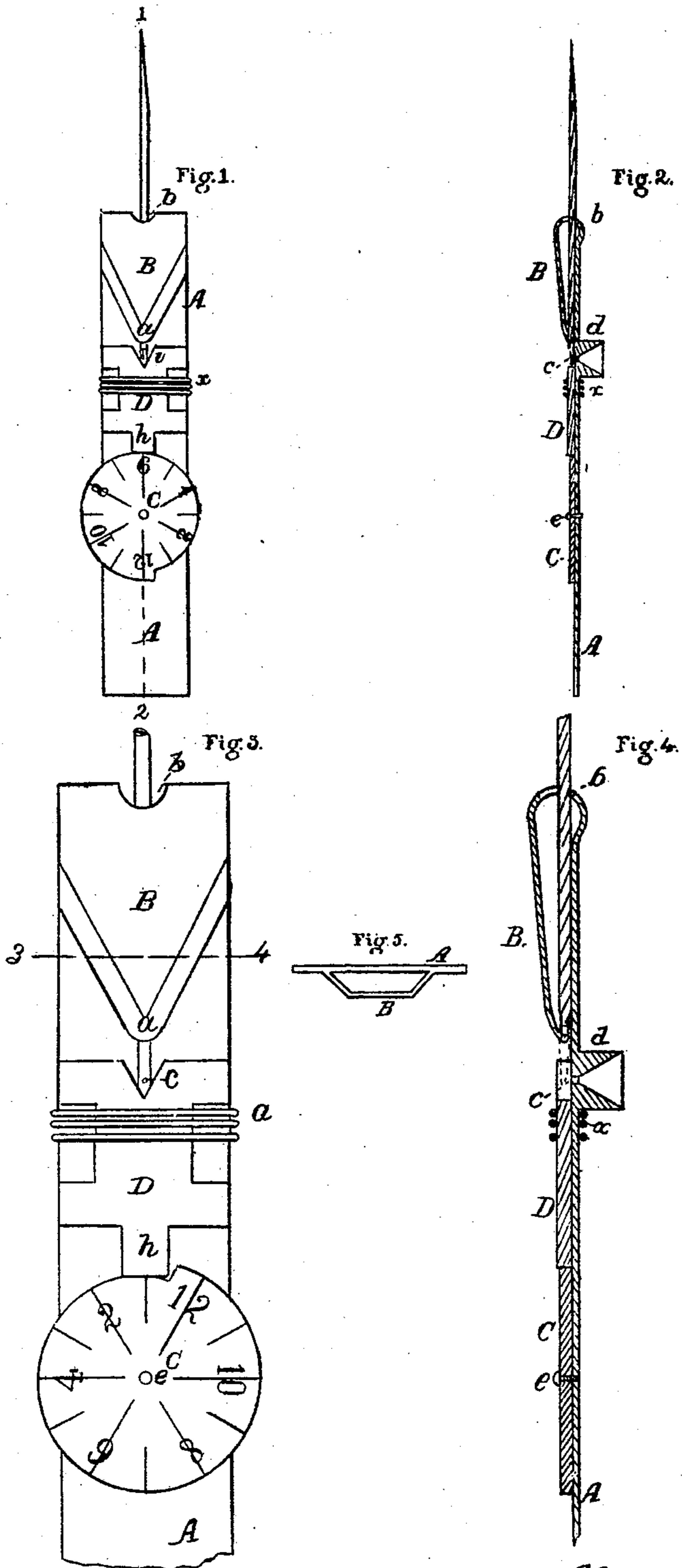


J. O'Kane.
Needle Threader.

No. 37,587

Patented Feb. 3, 1863.



WITNESSES. *Charles H. Hutton*
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UNITED STATES PATENT OFFICE.

JAMES O'KANE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR THREADING NEEDLES.

Specification forming part of Letters Patent No. 37,587, dated February 3, 1863.

To all whom it may concern:

Be it known that I, JAMES O'KANE, of the city and county of Philadelphia, Pennsylvania, have invented an instrument for facilitating the threading of needles; 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, and to the letters of reference marked thereon.

My invention relates to the peculiar construction and arrangement of devices described hereinafter for facilitating the threading of needles, the main advantage of my invention being the ready adjustment of the instrument for the reception of needles of different sizes.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a front view of my improved instrument for threading needles; Fig. 2, a vertical section on the line 1, 2, Fig. 1; Figs. 3 and 4, the same as Figs. 1 and 2, (drawn to an enlarged scale,) the operating parts being in a different position; Fig. 5, a transverse section on the line 1, 2, Fig. 3.

A is a metal plate the upper end of which is bent over as shown in the drawings, the sides of the bent portion being beveled and brought to a rounded point at *a*, so as to form a flexible lip, B, the point and beveled edges of which are in contact with the face of the plate, excepting under circumstances described hereinafter. A short distance below the point of the lip B, and in the plate A, is a small hole, *c*, and on the back of the plate is a cylindrical block of metal, *d*, in which is a conical opening communicating with the said hole *c*. A plate, D, is so secured to the plate A as to slide freely thereon to a limited extent, the upper edge of this sliding plate having a notch, *i*, and the lower edge a projection, *h*, which bears upon the edge of a cam, C, the latter being formed and graduated to suit needles of different sizes, as will appear hereinafter, and being hung to a pin, *e*, on the face of the plate A. A spring, *x*, serves to maintain the plate D in contact with the edge of the cam.

In using this instrument it is necessary in

the first instance to ascertain the number of the needle which it is desired to thread, (the sizes of all needles being determined by the number.) Supposing the needle to be the size number 6, the cam is turned until the number 6 is brought directly beneath the projection *h*, as seen in Fig. 1. The needle is then dropped head downward through an opening, *b*, in the bent portion of the plate A, when the head of the needle will be directed by the beveled edges of the lip toward the rounded point *a* of the latter. The needle is then pushed down, which is best done by pressing the thumb-nail against the point, (the lip opening sufficiently to permit its passage,) until the needle strikes the bottom of the notch *i*, when it will be found that the eye of the needle is directly opposite the hole *c* in the plate, and that the end of a thread passed into the conical opening in the projection *d* will be guided through the hole *c* into and through the eye of the needle. Should the number of the needle to be applied to the instrument be lower than six, (one for instance,) and the eye consequently larger and farther from the end of the needle, it will be found on introducing the head of the needle into the notch *i*, (the cam being still in the position shown in Fig. 1,) that the eye will be above the opening *c*, and consequently that the thread cannot be introduced. It is therefore necessary to lower the needle, which is done by turning the cam until the mark number 1 is beneath the projection *h*, when the plate D will be lowered to such an extent that when the needle is pushed down well into the notch, the eye will coincide with the opening *c*. It will be seen that the number of the needle to be threaded being first ascertained, and the cam C being turned until a mark bearing a corresponding number on its face is brought directly beneath the center of the projection *h*, the plate D is elevated or lowered by the action of the cam to such a position that when the head of the needle rests in the notch *i* its eye will exactly coincide with the hole *c* in the plate.

The elastic lip B, with its beveled edges, has a twofold object: first, it serves to guide the needle (however carelessly it may be inserted into the opening *b*) to the point *a* of the lip; secondly, the needle being flattened near the head, the tendency of the point of the lip on

the needle passing the same will be to bear on one of the flat sides of the head and to press the other flat side against the plate, the head in passing the point of the lip must consequently be turned (if turning be necessary) so that its eye is always presented toward the hole *c* of the plate. After the thread has been passed through the eye of the needle the latter, accompanied by the thread, is withdrawn from the instrument.

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

1. The cam *C*, so formed and so graduated and so arranged in respect to the hole *c* in a plate, *a*, to which the cam is hung, that the eyes of needles of different sizes may, by the aid of the cam and its graduations, be brought

to coincide with the said hole in the plate, for the purpose specified.

2. In combination with the graduated cam, or its equivalent, the slide *D*, with its notch *i*, the whole being arranged and operating substantially as and for the purpose described.

3. The flexible lip *B*, when arranged on the plate *a* in respect to the hole *c* in the said plate, and the notch *i* in the slide *D*, substantially as and for the twofold purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAS. O'KANE,

Witnesses:

HENRY HOWSON,
JAMES McCABEN.