

N. B. STOOPS & J. J. SIBLEY.

Sewing Machine.

No. 93,921.

Patented Aug. 17, 1869

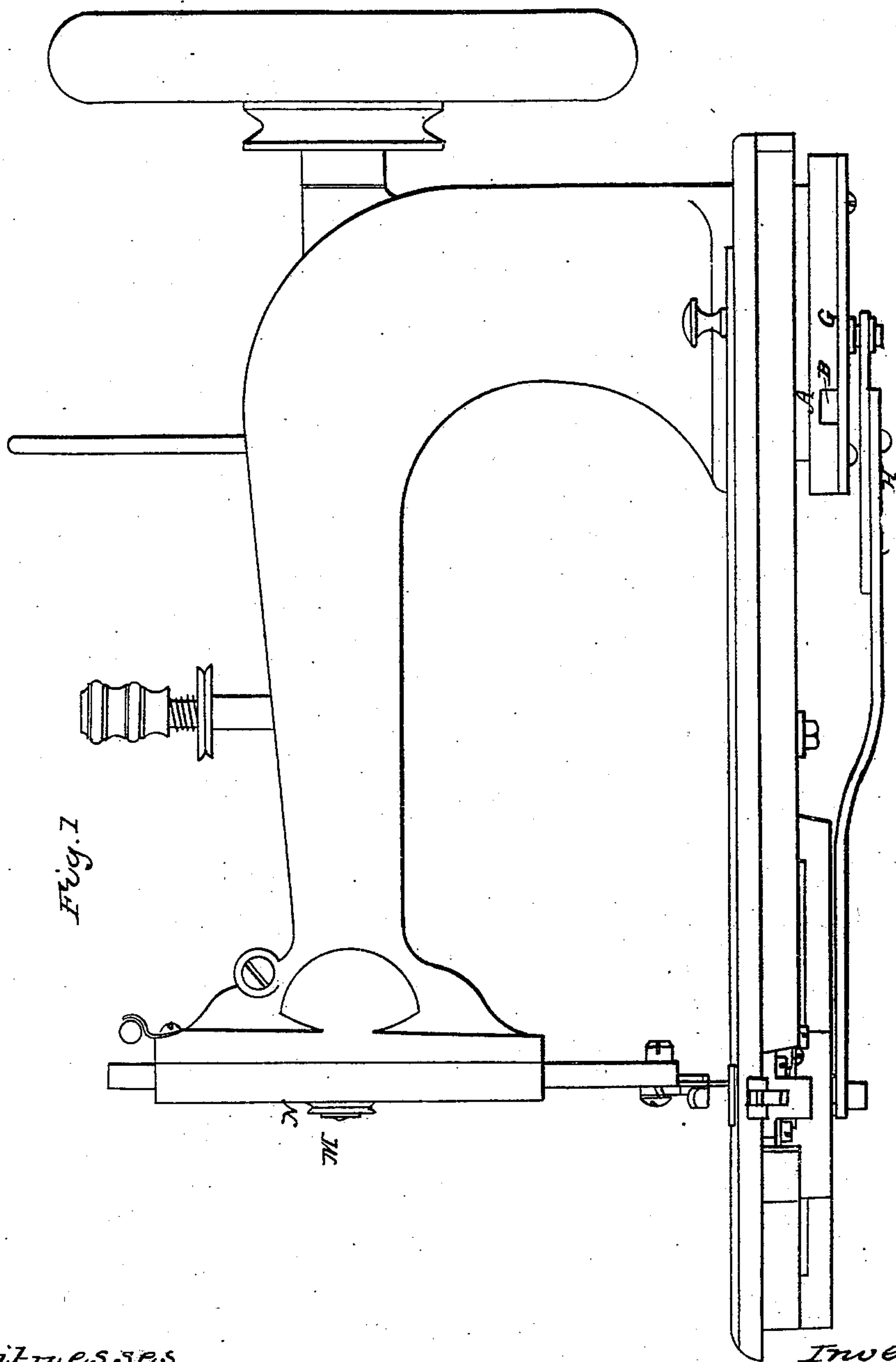


Fig. 1

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N. B. STOOPS & J. J. SIBLEY.

4 Sheets—Sheet 2.

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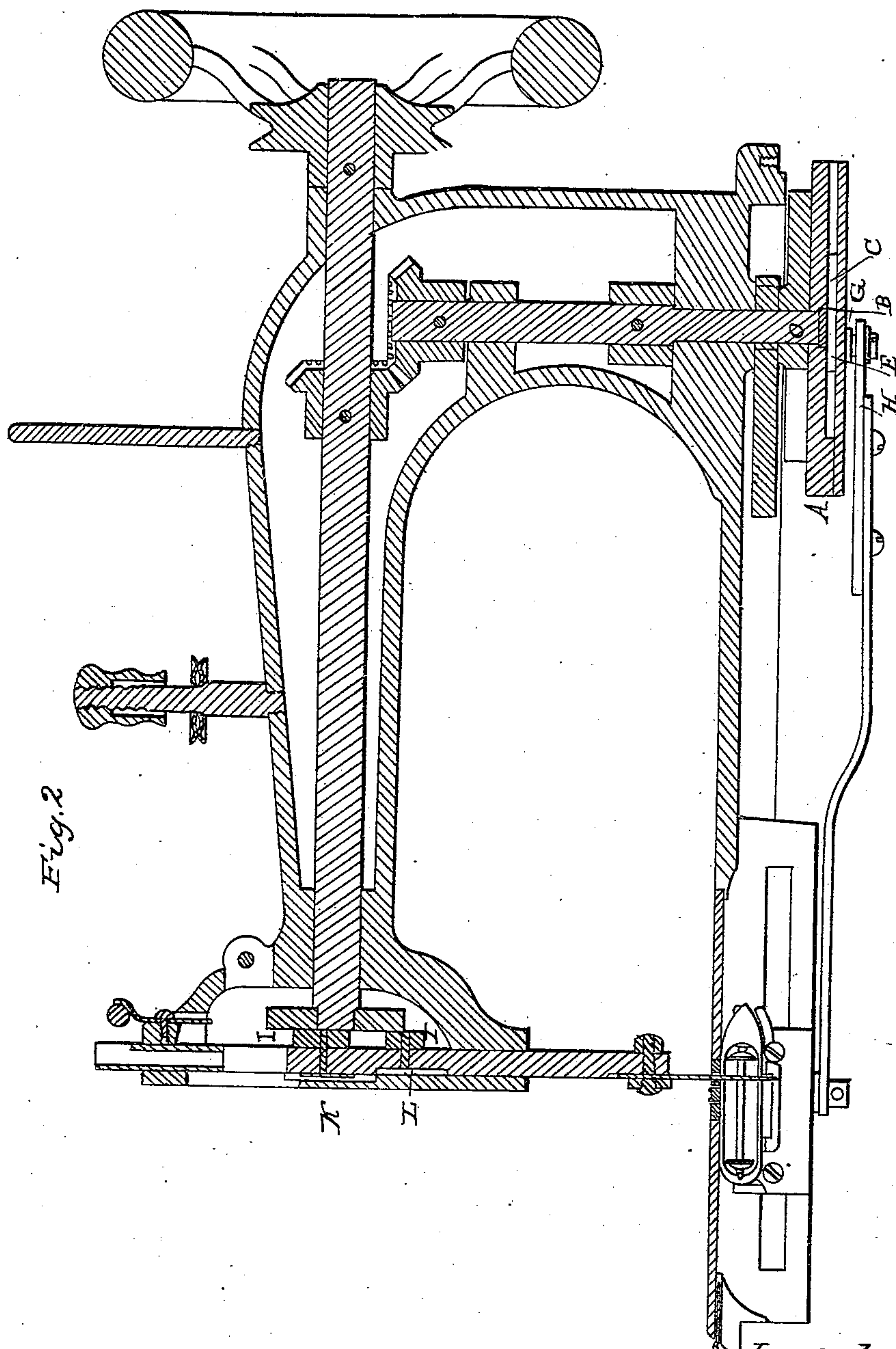


Fig. 2

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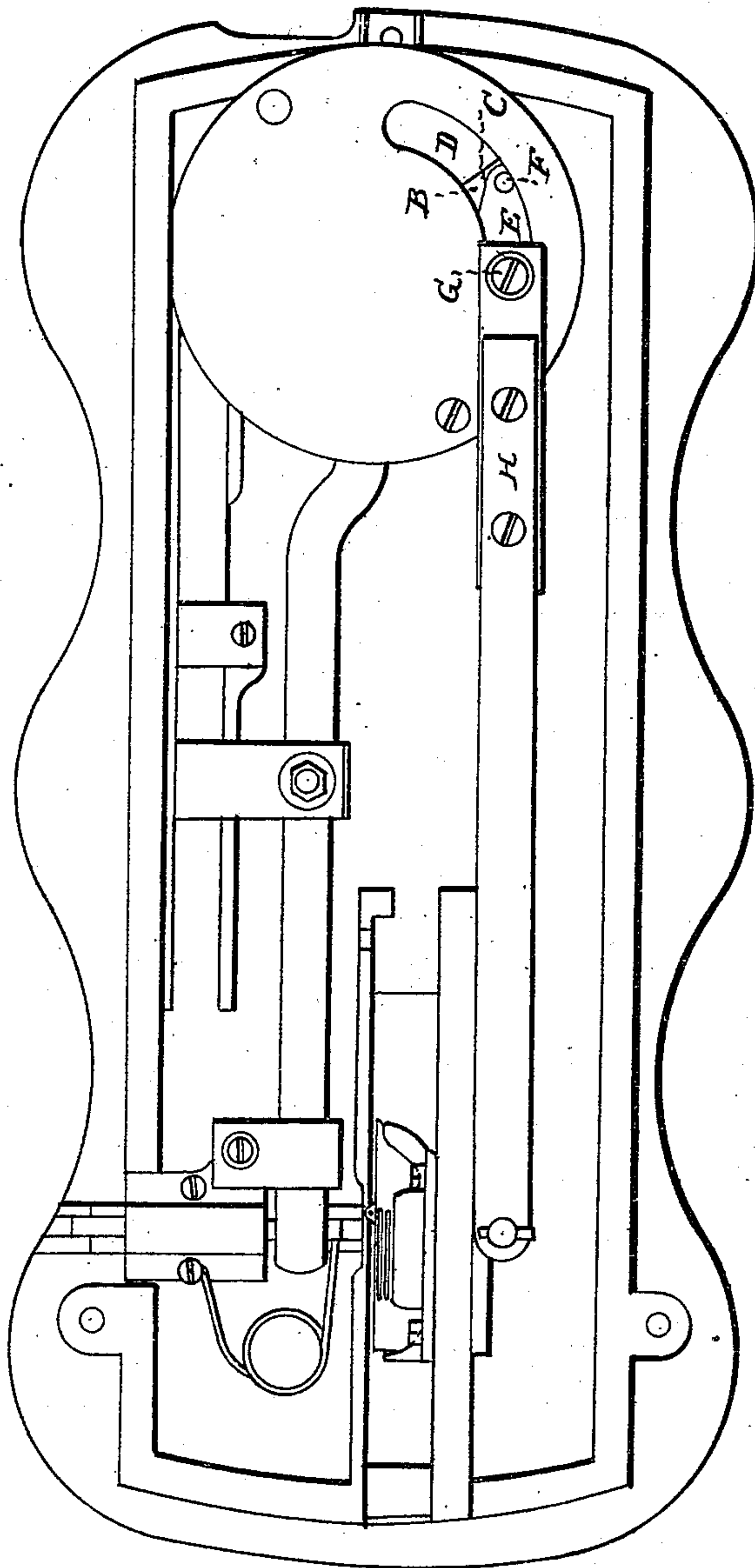
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Fig. 3



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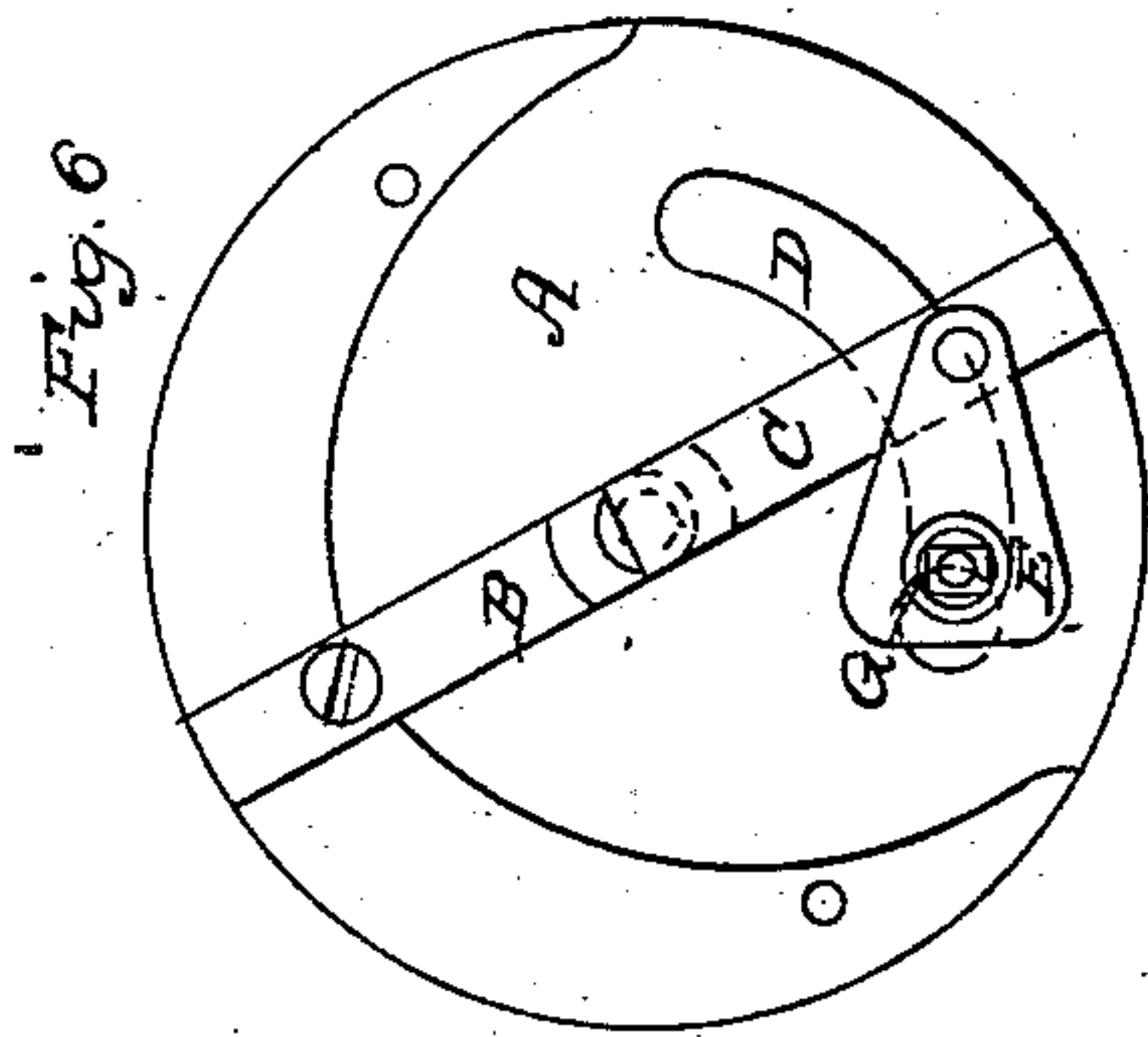


Fig. 7

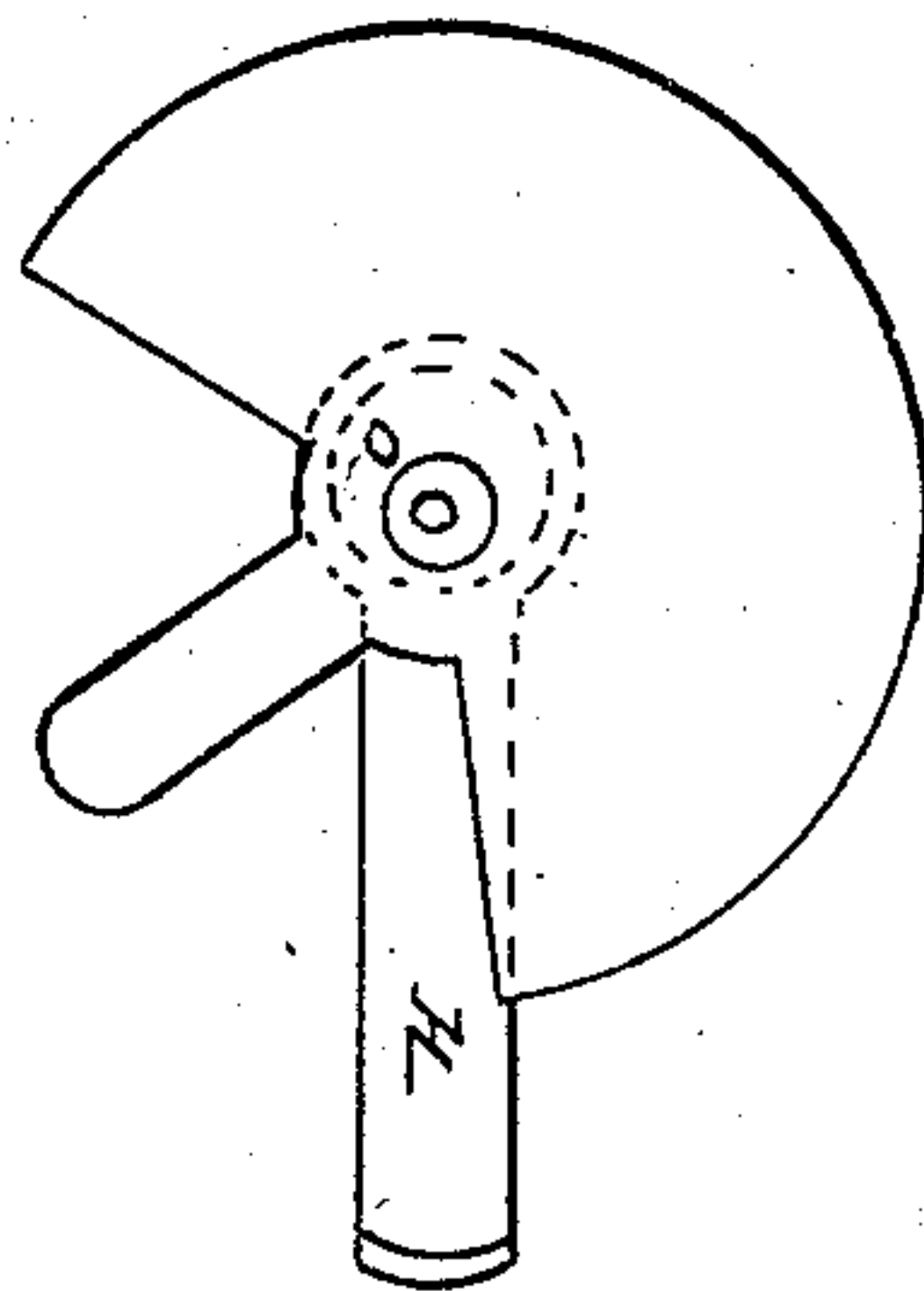


Fig. 8



Fig. 5

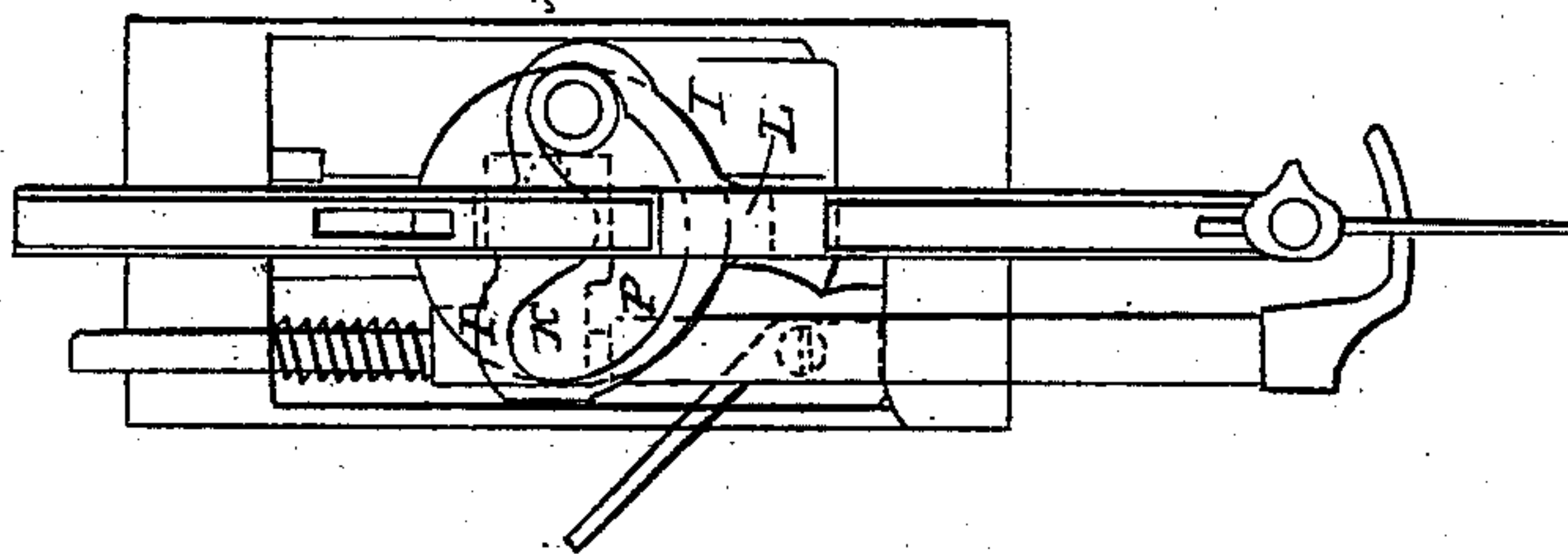
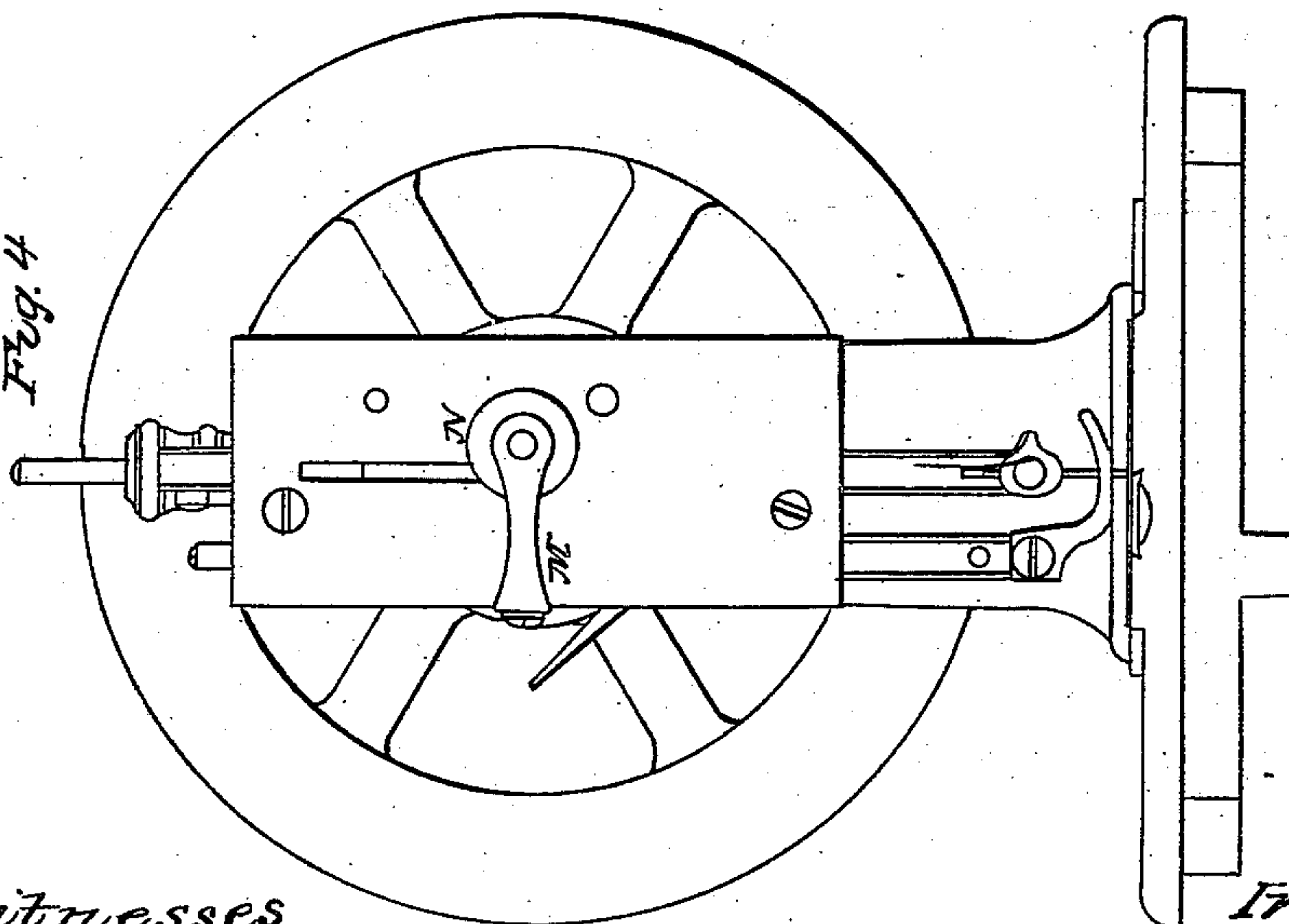


Fig. 4



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United States Patent Office.

NESBITT D. STOOPS, OF PHILADELPHIA, PENNSYLVANIA, AND
JOHN J. SIBLEY, OF NEW YORK, N. Y.

Letters Patent No. 93,921, dated August 17, 1869.

IMPROVEMENT IN SEWING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, NESBITT D. STOOPS, of the city and county of Philadelphia, State of Pennsylvania, and JOHN J. SIBLEY, of the city, county, and State of New York, have invented new and useful Improvements in Sewing-Machines; and we hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and the letters of reference marked thereon, in which the same letter represents the same thing in each figure.

Figure 1 is a side elevation of a shuttle sewing-machine containing our improvements.

Figure 2 is a cut section thereof.

Figure 3, a bottom view thereof.

Figure 4, an end front view thereof.

Figure 5, a cut section of the front end thereof.

Figure 6 is the trammel-shuttle driver.

Figure 7, a back view thereof.

Figure 8, a cross-section of the take-up.

Our improvements consist in combining devices for obviating the objections to driving the shuttle either by cams or direct cranks, the former being expensive, noisy, the parts particularly subject to wear, and the movement slow; the latter failing to give the requisite relative motion to the shuttle for fine sewing, also for timing the slacking of the needle-thread, according to the thickness of the material.

A represents the inner face of the slotted crank-plate.

B, the slot therein.

C, the crank-slide that works in slot B.

D, the curved slot in the outer face of the crank-plate.

E, the crank.

F, the crank-pin.

G, the trundle that guides crank E in slot D.

H, the shuttle-connecting-rod.

I, the heart-shaped needle-carrier.

J, the trundle that moves it.

K, a plate, loosely connected with and projecting laterally from the presser-rod.

L, the recess in the needle-bar.

M, the nipper-spring.

N, the nipper-disks.

O, the upright shaft.

P, the shoulder of the presser-foot bar.

The operation of these parts is as follows:

A, being permanently affixed to the ordinary upright shaft O, is revolved thereby, and crank-slide C travels in slot B the length of crank E, which at the same time

has revolved on pin F, guided by trundle G in slot D, and by pin F, secured both to crank E and connecting-rod H, and caused rod H to reciprocate intermittently. The effect and advantages of which are, the shuttle is thrown quickly through the loop, and held at rest until the needle has completed its upward movement, thus tightening both threads simultaneously.

When an ordinary crank is employed, the shuttle begins to retreat before the upward movement of the needle is complete, leaving the under thread slack, to be drawn up through the material by the needle.

The quick passage of the shuttle through the loop obviates the necessity of keeping the needle long at rest, and allows the loop of upper thread to come off the heel of the shuttle without lifting it or straining the thread, as is the case when the needle commences to rise before the shuttle is through the loop.

The descending needle-bar brings the upper incline of its recess L in contact with the plate K, and presses it outward, and against a pin in spring M, opening disks N N, thus releasing the needle-thread, which has been confined between them during the descent of the needle, at the precise moment the eye of the needle reaches the material, so that there may then be slack thread to form the loop for the shuttle-point to enter.

The plate K rests on shoulder P of the presser-bar, and as the material beneath the presser-foot is thick or thin, the plate will be raised or lowered, and will, consequently, be acted on by the incline in the needle-bar, to open the disks just when the needle-eye reaches the material.

What we claim, and desire to secure by Letters Patent, is—

1. The combination, with the needle, operated by the heart-shaped cam, of the shuttle, operated by the trammel-mechanism, all constructed substantially as and for the purpose described.

2. The combination, with the plate K, connected with the presser-rod, as described, of the needle-bar and thread-controlling disks, to release the thread as the eye of the needle reaches the cloth, as described.

3. The combination of the shuttle and its trammel-device, the needle, operated by the heart-shaped carrier, and the thread-controlling disks, governed as to their time of operation by the presser-rod, when all act together, substantially as described.

NESBITT D. STOOPS.

JOHN J. SIBLEY.

Witnesses:

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