

(No Model.)

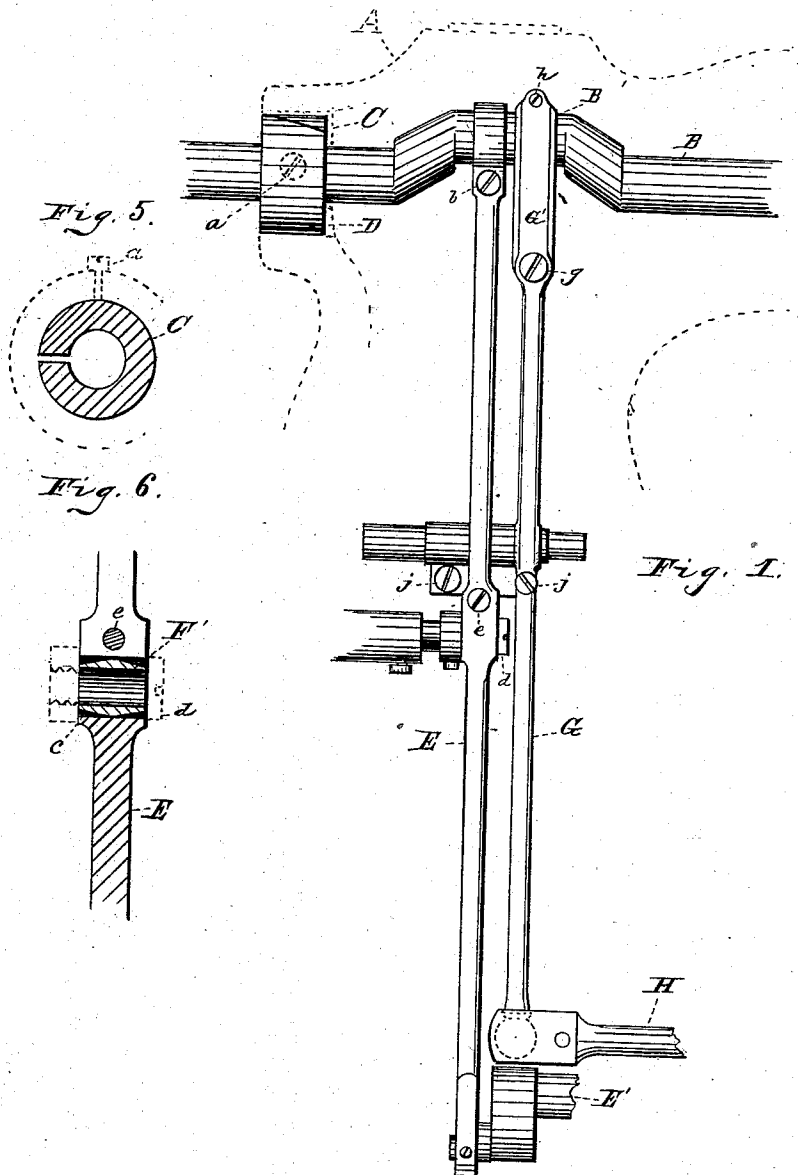
D'ARCY PORTER.

2 Sheets—Sheet 1.

DEVICE FOR CONVERTING MOTION IN SEWING MACHINES.

No. 257,609.

Patented May 9, 1882.



WITNESSES

*Ch. Engel*  
*W. D. Leggett*

*D. Arcy Porter*

By

INVENTOR

*Leggett Leggett*

ATTORNEYS

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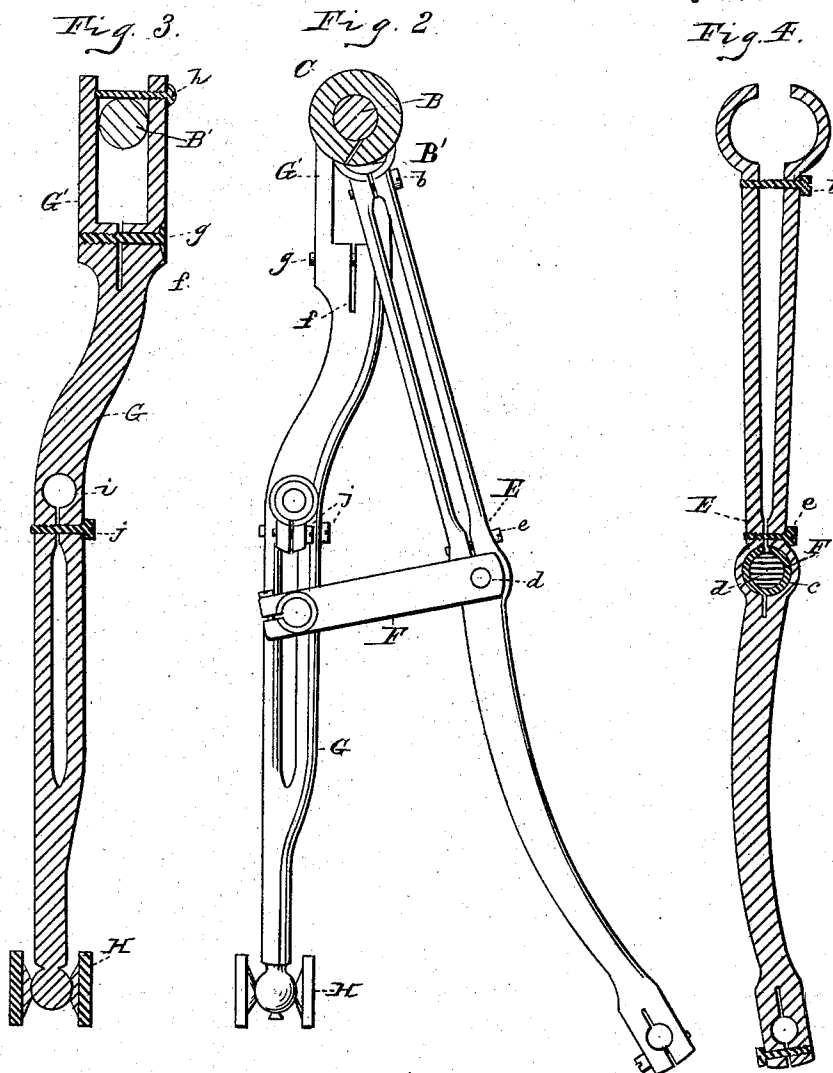
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# UNITED STATES PATENT OFFICE.

D'ARCY PORTER, OF CLEVELAND, OHIO.

## DEVICE FOR CONVERTING MOTION IN SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 257,609, dated May 9, 1882.

<sup>a</sup> Application filed January 24, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, D'ARCY PORTER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Devices for Converting Motion in Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to devices for converting motion; and it consists in the peculiar construction of the several parts, as will be hereinafter fully set forth and claimed.

In the drawings, Figure 1 is a view in front elevation of a portion of a sewing-machine constructed according to my invention. Fig. 2 is an end view of the same. Fig. 3 is a vertical section taken through the shuttle-operating lever. Fig. 4 is a vertical section taken through the feed-operating lever or pitman. Figs. 5 and 6 are detached views, in section, of some of the parts, showing more clearly their construction.

In the said drawings, A represents the standard of an ordinary sewing-machine, adapted to hold and support the operative parts of my device.

B represents the main horizontal driving-shaft, which is provided with a crank, B'. This driving-shaft B is provided with a split bushing, C, which acts as a bearing for said shaft B, and also as a bushing to fill the hole D, which is formed in the rear of the standard A, and which is made large enough to admit of the passage of the crank B' on the shaft B. A set-screw, *a*, passing through from the outside of the standard A in such a manner as to press against the side of the bushing, acts to hold said bushing in place in the standard and at the same time take up any wear that may occur. The split in the bushing allows it to be compressed by means of said set-screw *a*.

E represents the pitman, which is secured to and driven by the crank B', its lower end being pivoted to a crank on the feed-shaft E'. The manner of constructing this pitman E is shown more clearly in Fig. 4, where it is shown as being split down to a short distance below its connection with the radius-bar F. By constructing it in this manner it allows of the up-

per end being sprung apart far enough to pass over the crank B', when it may be again closed and secured and caused to hug or embrace the said crank B' by means of a set-screw, *b*, which also acts to take up any wear that may occur between the crank B' and the upper end of the pitman E.

The manner of connecting the radius-bar F to the pitman E is as follows: A hole, *c*, is formed near the center of the pitman E, of sufficient diameter to admit a split ball-bushing, F', in which is journaled the screw *d*, the head of which is somewhat larger than the hole *c*. The other end or point of the screw *d* is provided with a short screw-thread, which screws into one end of the radius-bar F snugly, and in such a manner that the oscillating of the said radius-bar will not tend to loosen it. This ball-bushing F' allows a universal movement between the radius-bar F and the pitman E, so that any irregularity in the different parts may be accommodated in "setting up" the machine, and being split, (see Fig. 4,) any wear between the screw *d* and bushing may be taken up by means of the set-screw *e*, which passes through the pitman E a short distance above the said bushing F'.

G is a lever, the upper end of which is provided with a yoke, G', in which moves the crank B', and the lower end being connected in any suitable manner to the shuttle-driving lever H. This lever G is constructed as shown in Fig. 3—viz., the upper end is bifurcated, thus forming the yoke G'. For a short distance below the bottom or lower end of the yoke G a slot, *f*, is cut, and a set-screw, *g*, passing through the lever G at a right angle to said slot *f* and through it, acts to adjust the sides of the said yoke G' to the crank B'. The upper end of the yoke G' is also provided with a set-screw, *h*, which passes through only one of the arms and abuts or presses against the other. The function of this screw *h* is to keep the inner sides or walls of the yoke G' parallel or equidistant apart, the tendency of the lower screw, *g*, being to cause the upper ends to close more than the lower part. Near the center of the lever G, or at the point where it is pivoted to the standard A, it is slotted for a considerable distance, the said slot running into the bearing *i*, and thus allowing the rear

of these parts to be taken up by means of a set-screw or set-screws, *j*.

The operation of the different parts while in motion is described in patent to Porter and  
5 White, No. 250,169, dated November 29, 1881, and hence I have not more fully described it here.

What I claim is—

1. In a sewing-machine, the combination, with  
10 a crank-shaft and an oscillating lever, of a pitman constructed with two yielding arms made integral therewith, the outer ends formed as bearings to fit upon the crank, and a set-screw inserted through the yielding arms to take up  
15 for wear, a split bushing inserted in a circular bearing formed between the yielding arms, and a radius-bar connected at one end to the

oscillating lever, and at the other end mounted on a bearing supported in said split bushing, substantially as set forth. 20

2. In a sewing-machine, the combination, with the crank *B'* and pitman *E*, said pitman being split, substantially as shown, of the radius-bar *F*, said radius-bar being connected to the pitman by means of a screw, *d*, passing 25 through a split ball-bushing, *F'*, substantially as and for the purpose shown and described.

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

D'ARCY PORTER.

Witnesses:

W. E. DONNELLY,  
ALBERT E. LYNCH.