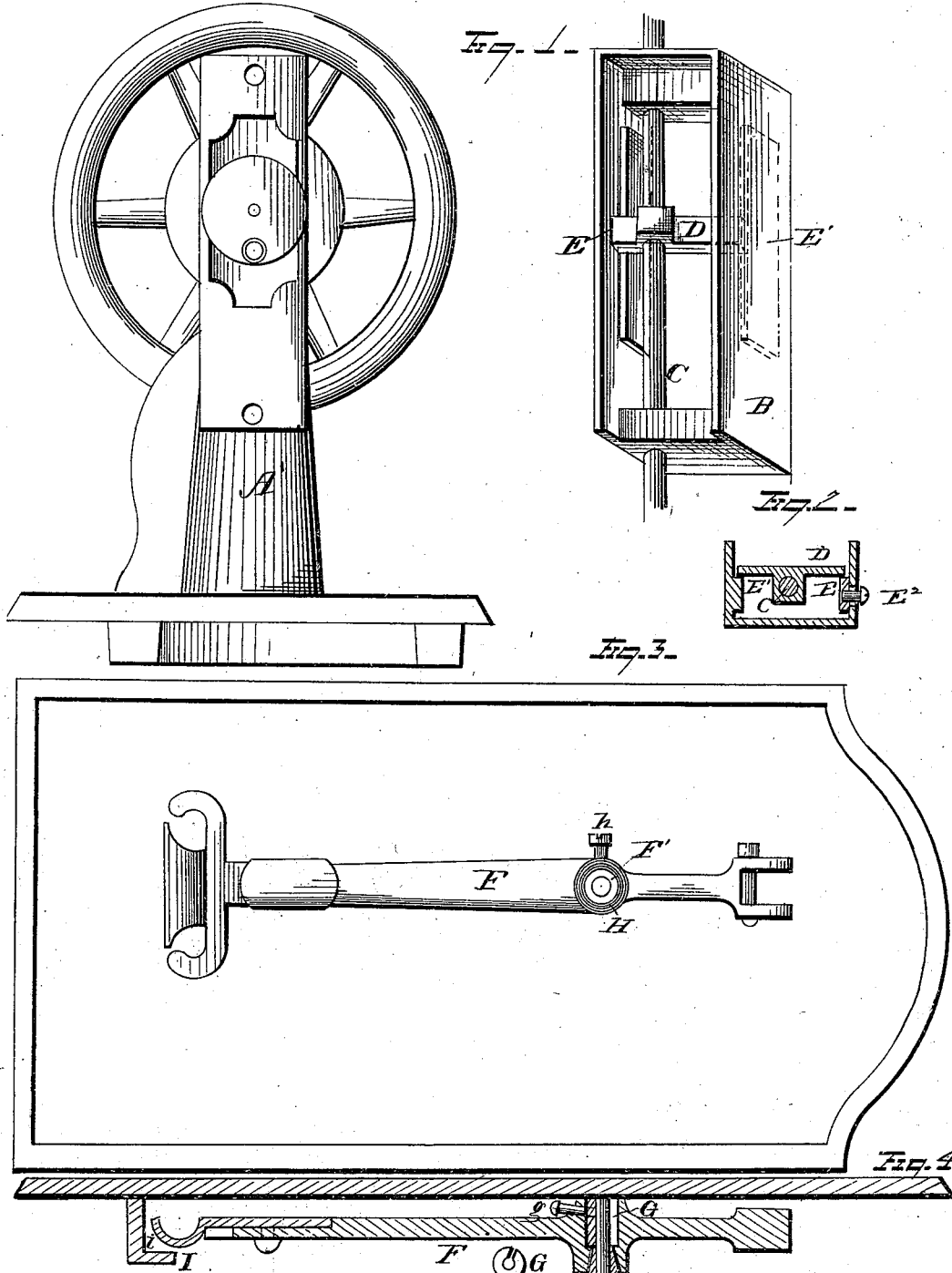


D. A. PORTER.  
SEWING-MACHINE.

No. 188,537.

Patented March 20, 1877.



Witnesses:  
*Ed. de Nottingham*  
*A. M. Bright*

Inventor  
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*Atys.*

# UNITED STATES PATENT OFFICE.

D'ARCY PORTER, OF CLEVELAND, OHIO, ASSIGNOR TO WHITE SEWING MACHINE COMPANY, OF SAME PLACE.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **188,537**, dated March 20, 1877; application filed December 23, 1876.

*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 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 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in sewing-machines, and more particularly to mechanism for preventing the revolution of the needle-bar or pressure-bar; also, in the attachment of the shuttle-lever to the machine, and also in the shuttle-race.

In the drawings, Figure 1 is a front view of the machine, with the face-plate removed and turned so as to show my improvements embraced therein. Fig. 2 is a cross-section through the cam-piece or cross-head of the needle-bar. Fig. 3 is a view of the bottom of the machine; Fig. 4, a longitudinal section through the shuttle-lever and the shuttle-race.

A is the body of the machine. B is the removable face-plate; C, the needle-bar; D, the cam on the needle-bar. E E<sup>1</sup> are projections attached to both sides of the removable face-plate, so as to receive the bearings of both ends of the cam D upon the same side of the said cam. It is therefore apparent that, the cam D resting, as it does, at both ends upon the projections E, the needle-bar, being firmly attached to said cam, cannot turn at all about its axis.

One of the projections, E<sup>1</sup>, is stationary or formed with the case, and the other one, E, is made adjustable, so as to take up any lost motion occasioned by wear. This same principle may apply to the pressure-bar, to prevent its revolution, by attaching a cross-piece to it which shall ride upon these side pieces E E<sup>1</sup>. The piece E is represented as adjustable by means of set-screws E<sup>2</sup>.

F is the shuttle-lever. It is pivoted on a stud, F', that projects down from the bed of the machine. G is a split washer placed with-

in the boxing about the upper end of the stud F'. The journal-box is recessed at its lower end, as shown, and a conical adjustable washer or head, H, is attached, by a set-screw, h, to the lower end of the stud.

By a set-screw, g, the split bushing G may be made to compensate for any lost motion occasioned by wear at that point, while the adjustable conical head H can be adjusted to compensate for wear in that locality.

I is the shuttle-race. i is a flange or lip projecting outward from the shuttle-race, its object being to support the shuttle-cage in case the shuttle should be struck by the needle, or be otherwise knocked downward.

I do not limit myself in the employment of this device to any particular kind of machine, but propose to employ them upon all machines of a like nature. Neither do I limit myself in the employment of the split bushing G and the conical head H to the attachment of the shuttle-lever, for it is equally applicable for the attachment of other levers, and especially such of them as rotate about a vertical stud.

It is apparent that in the combination of the shuttle with the stud F' the conical head may be adjacent to the plate and the split bushing be at the outer end, thus simply reversing the order shown in the drawings; but in this latter case a plain nut or collar is put upon the end of the stud to hold the parts in place.

What I claim is—

1. The combination, with the needle-bar and cam, of a fixed and an adjustable bearing secured to the case, substantially as and for the purpose set forth.

2. The combination, with the shuttle-lever, of the stud F, split bushing G, and adjustable conical head H, substantially as and for the purpose described.

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

D'ARCY PORTER.

Witnesses:

FRANCIS TOUMAY,  
EDWARD WALSH.