N. D. STOOPS.

Means for Connecting the Needle Operating Levers to the Needle-Bars of Sewing-Machines.

No. 198,705 Patented Dec. 25, 1877.

Fig. 1.

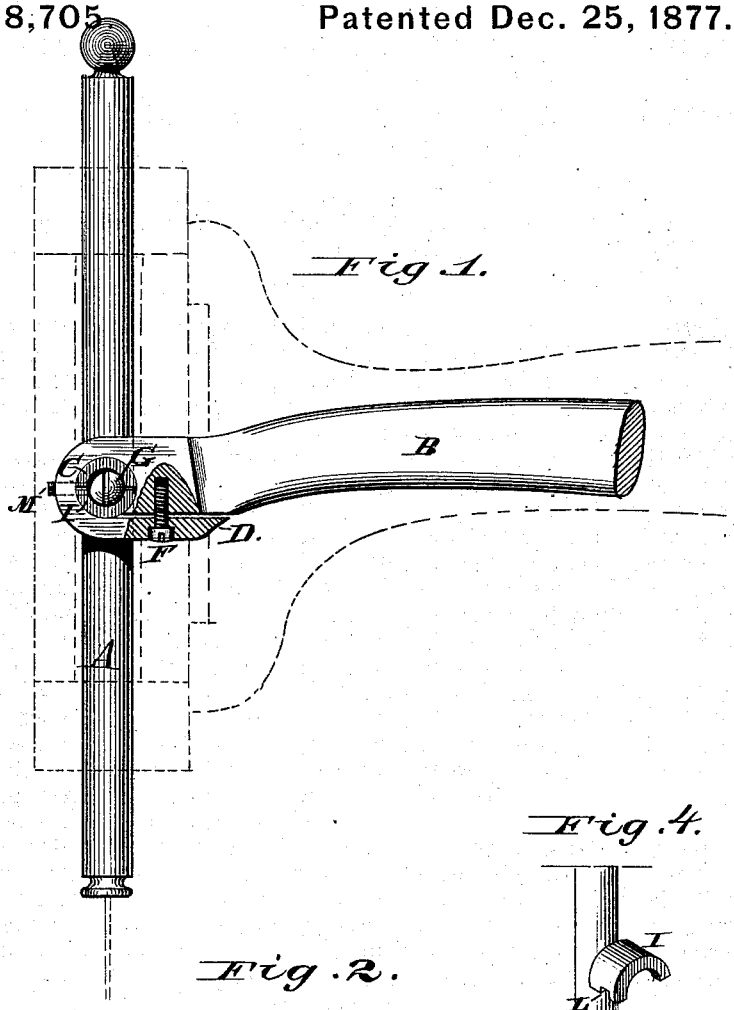


Fig. 2.

Fig. 3.

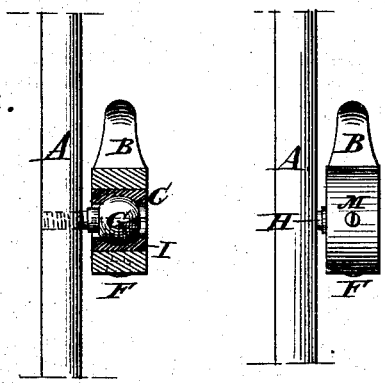
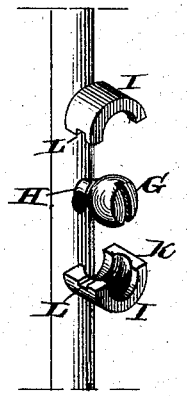


Fig. 4.



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NESBITT D. STOOPS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MEANS FOR CONNECTING THE NEEDLE-OPERATING LEVERS TO THE NEEDLE-BARS OF SEWING-MACHINES.

Specification forming part of Letters Patent No. **198,705**, dated December 25, 1877; application filed October 24, 1877.

To all whom it may concern:

Be it known that I, NESBITT D. STOOPS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Means for Connecting the Needle-Operating Levers to the Needle-Bars of Sewing-Machines, of which the following is a specification:

This invention relates to an improved device for connecting the reciprocating needle-bar of a sewing-machine to the oscillating lever by means of which motion is imparted thereto; and it has for its object to provide an adjustable universal joint, by means of which the socket can be readily and nicely adjusted around the base, in order to provide for a most positive and exact movement of the needle-bar, and compensate for any wear that may take place either in the ball or socket.

To this end my invention consists in the combination, with the pin attached to the needle-bar and the ball thereon, of a divided collar, in which the socket for said ball is formed, adjustably secured in the forward end of the needle-lever, as more fully hereinafter set forth.

In the drawings, Figure 1 represents a detached side elevation of the lever which actuates the needle-bar, showing the divided socket-collar in place. Fig. 2 represents a front view of said lever and the needle-bar. Fig. 3 represents a sectional view of my improved device, and Fig. 4 a detached perspective view of the divided socket-collar.

The letter A represents the reciprocating needle-bar, mounted in ways at the front of the upper standard of the sewing-machine, as usual.

B represents the oscillating lever which actuates said needle-bar, pivoted in the ordinary manner to the rear of the said standard. The front end of said lever is bored transversely, as shown at C, for the reception of the socket-collar, and the body of the metal at said forward end is split or partially divided from the outside portion to said transverse bore, as shown at D, and provided with a set-screw, F, by means of which the metal may be tightened around the collar, for the purpose of adjusting the same around the ball G formed on the pin or screw H attached to the needle-bar.

The letter I represents a divided collar, adapted to fit and be secured within the transverse bore in the end of the lever B, said collar being formed with a hemispherical socket, K, on its interior, in which the ball fits and is held. The two halves of said collar are each provided with a recess, L, at one of their edges, said recesses being arranged opposite to each other when the collar is in place, forming a recess in said collar for the reception of the end of a set-screw, M, passing through the front end of the lever B, by means of which the collar may be confined in the transverse bore and prevented from turning.

As thus constructed, it will be perceived that a ball-and-socket joint is provided for the needle-bar and its actuating-lever, by means of which the utmost nicety of operation is secured, as the collar can be made to embrace the ball with the greatest accuracy, providing for the proper play of said bar and lever with respect to each other, so as to prevent any binding of the needle-bar in its ways, and providing for the most positive working of the needle-bar, whereby the working of the machine is made much more accurate and effective.

Besides the above advantages, it will be perceived that the socket can at any time be conveniently tightened around the ball by means of the set-screw F, if it should become loosened by wear, obviating in a great measure the defective working of the machines from long-continued use.

What I claim as my invention is—

1. In combination with the needle-bar and its actuating-lever and the ball attached to said bar, the divided collar, provided with a socket for the reception of the ball, and secured in a transverse bore in the end of the lever, the metal at the rear end of said bore being split or partially divided, and provided with a set-screw, whereby said collar may be

adjusted around the ball, substantially as and for the purposes described.

2. In combination with the lever, provided with a transverse bore, and the needle-bar and ball thereof, the divided collar embracing the said ball, and provided with recesses for the reception of a set-screw passing through the lever, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

NESBITT D. STOOPS.

Witnesses:
J. F. MACKENZIE,
J. W. WRIGHT.