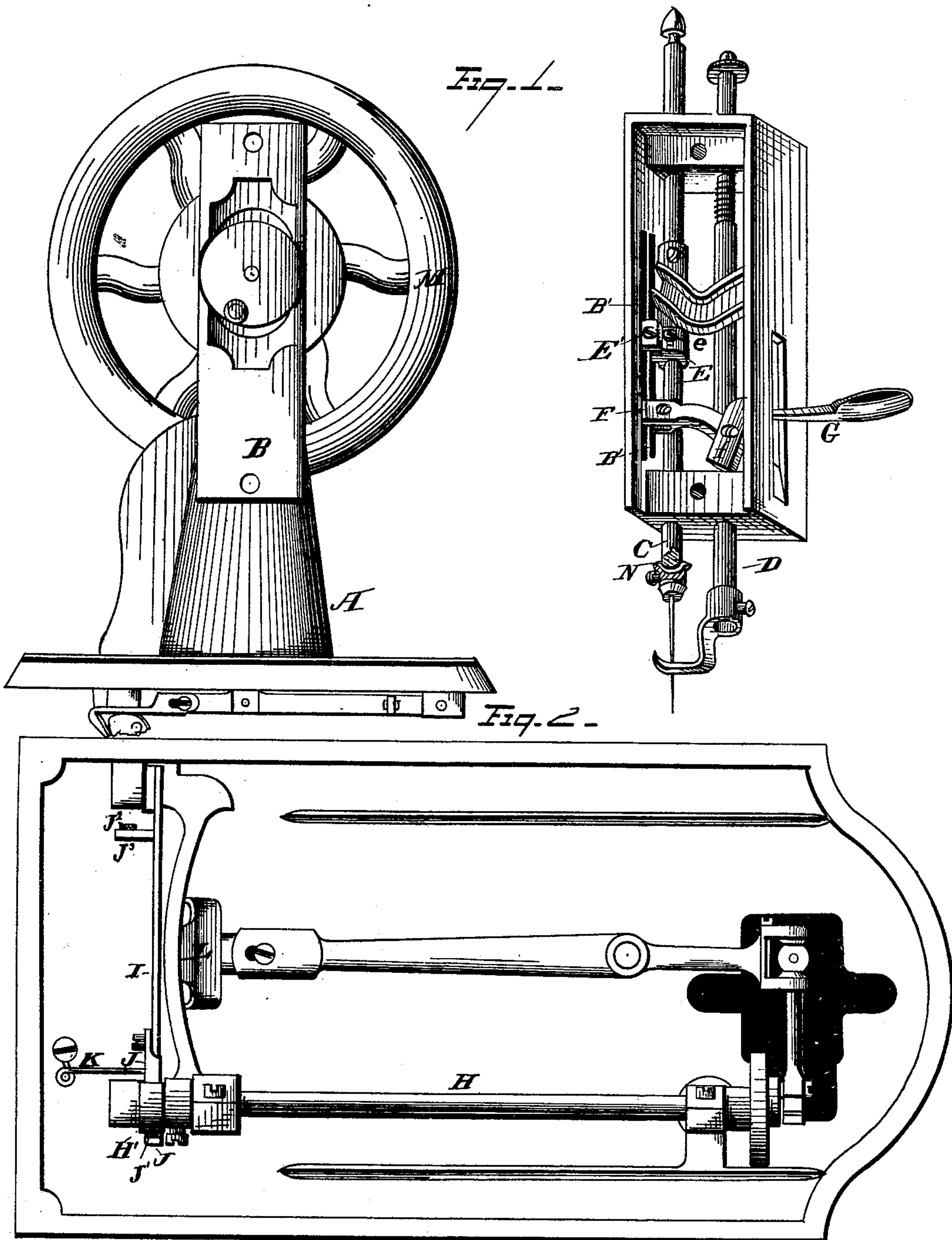


G. W. BAKER.
SEWING-MACHINE.

No. 188,767.

Patented March 27, 1877.



WITNESSES
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UNITED STATES PATENT OFFICE.

GEORGE W. BAKER, OF CLEVELAND, OHIO, ASSIGNOR TO WHITE SEWING MACHINE COMPANY, OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 188,767, dated March 27, 1877; application filed December 22, 1876.

To all whom it may concern:

Be it known that I, GEORGE W. BAKER, 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 certain improvements in sewing-machines; and the invention consists in certain details of construction and combinations of parts, as will more fully appear from the following description and claims.

In the drawing, Figure 1 represents a front view, with the face-plate removed and turned, so as to show my improvements embraced therein. Fig. 2 shows a bottom view of the machine; Fig. 3, a separate view of the shuttle-cage. Fig. 4 is a cross-section through the clutch E. Fig. 5 is a cross-section of the band-wheel, showing the wedge-shaped groove.

A is the body of my machine; B, the face; C, the needle-bar; D, the pressure-bar. E is a clutch or guide-piece, which is attached to the needle-bar by a set-screw, *e*, and it is provided with jaws, which embrace the guide-bar or projection B' inside of the case. The jaws are provided with a screw, E', which serves to take up any lost motion caused by wear. I show at Fig. 4 a cross-section through this clutch. F is another clutch similar to the clutch E. The clutch F is secured to the pressure-bar by a set-screw, *f*. In the instances shown in the drawing I have also secured the elevating-lever G to the pressure-bar by this same set-screw *f*. The clutch F likewise engages with the guide-bar or projection B' in the case.

It is apparent that this construction prevents any rotary motion of either the needle-bar or pressure-foot, and, at the same time, both are attached to the face-plate, so that by removing the screws by which the face-plate is attached to the machine the whole mechanism comes off with it.

It is evident that this construction greatly facilitates the cleaning of the machine by inexperienced persons, and, at the same time, it

furnishes a ready means of taking up all lost motion that may occur by wear.

I do not limit myself to the attachment of the elevating-lever G by the set-screw *f*, for the clutch F is entirely independent of the lever G, and may, therefore, be employed in any other locality upon the pressure bar, and the elevating-lever be placed at some other point on the same bar.

H is the cam-shaft, and H' the cam that drives the feed mechanism, which feeds the fabric forward. I is the feed-bar. J is an arm attached to the feed-bar, and which embraces the cam, the said bar being driven in one direction by the cam, and in the other direction by the retraction of the small spring K.

It is apparent that when the bar is adjusted for a long stitch the end of the arm J will be constantly bearing against the cam H', and there will be no noise; but when the bar I is adjusted for the short stitch the cam H' will, at each revolution, strike the face of the arm J, causing a slight noise. To prevent this noise under such circumstances I propose to line that face of the arm J which is adjacent to the cam H' with rawhide, or some equivalent substance, J¹, which will receive the stroke, but muffle the sound. So, also, at any other point on the feed-bar where there is a stroke of the bar or any projection against any other adjacent part, I propose to employ a similar lining, as, for instance, at J² on the stop J³. These are the only points on the machine to which these improvements have been applied by me that require to be thus muffled except the shuttle-cage.

L is the shuttle-cage. It is well known that the shuttle ordinarily rests loosely within a metallic cage, and produces a sharp metallic sound at each vibration of the shuttle-carrier. This I propose to overcome by lining the shuttle-cage with rawhide or other equivalent substance, as shown in the drawings at L'.

I would have it understood that I do not limit myself in the employment of the clutches E and F to any particular kind of machine, but propose to employ them on any machine wherein the needle-bar or the pressure-bar is employed.

M is the band-wheel. It is provided with

an abrupt wedge-shaped groove, which will gripe the belt that runs within it, so as to prevent it from sliding, although the belt itself is quite loose. This construction obviates the usual necessity of employing a tight belt, which causes wear on the journals, and makes a machine run hard. N is a small oil-cup, either cast in one piece with the needle-bar or so constructed as to be detached therefrom. Its purpose is to catch any oil that may descend along the bar from the places where the bar needs to be lubricated, and thus prevent the dripping of the same upon the fabric that may be operated on. Said cup is, preferably, placed near or at the lower end thereof.

What I claim is—

1. The combination, with the needle-bar and the case, constructed with a guide, of a forked clutch attached to the needle-bar to embrace said guide, the clutch being provided with means, substantially as described, for adjusting the arms of the clutch to take up the wear of the clutch and guide, substantially as and for the purpose set forth.

2. The combination of the case, guide, needle-bar E, with the clutch and adjusting device

E', substantially as and for the purpose set forth.

3. The combination, with the pressure-bar and the case, constructed with a guide, of a forked clutch attached to the pressure-bar to embrace the guide, the clutch being provided with means, substantially as described, for adjusting the arms of the clutch to the guide, to compensate for wear of clutch and guide, substantially as and for the purpose set forth.

4. The combination, with the pressure-bar and clutch F, of the lever G, said lever and clutch secured by set-screw f, substantially as described.

5. The combination, with the removable head, of the bar or projection B', the needle-bar, presser-foot, and clutches E and F, substantially as described.

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

GEORGE W. BAKER.

Witnesses:

FRANCIS TOUMEY,
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