

E. S. Ritchie.

Holtz Electrical Machine.

N^o 74139

Patented Feb. 4, 1868

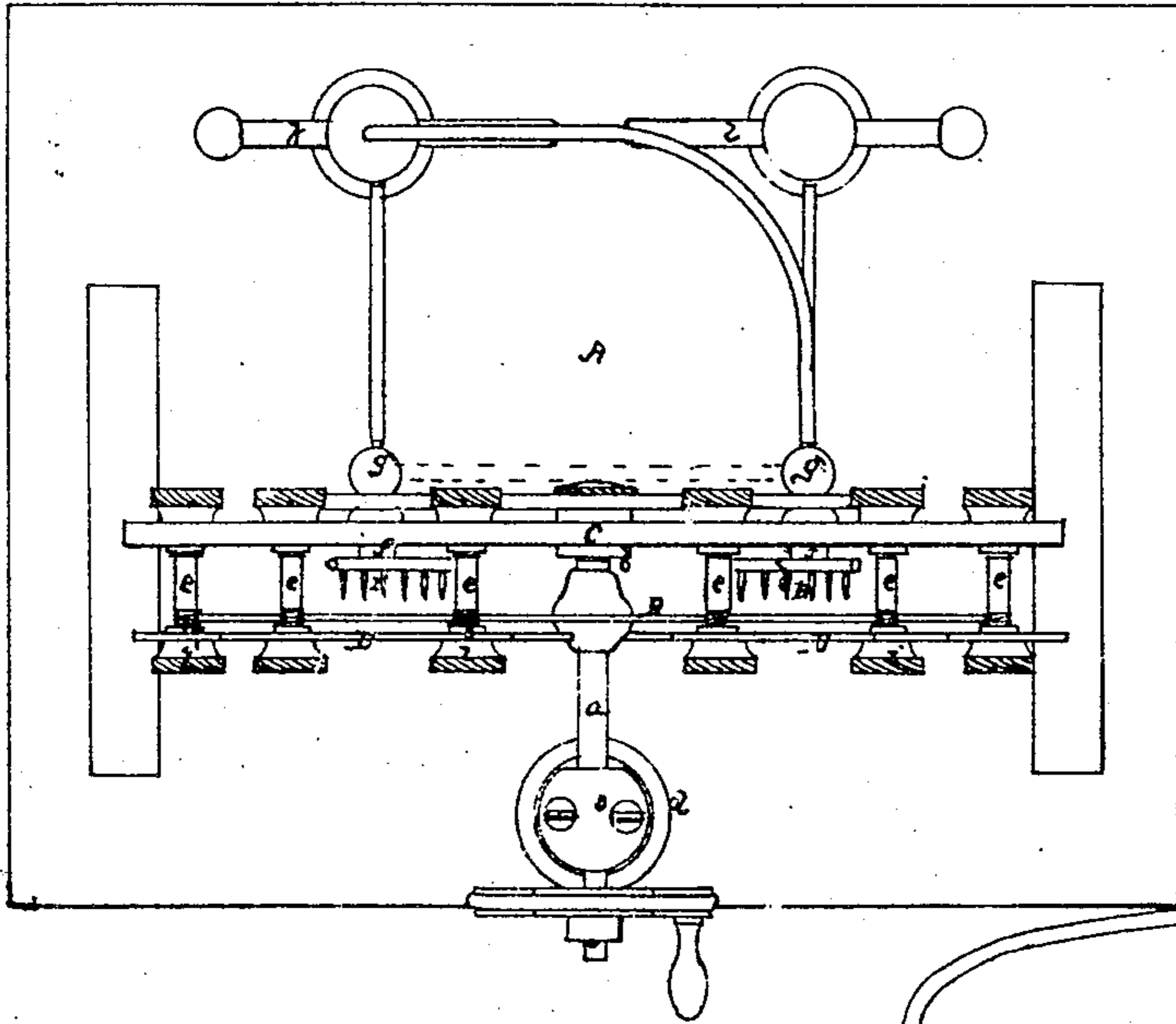


Fig. 1

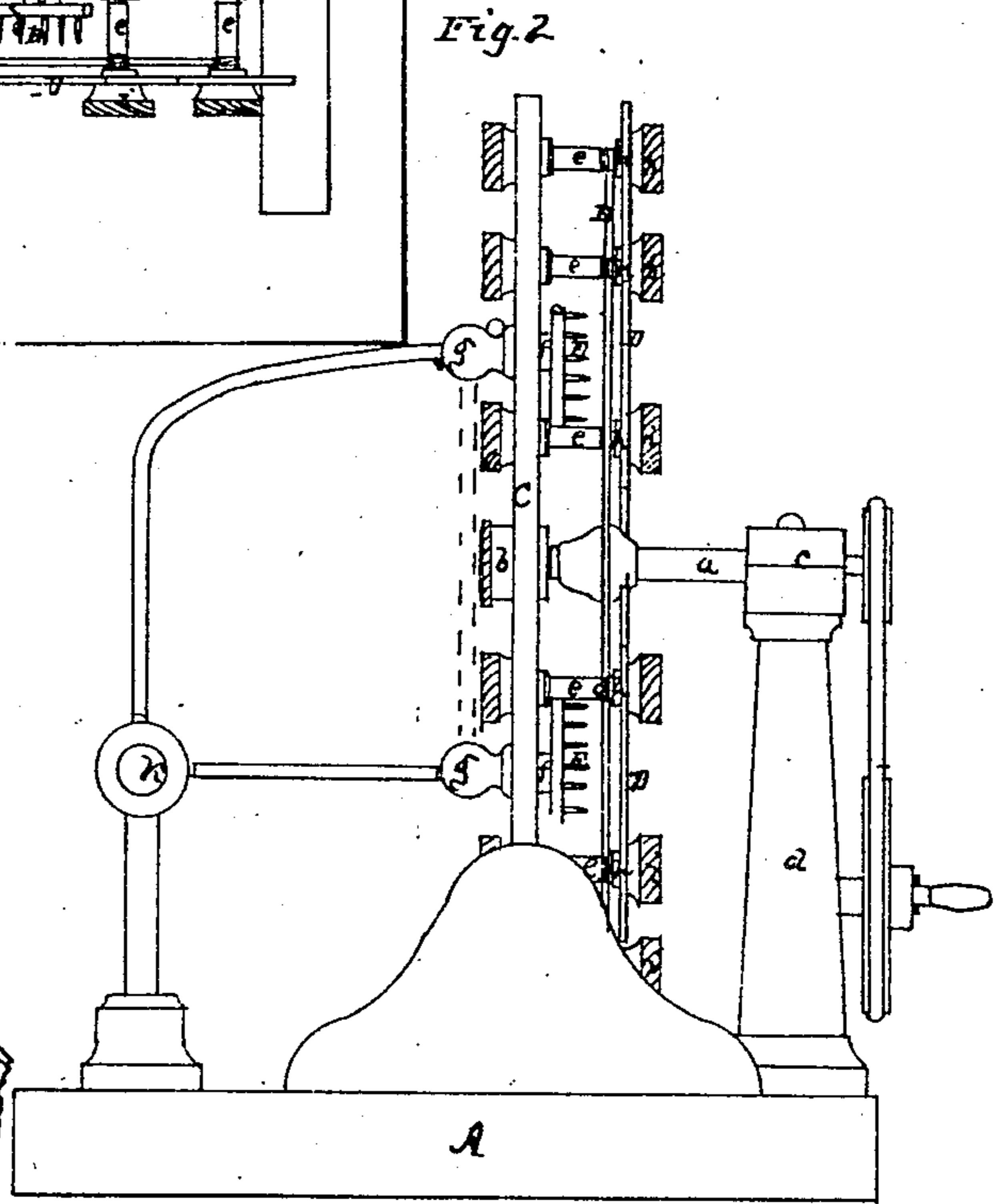


Fig. 2

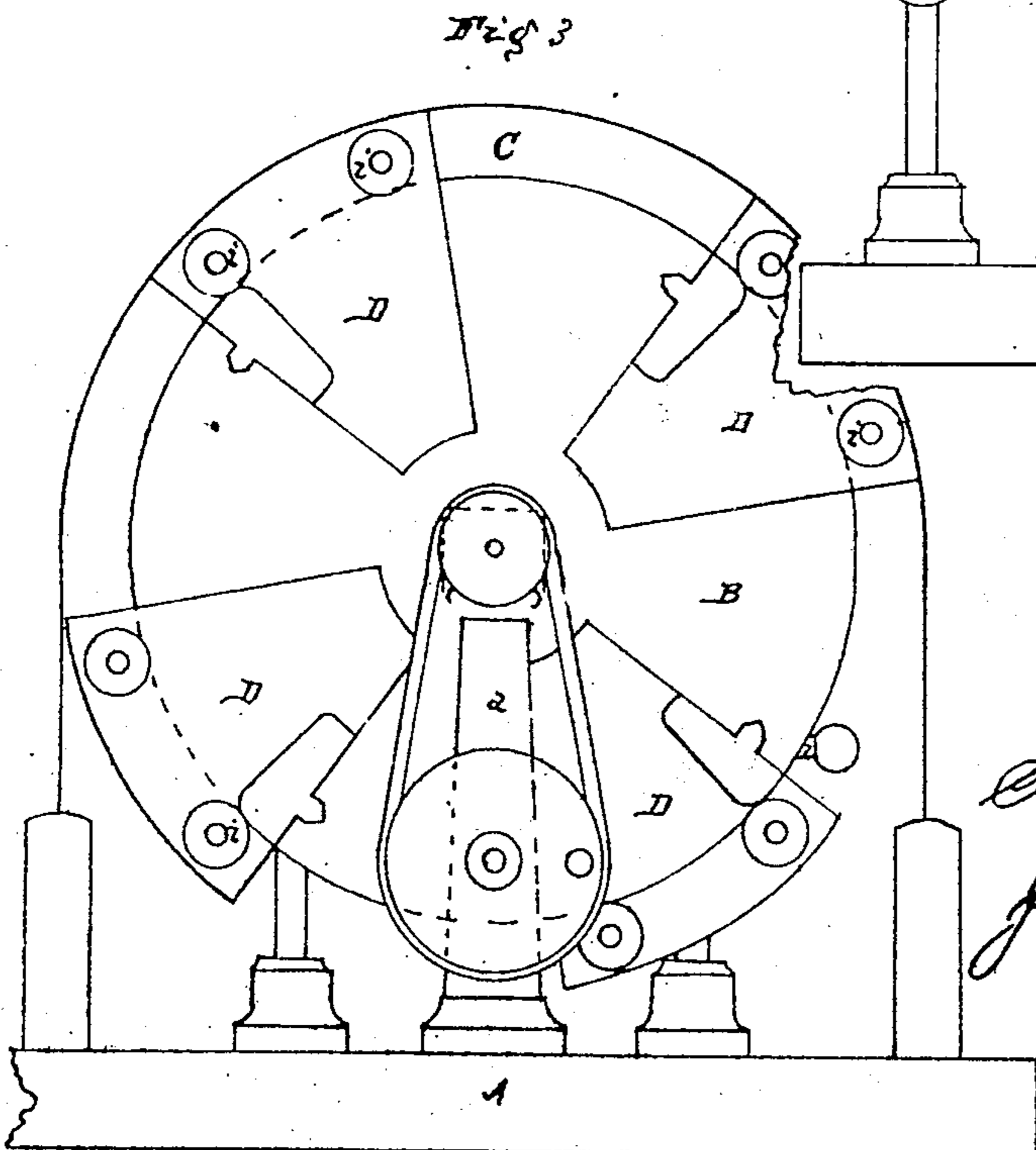


Fig. 3

Witnesses
S. N. Piquet
J. P. Snow.

E. S. Ritchie

by his attorney
R. H. Ledy

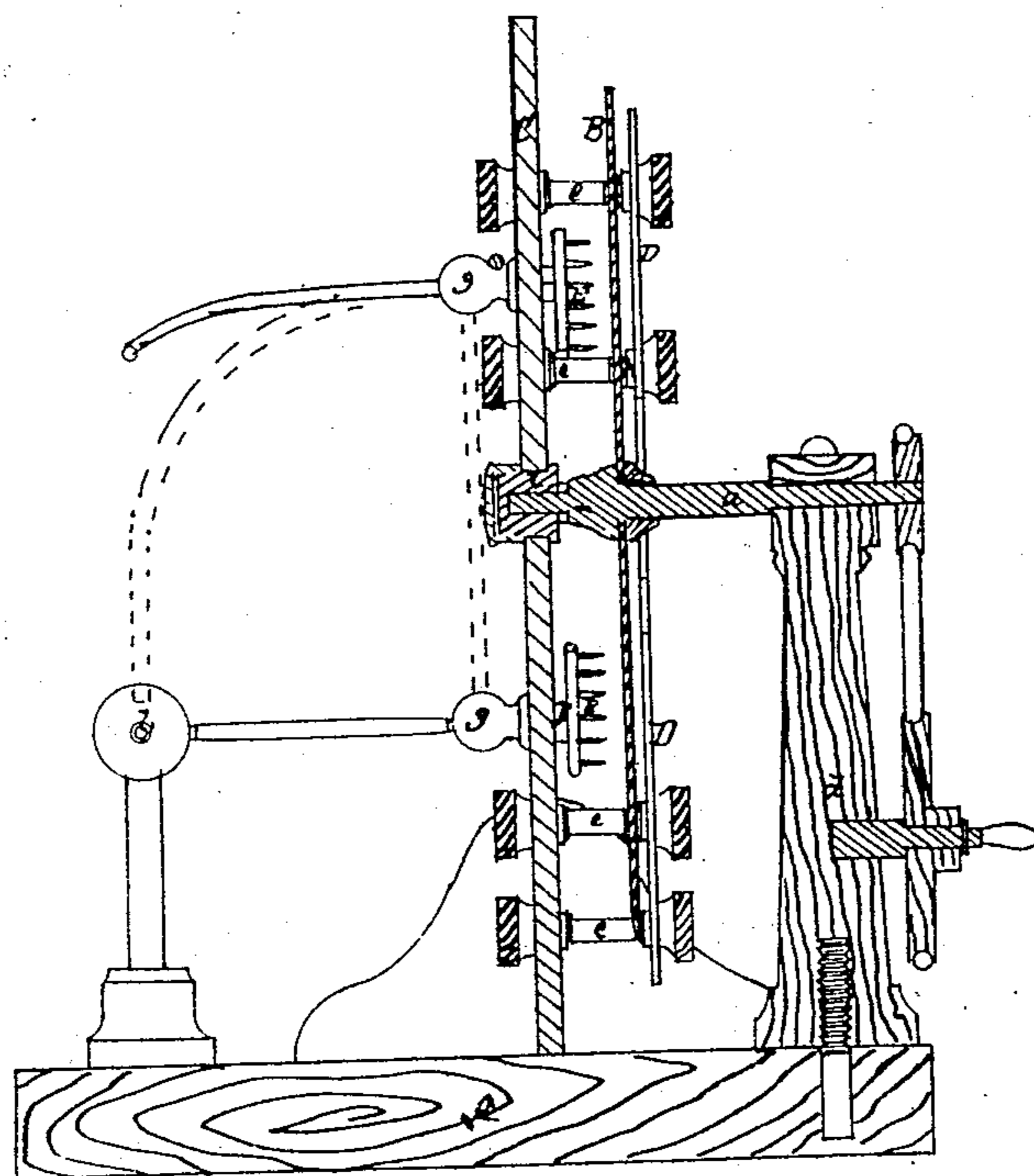
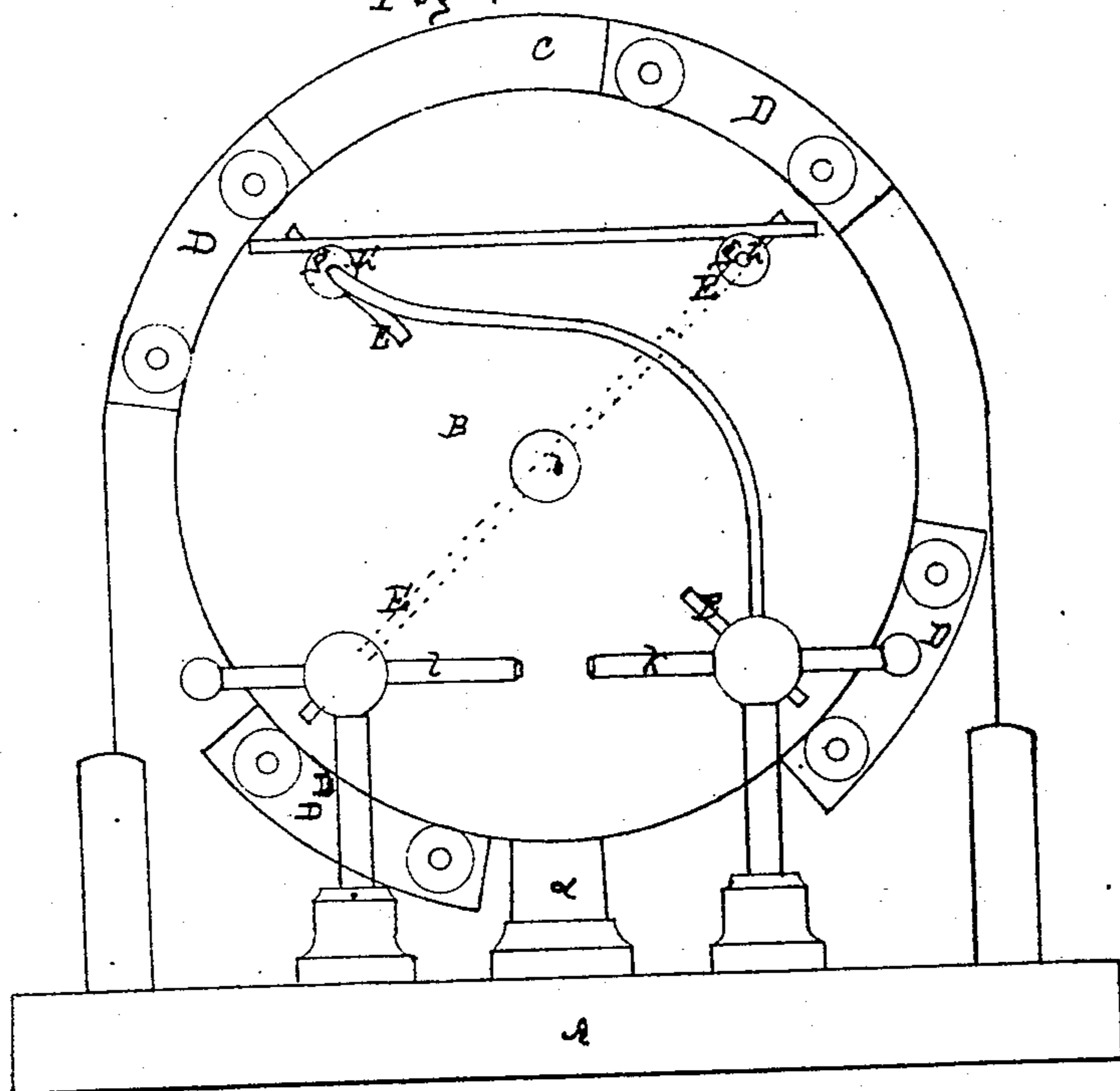
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Fig 4



Witnesses
S. N. Piper
J. P. Snow

E. S. Ritchie
by his attorney
R. M. Eddy

United States Patent Office.

EDWARD S. RITCHIE, OF BROOKLINE, MASSACHUSETTS.

Letters Patent No. 74,139, dated February 4, 1868.

IMPROVEMENT IN HOLTZ ELECTRICAL MACHINE.

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

TO ALL PERSONS TO WHOM THESE PRESENTS MAY COME:

Be it known that I, EDWARD S. RITCHIE, of Brookline, in the county of Norfolk, and State of Massachusetts, have invented a new and useful Improvement in the "Holtz Electrical Machine;" and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view,
Figure 2 a side elevation,
Figure 3 a front view,
Figure 4 a rear elevation, and
Figure 5 a vertical section of it.

The principle of my invention or improvement consists in supporting all the combs and sectors by a glass plate, arranged parallel to the rotary electrizing-disk. Heretofore, it has been customary to support such combs and sectors by means of separate insulating-columns of glass or other suitable non-conducting material. My improvement greatly simplifies the machine, renders it very stable, convenient of access, and efficient in operation. The glass plate I also employ as a means of supporting the box of the inner journal of the shaft of the electrizing-disk.

In the drawings, A denotes the base-board of the machine; B, the rotary electrizing-disk, the journals of whose shaft, *a*, are sustained in boxes or bearings, *b c*, one of which is upheld by a post or standard, *d*, and the other by the glass plate *e*, erected on the base-board A. This glass plate is arranged parallel to the plane of the disk, and, by means of arms or short columns, *e e*, projecting horizontally from such plate, it gives support to the several sectors D D D D, and also, by other arms or appliances, *f f*, it sustains the several combs E E E E, the whole being arranged as represented in the drawings. Each of the comb-supports terminates, at its rear, in a ball, *g*, having a hole, *h'*, made axially and horizontally in it, such hole being to enable the end of one electric conducting-wire to be inserted within the ball.

The conductors are used to put any two or more of the combs in electrical connection with each other and with the dischargers *k l*, made, arranged, and applied to the base-board in the ordinary way, such being as exhibited in the drawings.

Each of the sectors is held to its supporting-arm *e* by two clamp-nuts, *h i*, screwed upon a screw, *o*, formed on the arm, one of the nuts being on one side of the sector, and the other being on its opposite side. By means of the screw and nuts, the distance of the sector from the rotary disk may be adjusted, as circumstances may require.

Another advantage of my improvement is that it enables the machine to be readily converted into a "Bertesh machine," in which but one pair of sectors is employed with four of the combs. It also enables the machine to be reduced to that simpler form, viz, that in which but two sectors and two combs are used.

The improvement also enables the conducting-wires to be applied to the combs and the dischargers to great advantage, enabling any combination of them to be made, as may be desirable.

My improvement admits of one pair of combs and one pair of the sectors being easily raised from, and the other being left in connection with, the glass plate.

I claim the combination and arrangement of the supporting-plate C, of glass or other equivalent material, with the several sectors, and the combs arranged together and with the rotary electrizing-disk, substantially as specified.

I also claim the application of the plate C, not only to the several sectors and combs, for giving support to them in their proper relations with one another and the rotary disk, but as a support for one of the bearings of the shaft of the rotary disk, the whole being substantially as hereinbefore explained.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.

E. S. RITCHIE.