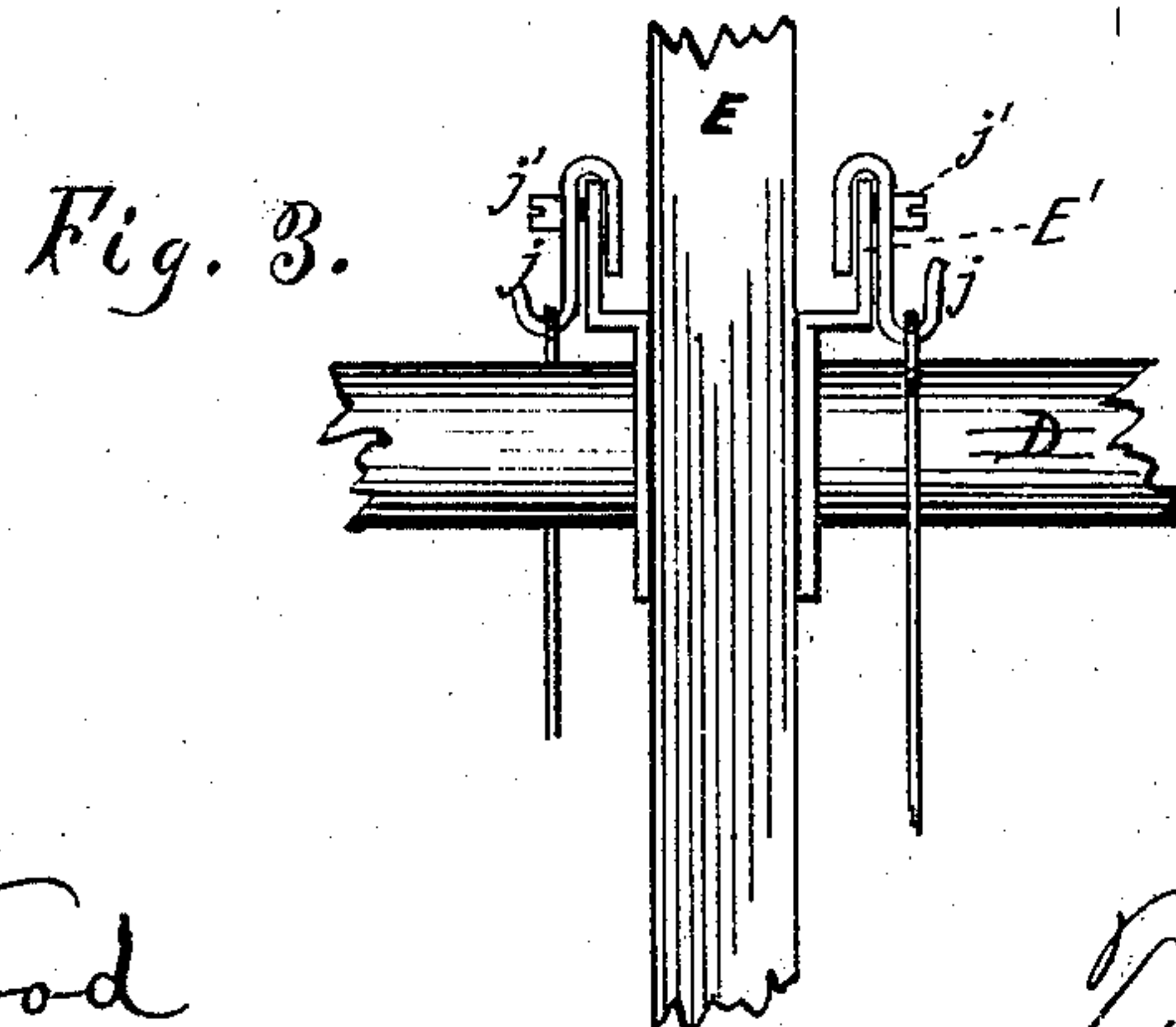
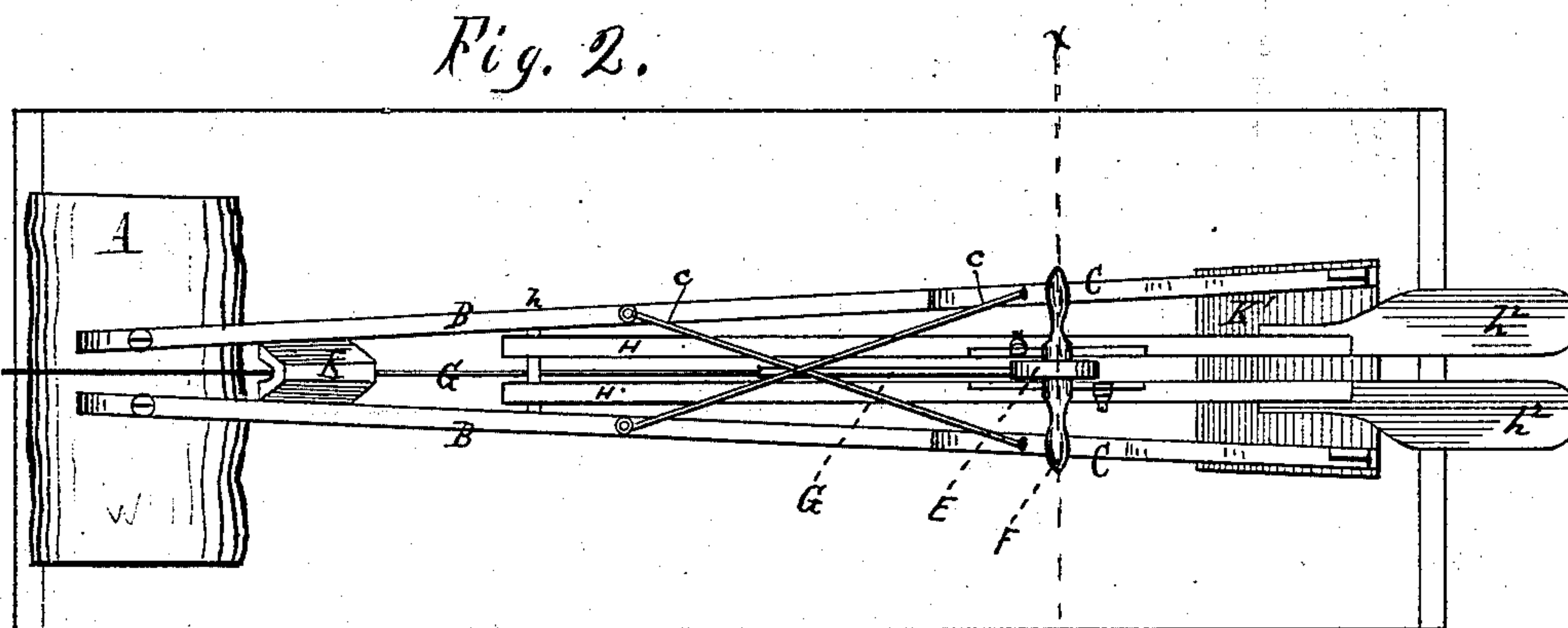
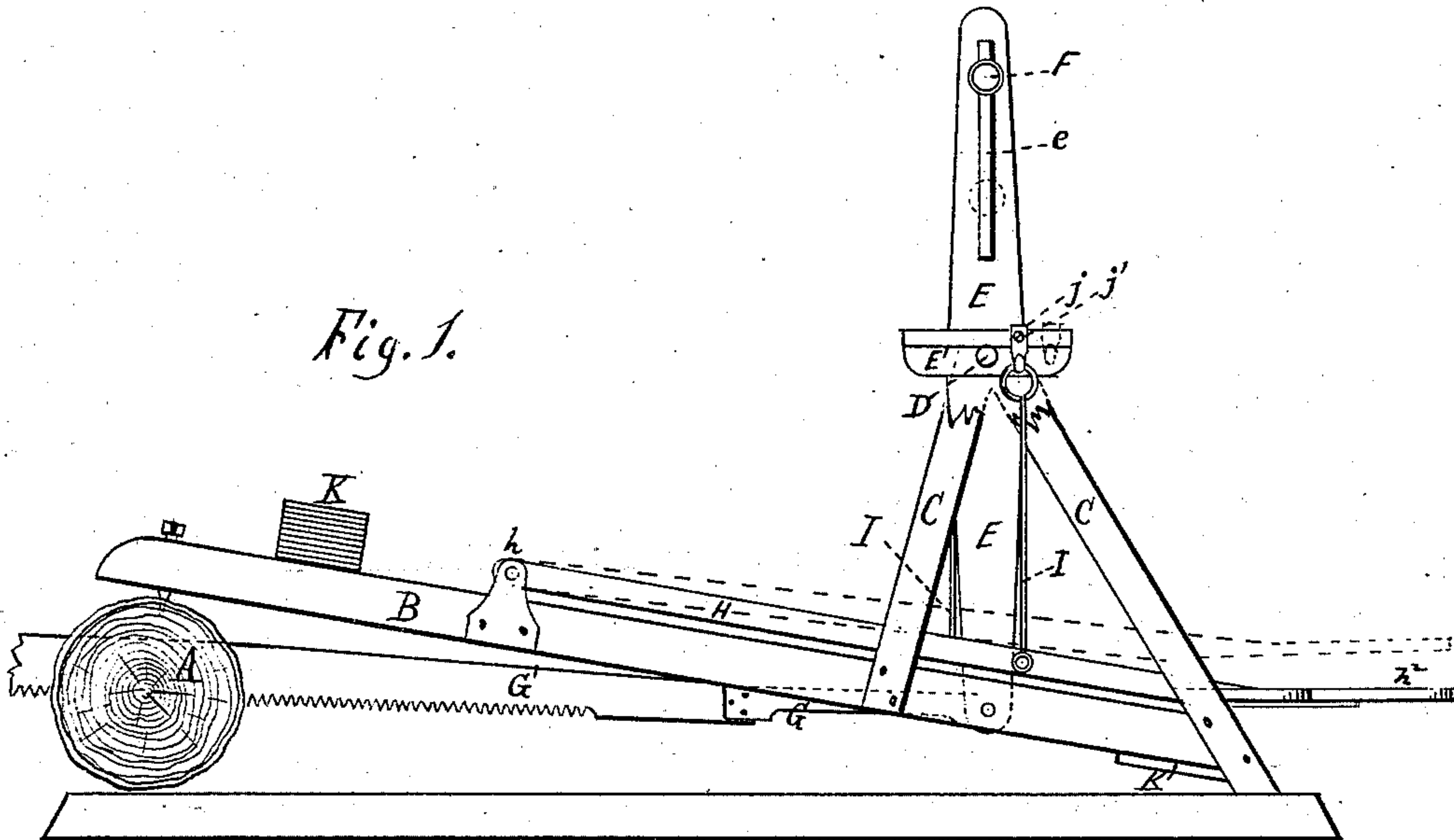


T. VAN KANNEL.
Drag-Sawing Machine.

No. 224,809.

Patented Feb. 24, 1880.



Attest:
Thos. Wood
Walter S. Moser

Inventor
T. Van Kannel

UNITED STATES PATENT OFFICE.

THEOPHILUS VAN KANNEL, OF CINCINNATI, OHIO, ASSIGNOR TO DAVID L. CHAMBERLIN, OF SAME PLACE.

DRAG-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 224,809, dated February 24, 1880.

Application filed January 21, 1880.

To all whom it may concern:

Be it known that I, THEOPHILUS VAN KANNEL, of Cincinnati, county of Hamilton, and State of Ohio, have invented a new and Improved Sawing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1 is a side elevation, Fig. 2 is a plan, and Fig. 3 is a detail, of the center of vibrating arm, taken in line *x* of Fig. 2.

The nature of my invention relates to a machine for sawing logs and wood in other forms, as well as stone, &c., wherein a long saw-blade is to be operated by man-power.

An important feature of this machine consists in the adjustability of the various working parts, whereby the stroke of the handles, as well as that of the pedals, can be varied to suit the operator, and either set can be adjusted independent of the other. Thus the operator can arrange the machine to use his legs, more or less, or only his arms, as he chooses; or he may vary the stroke of his hands or his feet to a given stroke of the saw-blade. The operator is thus given a machine that is, in its parts, adjustable to him. He need not yield his conditions to those of the machine.

In construction my invention is as follows: A represents a log being sawed, and B B two main timbers resting by one end on the log A, by the other resting on the ground. From these rise the two uprights C C, carrying the oscillating shaft D, on which is mounted the vibrating arm E. This arm rises some distance above shaft D, having vertical slot *e*, in which are placed the adjustable handles F. To the lower end is attached the connecting-rod G, operating the saw G'.

At H H are treadles, pivoted at *h h*, and terminating in broad flat pedals *h² h²*. The rods I I, jointed to the treadles, as seen in the drawings, extend upward, where they are hung on adjustable hooks *j j*.

The arm E is penetrated by shaft D, to which it is fastened, and these are more firmly held together by the assistance of the overhanging side plates, E'. The hooks *j* are held in any adjusted position by means of set-screws *j'*. The frame is further strengthened by the bridge-piece K and base-board K'. The cross-rods *c c* also strengthen the up-

rights C and resist any lateral or twisting strain.

In operation my invention is as follows: The operator stands on the pedals, and by moving his weight from one to the other the force thus exerted is transferred to the vibrating arm E by the intervention of rods I. In addition, the operator, having hold of handles F, also makes use of them to propel the arm E back and forth, thus giving the saw its reciprocating horizontal motion.

If the operator is a tall man he may find it to his advantage to fasten handles F near the upper end of slot *e*, also to move-hooks *j* farther from the shaft D, whereby he can utilize his natural stroke both of his arms and legs; but should the operator be of low stature, yet strong, the reverse adjustment from that last mentioned will be found most advantageous, preventing him from swaying his body more than to a natural and easy degree.

If a boy desires to use the saw, the same adjustment as that of a tall man is used; but in this case he gives the saw a shorter stroke. This gives him a greater leverage over the machine, whereby his task may last longer, still it does not overpower him.

It will be observed that the two treadles are balanced by being hung on opposite sides of the rock-shaft and at equal distances therefrom, and that when weight is put on or taken off of either one it at once transfers this force to the saw, as will be seen by the construction of the working parts.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The vibrating arm E, having attached thereto side plates, E', carrying the adjustable hooks *j j*, and rods I, all arranged and operated as and for the purpose specified.

2. In a sawing-machine, the frame B C, the vibrating arm E, pivoted in such frame and extending on each side of its pivot, the treadle-levers H H, pivoted to the frame and adjustably hung from the said vibrating arms on opposite sides of its pivot, the foot-pedals arranged side by side, and the adjustable handles F, all constructed, arranged, and combined substantially as described and shown.

T. VAN KANNEL.

Attest:

A. V. STEWART,
D. L. CHAMBERLIN.