

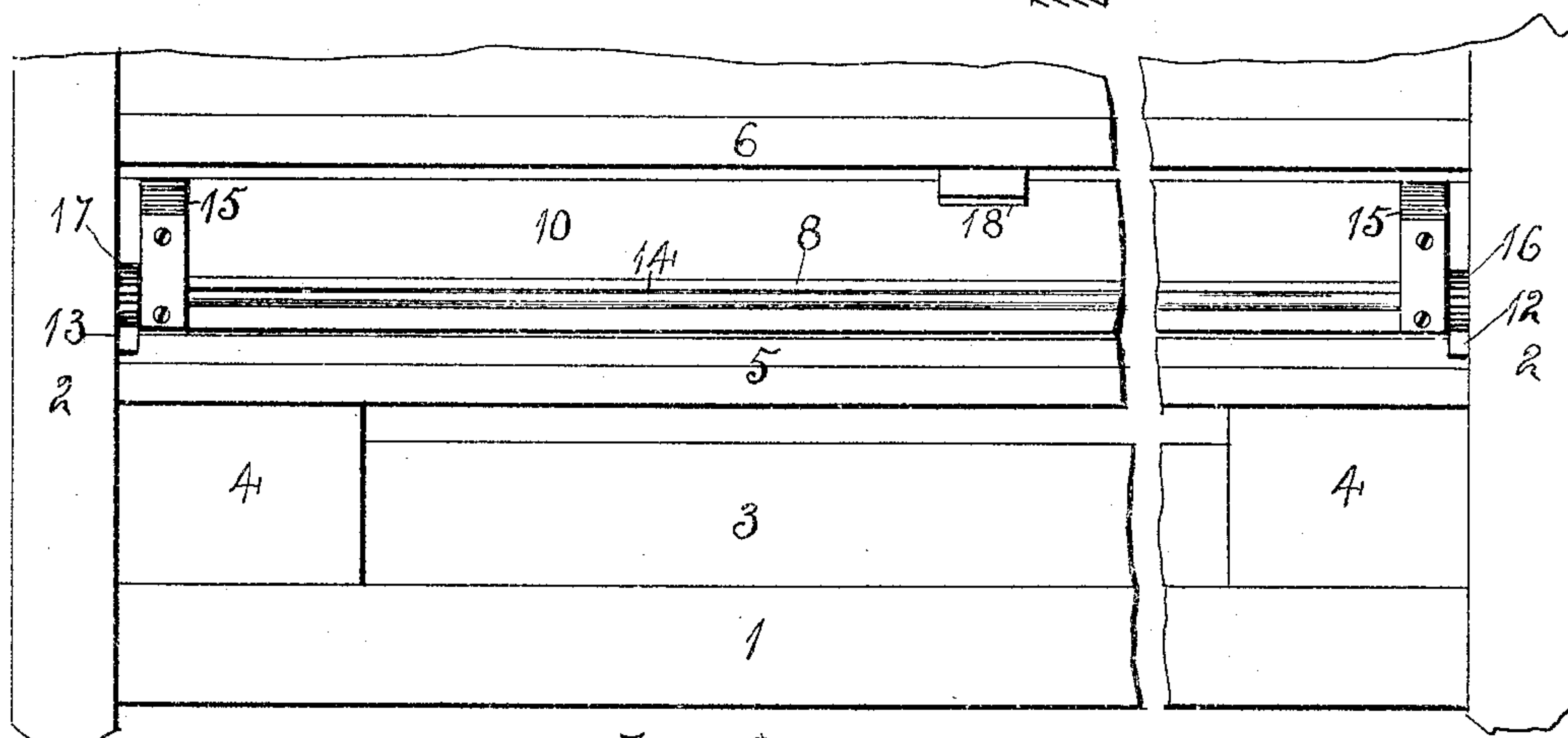
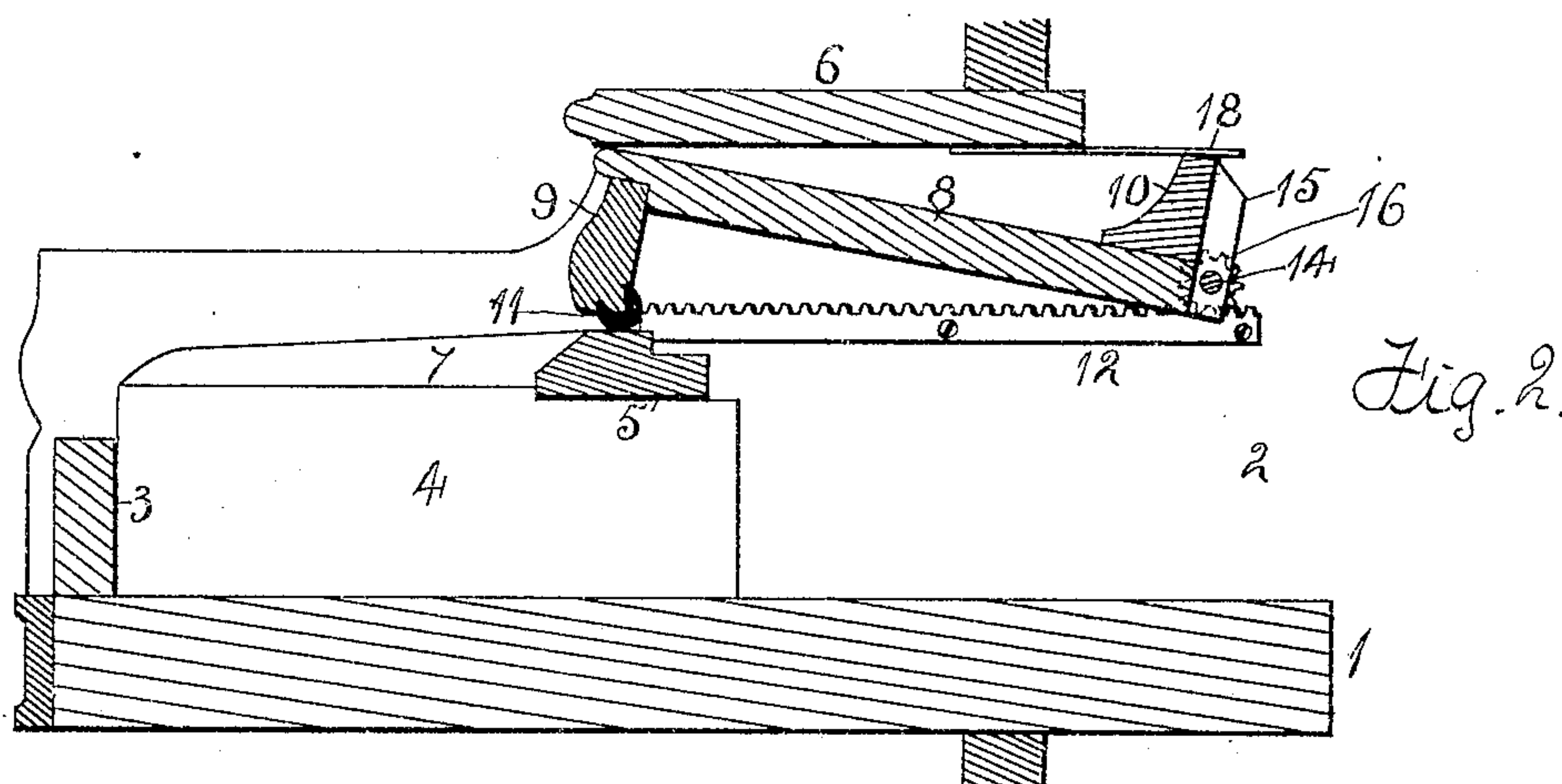
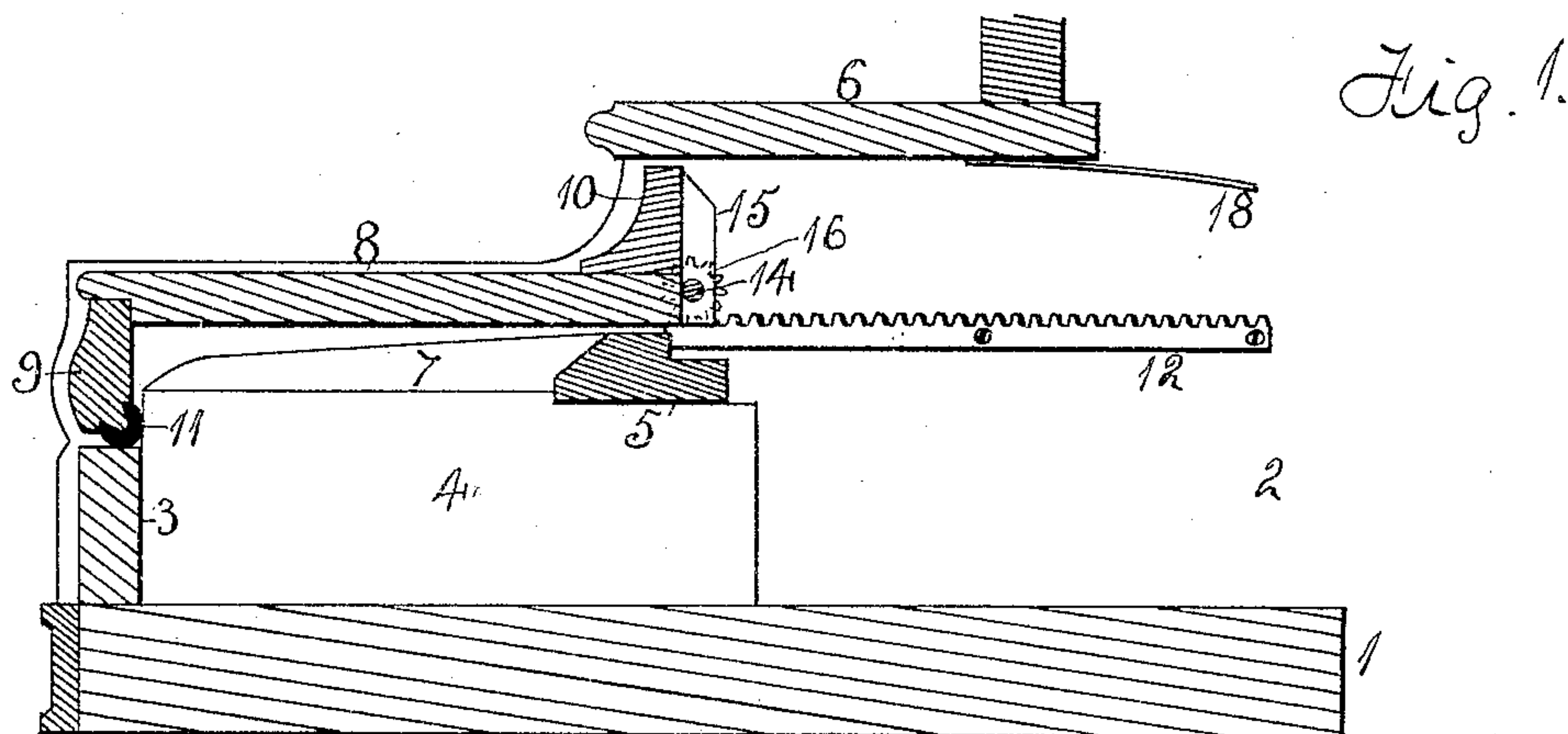
No. 788,044.

PATENTED APR. 25, 1905.

C. A. HADDORFF.

PIANO.

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Fig. 3.

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att.

## UNITED STATES PATENT OFFICE.

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## PIANO.

SPECIFICATION forming part of Letters Patent No. 788,044, dated April 25, 1905.

Application filed December 16, 1904. Serial No. 237,129.

*To all whom it may concern:*

Be it known that I, CHARLES A. HADDORFF, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Pianos, of which the following is a specification.

The object of this invention is to equip a piano with a fall-board which is supported in a manner to slide under the shelf and provided with means for carrying both ends uniformly to prevent cramping.

In the accompanying drawings, Figure 1 is a transverse section of so much of a piano necessary to show my improvements and in which the fall-board is closed. Fig. 2 is a similar section in which the fall-board is open. Fig. 3 is an elevation as seen from the rear, the sounding-board being removed.

The key-bed 1 is supported by the ends 2 of the piano-case. The key-slip 3, key-block 4, and name-board 5 are supported by the key-bed in the usual manner. A shelf 6 is located over the name-board 5. Inclined tracks 7 are supported by the key-blocks. A fall-board 8 has a depending front end 9 and to its rear edge is secured a projection 10. To the lower edge and inner corner of the depending front end 9 is secured an edging of felt 11.

To the ends of the piano-case are secured two toothed racks 12 and 13.

To the inner rear edge of the fall-board is secured a shaft 14 and held in place by the supports 15. This shaft 14 has two pinions 16 and 17 secured to the ends. The pinion 16 is supported by the toothed rack 12 and the pinion 17 is supported by the toothed rack 13.

When the parts are in the position shown

at Fig. 1, the fall-board is drawn forward and closes the space occupied by the keys of the piano and the felt edging 11 rests on the key-slip.

The fall-board may be moved into the position shown at Fig. 2, and the felt edging will follow the tracks 7 until it rests upon the name-board 5.

By the employment of the toothed racks and pinions in connection with the fall-board both ends of the fall-board will be moved parallel with each other, thereby preventing cramping and permitting the fall-board to be easily moved from any point at which the attendant may take hold of it.

The felt edging prevents the marring of the woodwork.

When the fall-board is open, as shown at Fig. 2, the projection 10 will rest under a flat spring 18, having one end secured to the shelf 6, its action being to hold the pinions firmly against the toothed racks, thereby preventing the jingling of the parts when the piano is in use.

I claim as my invention—

1. In a piano, a fall-board having a sliding movement within the casing, and yielding means with which the upper edge of the fall-board engages when in its open position, to prevent jingling.

2. In a piano, a fall-board having a sliding movement within the casing, and a spring with which the fall-board engages when in its open position.

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