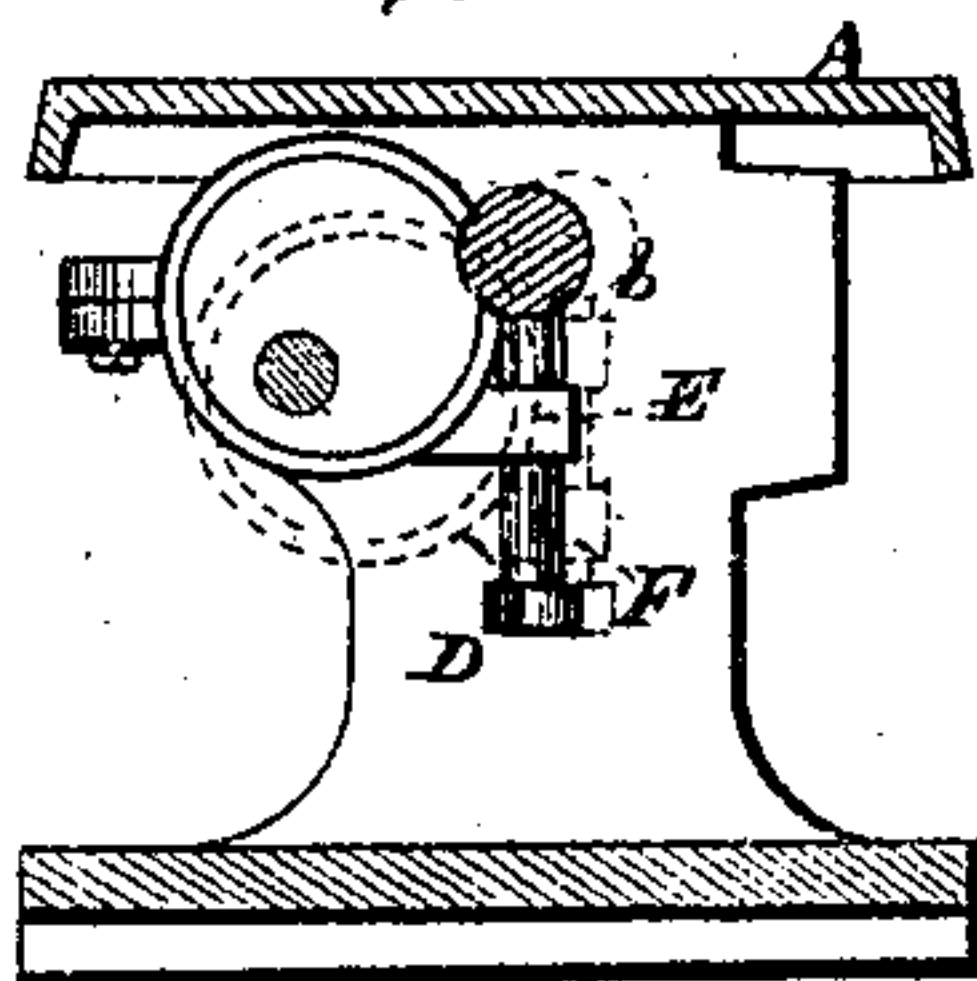
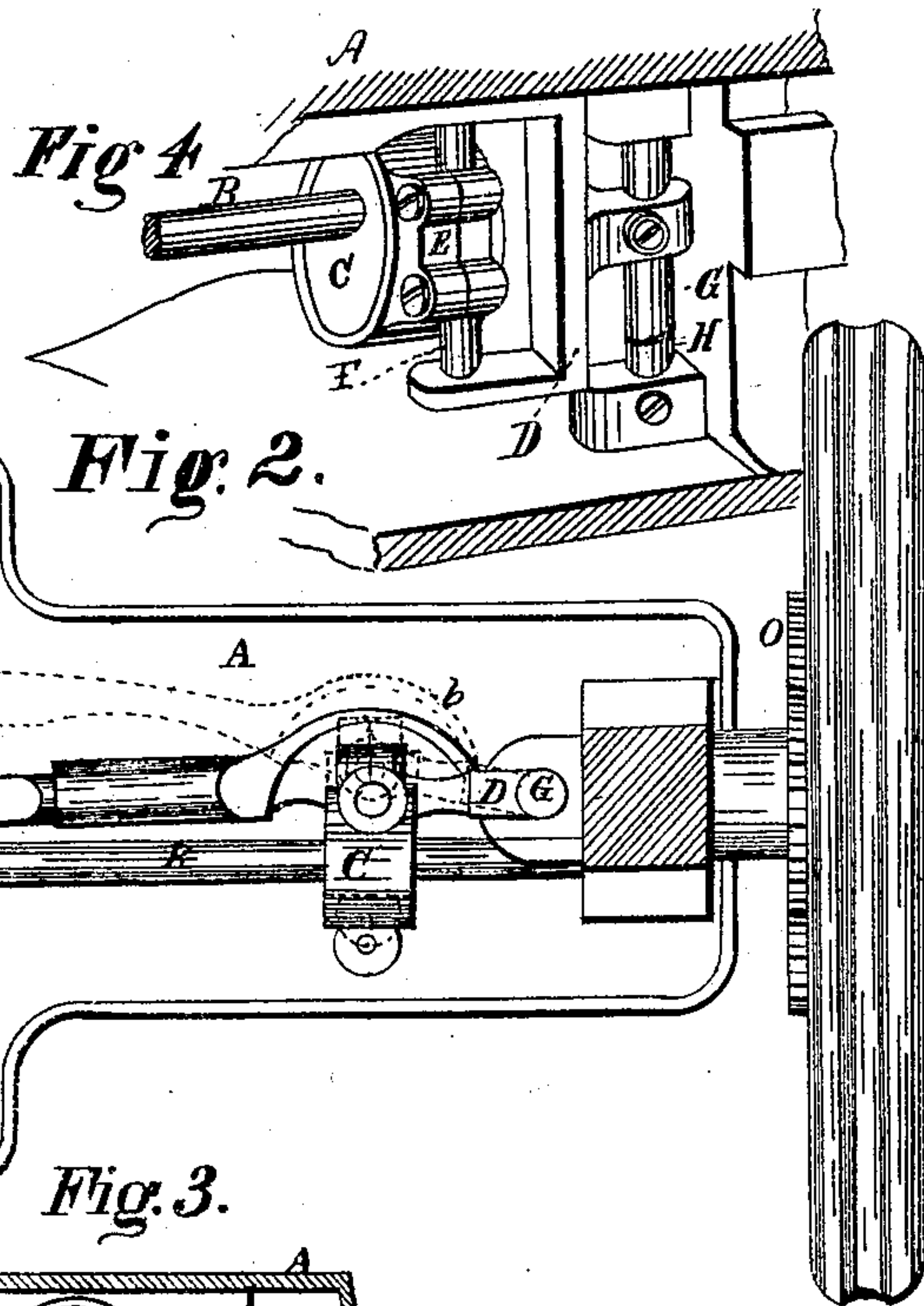
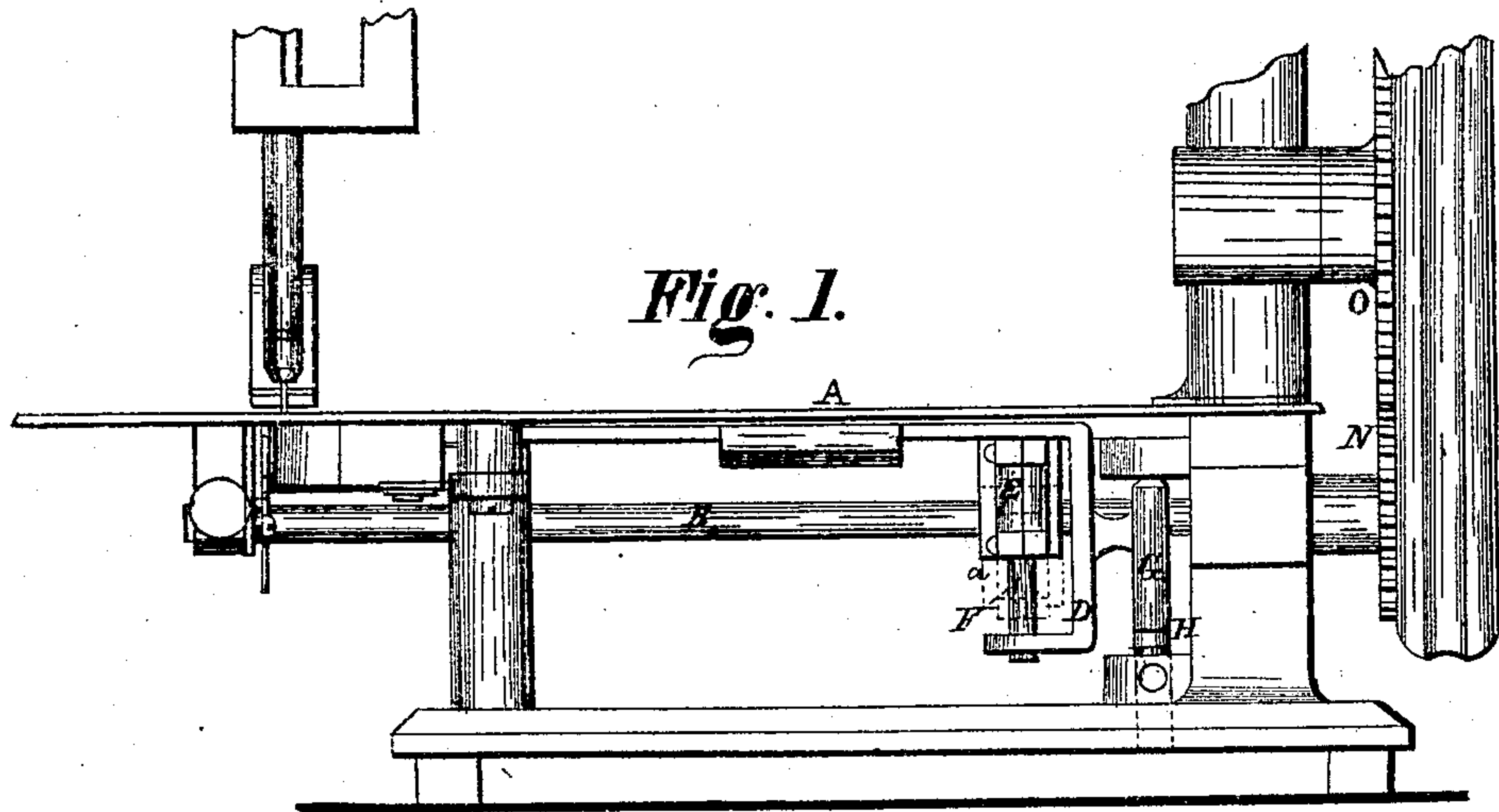


D'A. PORTER.
Sewing-Machines.

No. 144,864.

Patented Nov. 25, 1873.



Witnesses.

Alb. Stoner,
Bradford Howland

Inventor.

D'Arcy Porter.
Per. Burridge & Co.
Atty.

UNITED STATES PATENT OFFICE.

D'ARCY PORTER, OF CLEVELAND, OHIO.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **144,864**, dated November 25, 1873; application filed August 4, 1873.

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 a certain new and Improved Sewing-Machine; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings making part of the same.

Figure 1 is a side view of the machine. Fig. 2 is a view of the under side, and Figs. 3 and 4 are detached sections.

Like letters of reference refer to like parts in the several views.

The object of this invention is to provide an adjustable and durable device for operating the shuttle of a sewing-machine; and consists in providing the shuttle-carrying lever at one end with a bracket-like arm and a rod, to which is connected the straps of an eccentric, which is mounted on the feed-shaft. The eccentric operates the straps to vibrate the shuttle-lever, and at the same time the straps slide on the rod of the bracket.

The construction and operation of the several parts of the device are as follows:

A represents the table of the machine. All the mechanism above it is similar to that in ordinary use, and to which and analogous machines I apply my invention. B, Fig. 1, is a shaft, on which is secured an eccentric, C, for vibrating the bracket D, to which it is attached by a strap or lug, E, fitted closely but loosely to a rod or bar, F, held in the arms of the bracket, as shown in Fig. 1, and on which bar the strap slides vertically on the movement of the eccentric. The bracket referred to is secured to a spindle, G, having its foot bearing in an adjustable step, H. The bracket and spindle are vibrated by the eccentric. The upper arm I of the bracket is of considerable length, and terminates in a socket, into which is fitted and secured the stem J of the shuttle-carrier K. The shaft B is made to revolve for carrying the eccentric by a pinion, N, in connection with the wheel O. The movement of

the eccentric vibrates the bracket, and, consequently, the shuttle-carrier attached thereto, as above described, thereby reciprocating the shuttle held therein. In consequence of the rotating movement of the eccentric, and the vibratory action of the bracket, the connecting strap or lug of the eccentric attached to said bracket has a twofold movement—first, a vertical-reciprocating movement on the bar F of the bracket, caused by the rotation of the eccentric, as indicated by the dotted lines *a* in Fig. 1, and a partial rotating movement thereon by reason of the vibration of the bracket, as indicated by the dotted lines *b* in Figs. 2 and 3. By virtue of these two relative movements the connection of the eccentric with the bracket will wear evenly, and thereby maintain a correct and uniform movement of the joint, avoiding a looseness in one direction of the connection of the two parts, causing the machine to run easily and smoothly in that direction.

It will be observed that the strap of the eccentric is divided, and that the two sections are connected to each other by a set-screw, which allows the two parts to be tightened up around the bar, if loose.

The step in which the spindle runs is adjustable, so that it can be pushed upward, and kept in close relation to the end of the spindle, as it may become worn away, thereby avoiding a rattling of the parts.

In attaching the stem of the shuttle-carrier to the arm of the stay by means of a socket-joint, the length of the arm can be easily and readily adjusted.

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

The shuttle-carrying lever provided with bracket D and bar F, in combination with the eccentric C and its strap, substantially as described, and for the purpose specified.

D'ARCY PORTER.

Witnesses:

ALBT. STORER,
A. F. CORNELL.