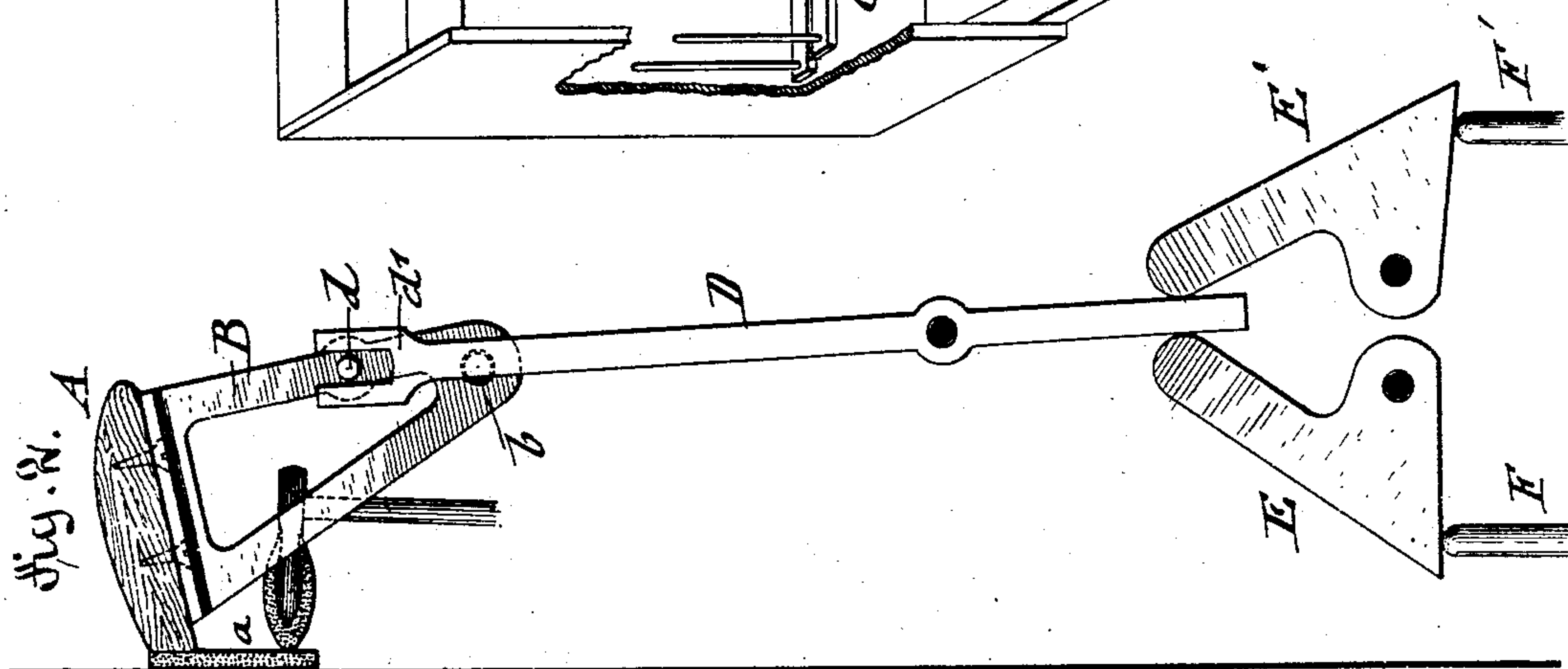
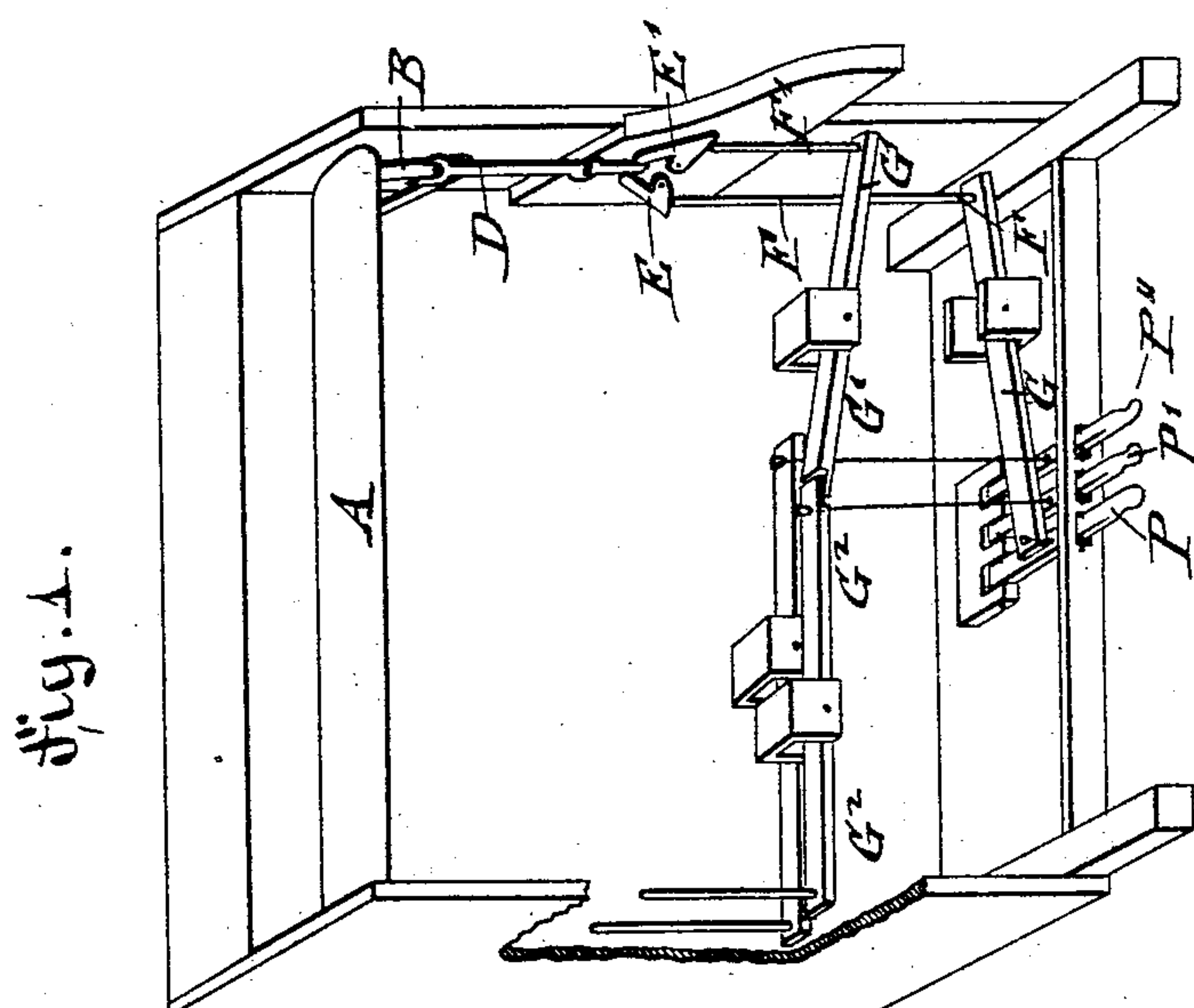
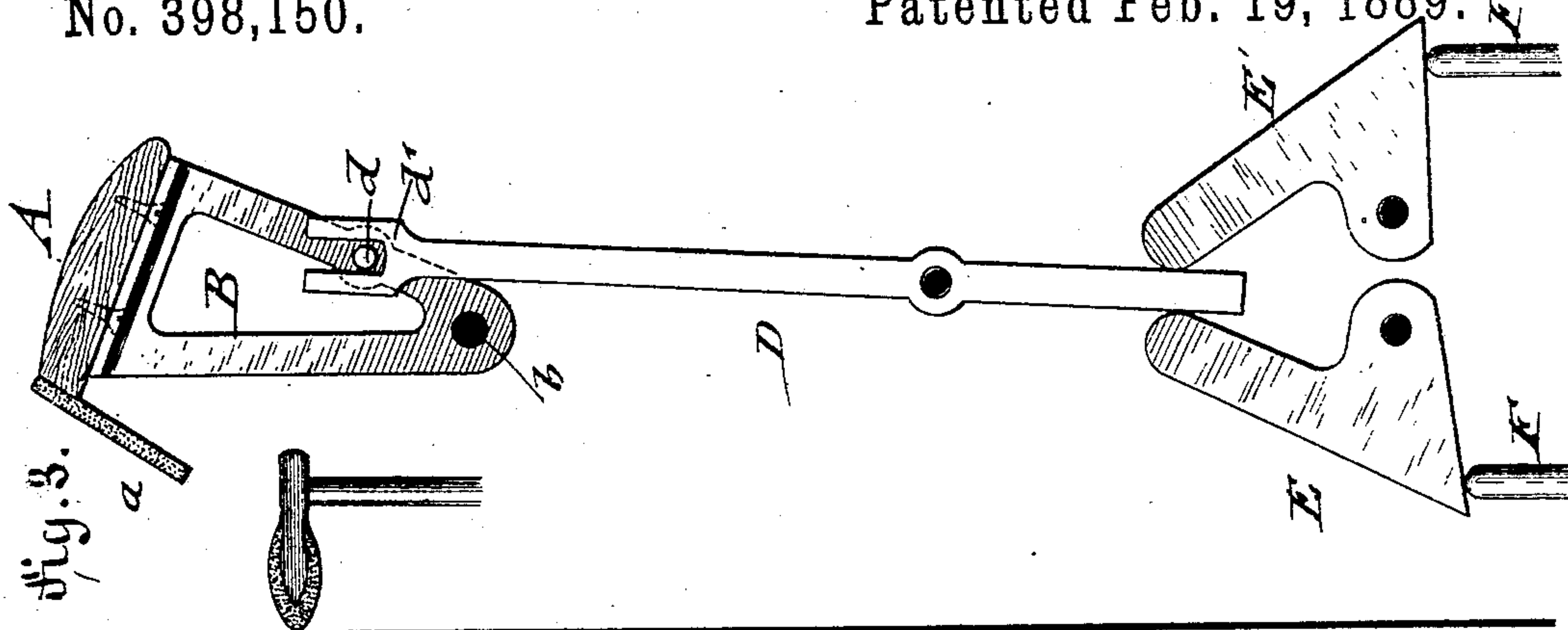


(No Model.)

S. HANSING.
MUFFLER FOR UPRIGHT PIANOS.

No. 398,150.

Patented Feb. 19, 1889.



WITNESSES:

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SIEGFRIED HANSING, OF NEW YORK, N. Y.

MUFFLER FOR UPRIGHT PIANOS.

SPECIFICATION forming part of Letters Patent No. 398,150, dated February 19, 1889.

Application filed November 8, 1888. Serial No. 290,299. (No model.)

To all whom it may concern:

Be it known that I, SIEGFRIED HANSING, of the city, county, and State of New York, have invented certain new and useful Improve-
5 ments in Mufflers for Upright Pianos, of which the following is a specification.

In the sound-mufflers which were heretofore used for upright and other pianos the muffling bar and apron were applied to the strings
10 by means of a stop located above the keyboard in connection with intermediate lever mechanism. This arrangement was objectionable and unsightly. In other mufflers the muffling bar and apron were actuated by
15 means of mechanism which is located at the interior of the piano and operated from below the key-bottom, which arrangement was inconvenient and unhandy. Attempts have also been made to operate the muffling at-
20 tachment by means of a pedal, but as the return of the muffling-bar could not be accomplished by the same this arrangement was unsuccessful and was rejected.

The objections to the mufflers heretofore
25 devised have prevented the general introduction of muffling attachments for pianos which otherwise would be of great advantage, inasmuch as the annoyance caused by the practicing of beginners can be obviated to a great
30 extent by the same.

The object of this invention is to furnish an improved muffling attachment for upright pianos which is operated by pedal action, but in such a manner that the muffling-bar can
35 be applied to and returned to its former position with great facility; and the invention consists of a muffling-bar pivoted to the action-frame of an upright piano and actuated by an oscillating lever, which is operated by
40 means of fulcrumed elbow-levers acting on its lower end, one of said elbow-levers being operated by a separate muffler-pedal and intermediate lever mechanism when the muffling-bar is to be applied, while the other el-
45 bow-lever is operated by the soft pedal and intermediate lever mechanism, so that the muffling-bar is returned to its normal position of rest.

In the drawings, Figure 1 represents a per-
50 spective view showing the general arrangement of my improved sound-muffler for up-

right pianos and the method of working the same by pedal action; and Figs. 2 and 3 are detail side views of the same, drawn on a larger scale, showing its connection with the
55 pedal-operating mechanism.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the muffling-bar, which is provided with a muffling-apron, 60
a, of felt or other suitable material, that is interposed between the strings and the hammers whenever the sounds of the strings are to be muffled. The muffling-bar A is applied by bracket-arms B, which are attached thereto 65
by pivots b of the action-frame of the piano. Above the pivots of the bracket-arms B is applied to one of said brackets a fixed pin, d, which is engaged by the upper forked end, d', of an oscillating lever, D, that is fulcrumed 70
to the side walls of the supporting-frame of the piano. The lower end of the fulcrumed lever D is acted upon by the upper toe-shaped ends of elbow-levers E E', which are pivoted at their lower and inner ends to the side walls 75
of the supporting-frame, and acted upon near their apices by pusher-rods F F', that rest on intermediate pedal-levers, G G'. The pedal-lever G and pusher-rod F are operated by a muffler-pedal, P, while the pedal-lever G' and 80
pusher-rod F' are operated by the soft pedal P'. The third pedal, P², serves for producing the forte playing. The soft pedal P' also serves to raise the hammers by the usual lever-connection, G², as shown in Fig. 1, be- 85
sides returning the muffling-bar into its normal position of rest. (Shown in Fig. 2.)

Whenever the sounds of the piano are to be muffled, the muffler-pedal P is lowered, so that by the action of the pedal-levers G, pusher-rod F, elbow-lever E, and oscillating lever D the muffling-bar A is moved from the position of rest toward the strings, so that the muffling-apron is interposed between the strings and hammers, as shown fully in Fig. 2. The 95
muffling bar and apron are retained in this position after the pedal P is released, and are removed from the strings by depressing the soft pedal P', which, by the action of the pedal-lever G, pusher-rod F', elbow-lever E', and 100
oscillating lever D returns the muffling bar and apron into its former position of rest, as

shown in Fig. 3. The soft pedal P' hereby serves two functions—that of lifting the hammers for piano playing as well as for returning the muffling attachment from the strings
5 to its normal position of rest.

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

1. The combination, with an oscillating muffling bar and apron pivoted to the supporting
10 action-frame, of a fulcrumed lever engaging one of the supporting-arms of the muffling-bar, a muffler-pedal, a soft pedal, and intermediate lever mechanisms between the fulcrumed lever and said pedals for applying or removing
15 the muffling-bar to or from the strings, substantially as set forth.

2. The combination, with an oscillating muffling bar and apron, of an oscillating lever engaging the supporting-arms of the same,
20 pivoted elbow-levers engaging the lower end of said oscillating lever, a separate muffler-pedal, a soft pedal, and mechanism between said pedals and the elbow-levers for applying

the muffler to the strings or returning the same to its normal position of rest, substantially as set forth. 25

3. The combination, with a muffling bar and apron, of pivoted bracket-arm supporting the muffling-bar, a pin applied to one of said arms, a fulcrumed lever having a forked upper end for engaging said pin, elbow-levers engaging the lower end of the actuating-lever, pusher-rods for raising the elbow-levers, a muffler-pedal, a soft pedal, and pedal-levers between the muffler and soft pedals and the
35 pusher-rods, whereby the elbow-levers and muffler-bar are alternately operated and the latter either applied to or removed from the strings, substantially as set forth.

In testimony that I claim the foregoing as
40 my invention I have signed my name in presence of two subscribing witnesses.

SIEGFRIED HANSING.

Witnesses:

PAUL GOEPEL,

JOHN A. STRALEY.