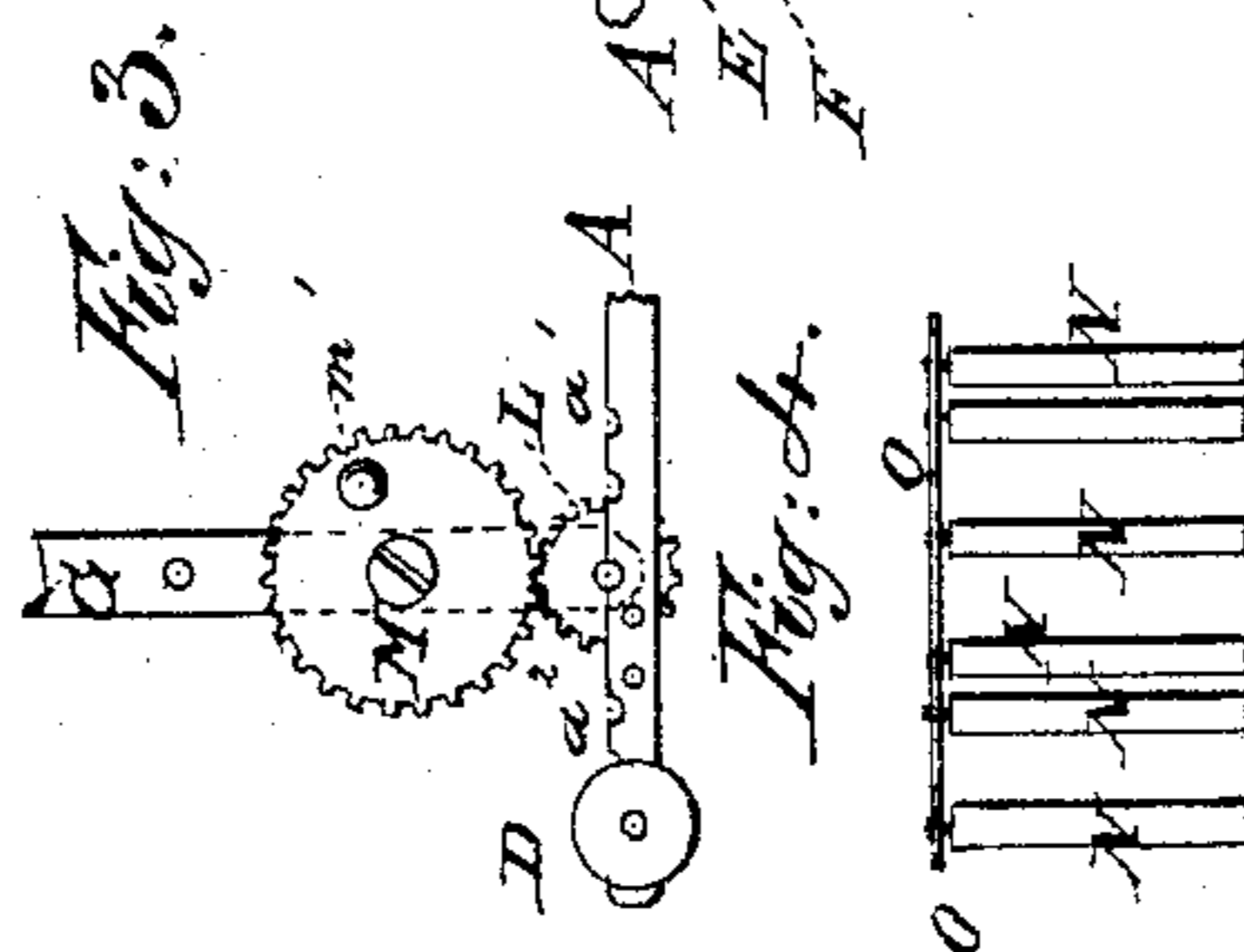
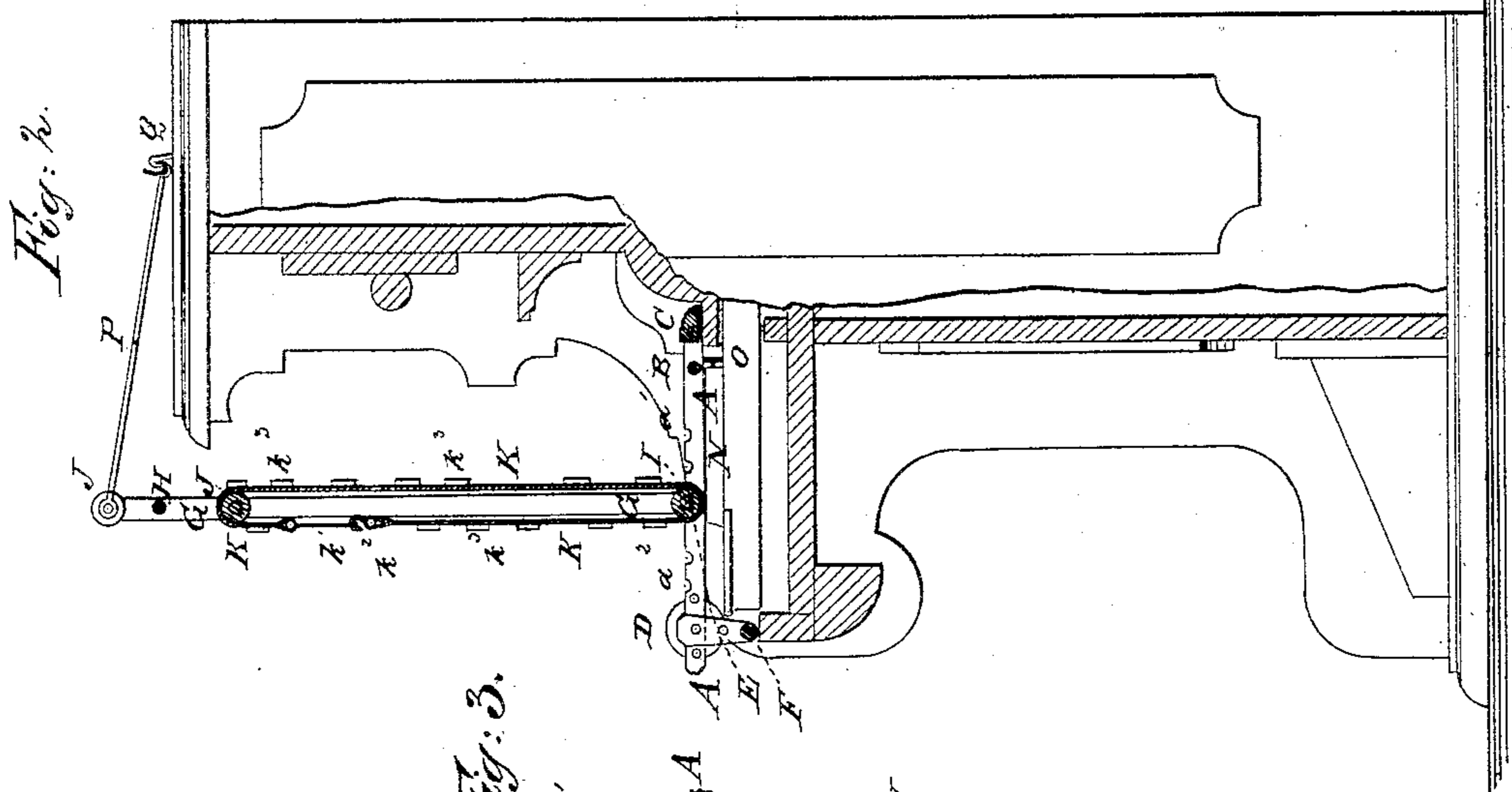
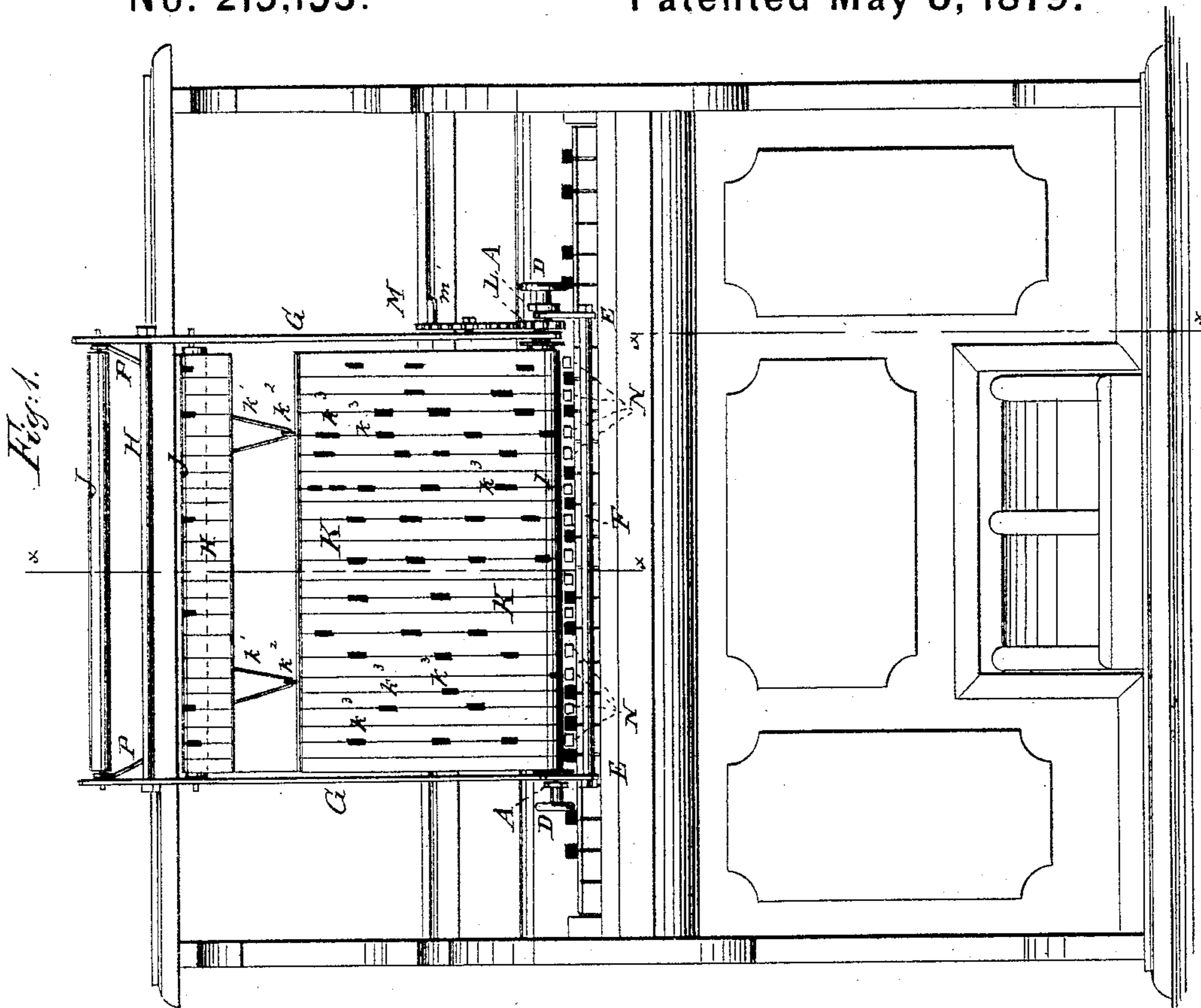


E. F. O'NEILL.  
Self-Playing Attachment for Keyboard Instruments.

No. 215,155.

Patented May 6, 1879.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SELF-PLAYING ATTACHMENTS FOR KEY-BOARD INSTRUMENTS.

Specification forming part of Letters Patent No. **215,155**, dated May 6, 1879; application filed January 17, 1879.

*To all whom it may concern:*

Be it known that I, EDWARD FORBES O'NEILL, of Storm Lake, in the county of Buena Vista and State of Iowa, have invented a new and useful Improvement in Attachment for Organs, Pianos, &c., of which the following is a specification.

Figure 1 is a front view of an organ to which my improvement has been applied. Fig. 2 is a detail section of the same, taken through the broken line *x x x x*, Fig. 1. Fig. 3 is a detail view of a part of the same. Fig. 4 is a detail view of a group of false keys.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved attachment for organs, pianos, melodeons, and other key-board instruments, by the use of which any one, though wholly unacquainted with music, can play dance-music, and any other kind of music, sacred or secular, and which shall be simple in construction, easily applied to the instrument, and conveniently operated.

A are two bars, made of brass or other suitable material, and connected together by a rod, B. To and between the inner ends of the bars A are pivoted, or to them are attached, the ends of a bar, C, which is designed to rest upon the key-board of the instrument, in the rear of the keys.

To the outer ends of the bars A are secured, by clamping-screws D, two short uprights, E, the lower ends of which rest upon the instrument at the forward ends of its keys, and which may be connected together by a rod, F. Several holes are formed in the uprights E to receive the screws D, so that the said uprights E may be adjusted as the height of the keys may require.

G are two bars, made of brass or other suitable material, and connected together by one or more rods, H. To the lower ends of the bars G are pivoted the ends of a roller, I, the journals of which project to rest in notches in the upper sides of the bars A. To the upper parts of the bars G is pivoted a roller, J.

K is the music-chart, which is made of paper, cloth, or other suitable material, and passes around the rollers I J. To one end of the music-chart K are attached elastic loops or

straps  $k^1$ , which are hooked upon hooks  $k^2$ , attached to the other end of the said chart.

Several holes are formed in the upper parts of the bars G, to receive the journals of the roller J; or two or more rollers, J, are pivoted to the upper parts of the said bars G, so that music-charts of different lengths may be conveniently applied to the frame G H I J.

The notes of the music are represented upon the chart K by small projections  $k^3$ , of leather, rubber, or other suitable material. The long notes may be represented by long projections  $k^3$ ; or the projections  $k^3$  may all be of the same length, and the long notes formed by placing two or more of the said projections close together.

To one of the journals of the lower roller, I, is attached a small gear-wheel, L, into the teeth of which mesh the teeth of a larger gear-wheel, M, pivoted to the bar G. The gear-wheel M is provided with a crank-pin or handle,  $m'$ , by means of which the device is operated.

N are false keys, placed upon the white keys, between the black keys, and pivoted or hinged at their inner ends to a strip, O, of brass or other suitable material, which is made of such a thickness that it may be placed in the space between the inner ends of the black keys and the inner part of the key-board. The false keys N are made of such a length and thickness that their outer ends and upper sides may correspond with the outer ends and upper sides of the black keys.

To the upper ends of the bars G are pivoted the ends of a loop or bail, P, the middle part of which is made straight and parallel with the frame G H I J, and is placed upon a hook, Q, attached to the top of the instrument, so that the whole device can be moved laterally upon the instrument, to adjust it to the key in which the music is to be played.

When the device is to be used the journals of the lower roller, I, are placed in one of the inner notches,  $a^1$ , of the bars A, so that the projections  $k^3$  of the chart K will come into contact with and depress the black keys and the false keys, the said false keys operating the white keys, upon which they rest.

In the outer parts of the bars A are formed other notches,  $a^2$ , to receive the journals of the lower roller, I, and keep the projections  $k^3$  of

the chart K out of contact with the keys when it is desired to change or adjust the said chart K.

With this construction any piece of music represented upon the chart can be played by operating the crank-handle *m'*.

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

1. The false keys N, pivoted or hinged to a connecting-strip, to adapt them to be placed upon the white keys of a key-board instrument, between the black keys, substantially as herein shown and described.

2. The combination of the notched bars A, the rod B, the cross-bar C, the adjustable up-

rights E, and the clamping-screws D with each other, to form a frame to support the frame that carries the music-chart, substantially as herein shown and described.

3. The combination of the bars G, the rod or rods H, the rollers I J, the bail P, the gear-wheels L M, and the music-chart K, upon which the notes are represented by projections, with each other, and the frame A B C E D, substantially as herein shown and described.

EDWARD FORBES O'NEILL.

Witnesses:

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