

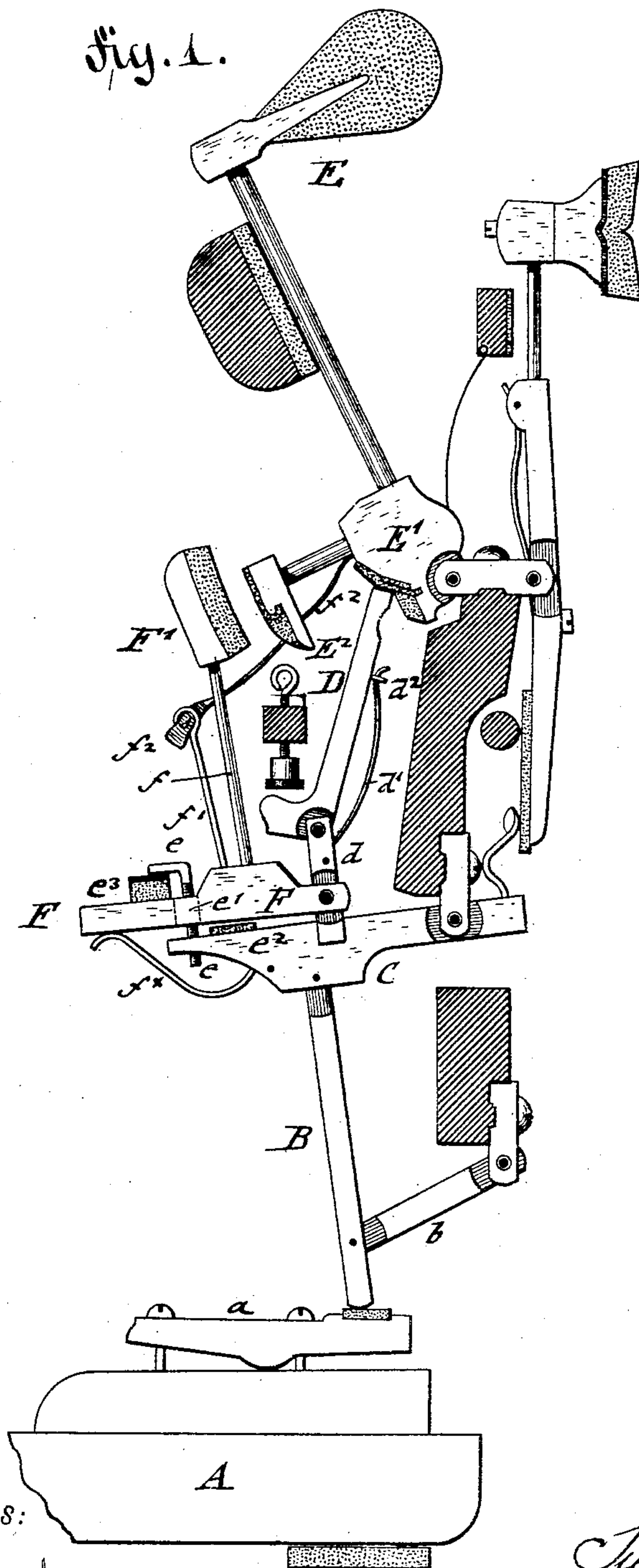
(No Model.)

3 Sheets—Sheet 1.

S. HANSING.
UPRIGHT PIANO ACTION.

No. 398,151.

Patented Feb. 19, 1889.



WITNESSES:

for H. Rosenbaum.
Carl Karp

INVENTOR,
Siegfried Hansing
BY
Gospel & Paegener
ATTORNEYS.

(No Model.)

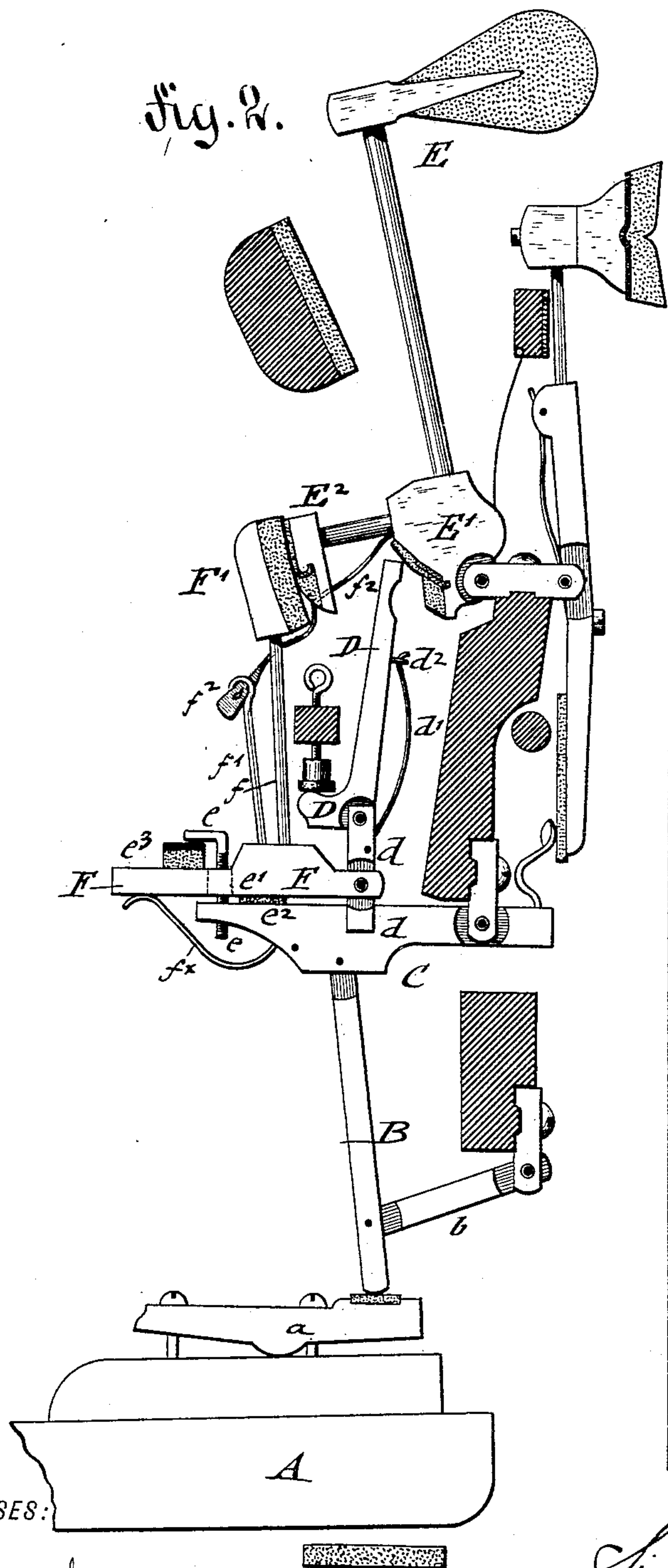
3 Sheets—Sheet 2.

S. HANSING.

UPRIGHT PIANO ACTION.

No. 398,151.

Patented Feb. 19, 1889.



WITNESSES:

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INVENTOR,

INVENTOR,
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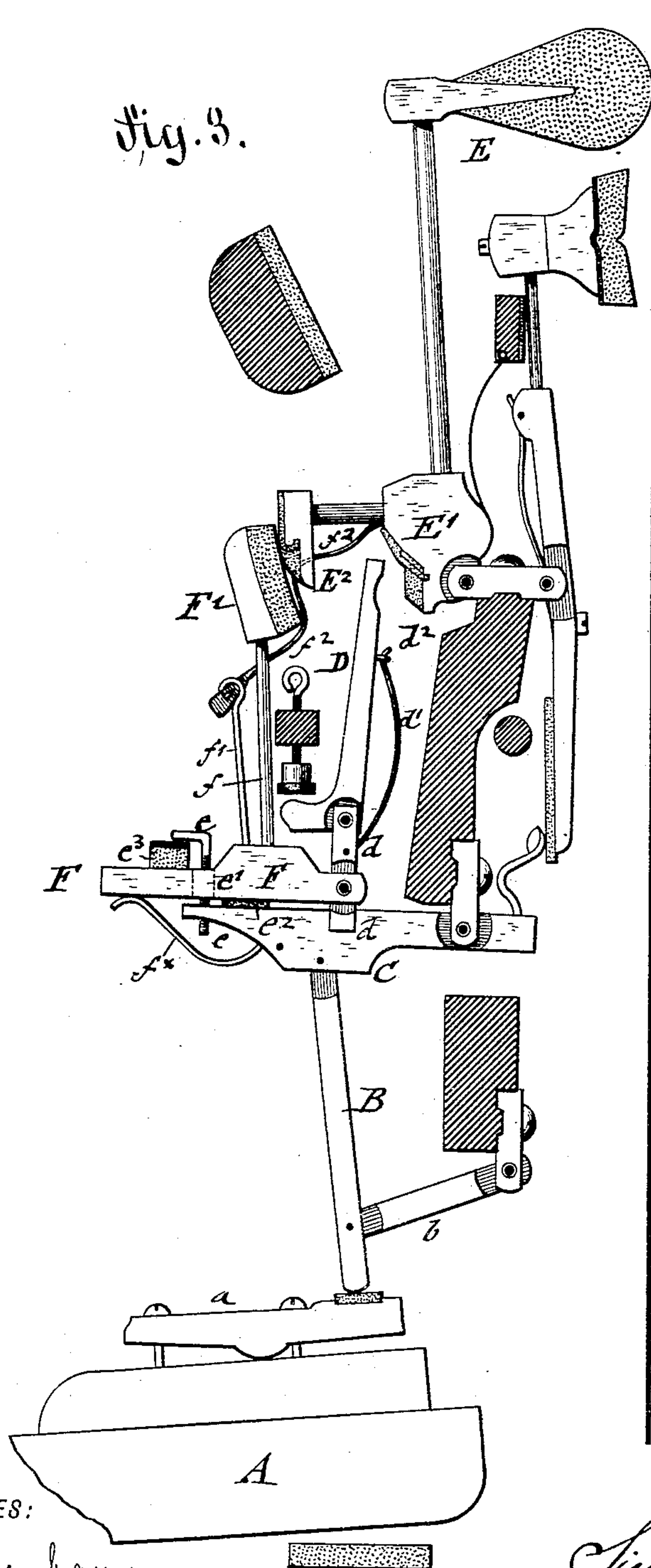
(No Model.)

3 Sheets—Sheet 3.

S. HANSING.
UPRIGHT PIANO ACTION.

No. 398,151.

Patented Feb. 19, 1889.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SIEGFRIED HANSING, OF NEW YORK, N. Y.

UPRIGHT-PIANO ACTION.

SPECIFICATION forming part of Letters Patent No. 398,151, dated February 19, 1889.

Application filed November 8, 1888. Serial No. 290,300. (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 Improvements in Upright-Piano Actions, of which the following is a specification.

This invention relates to an upright-piano action which responds readily to the touch and combines facility of repetition with reliability and ease of movement; and the invention consists of an upright-piano action in which the hammer-check is supported on a pivoted and spring-pressed hammer-check lever that is pivoted close to the jack-lever and engaged by a check-wire that is attached to the jack-lever and passed through an opening of the hammer-check lever, as will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figures 1, 2, and 3 represent side elevations of my improved upright-piano action, showing the same, respectively, in a position of rest, in an intermediate position for repetition, and in the act of striking the string.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the key-lever, which is provided with an equalizing-lever, *a*, on which rests the pilot B, that is connected at its lower part by a pivot-link, *b*, to the lowermost bar of the action-frame and at its upper end to the jack-lever C, which is fulcrumed to the main bar of the action-frame. The rear end of the jack-lever C is provided with the usual spoon-shaped wire for operating the damper-lever. To the middle part of the jack-lever C is rigidly secured, at right angles thereto, an upright post, *d*, to the upper end of which is fulcrumed the jack D, which is drawn in backward direction by a spring, *d'*, that is applied by its lower end to the post *d*, and retained at its bent upper end by a staple or eye, *d*², of the jack, which latter engages a shoulder of the hammer-butt E, so as to operate the hammer in the usual manner by the lifting of the jack. To the front end of the jack-lever C is applied a check-wire, *e*, which passes through an opening in the hammer-check lever F, that is pivoted to the post *d*, and supported at its front

end by a wire spring, *f*^x, that is attached to the jack-lever C, and applied by its curved free end to the under side of the hammer-check lever F. A felt cushion, *e*², is attached to the jack-lever below the hammer-check lever, so as to provide a yielding support for the same. A cushion, *e'*, is also applied to the upper side of the hammer-check lever, said cushion forming a yielding rest for the check-piece *e*, the shank of which is threaded, so as to be adjusted higher or lower on the jack-lever C. The hammer-check lever F carries the wire shank *f* of the hammer-check F' and the bridle-wire *f'*, to the upper end of which the bridle *f*² is attached, which passes through the lower end of a shoe, E², that is applied to the hammer-butt E, as shown clearly in the drawings. The remaining accessories of the action—such as an adjustable check for the jack, a spring that engages the hammer-butt, and a hammer-rest—are the same in upright-piano actions.

The essential feature of my improved upright-piano action consists in the sensitive and responsive action of the hammer-check and its lever, whereby the hammer is very effective in repetition. This is accomplished by the connection of the hammer-check lever with the jack-lever, by which a very reliable action of the hammer-check and the proper cushioning of the shoe of the hammer-butt is produced. On depressing the key-lever so that the hammer strikes the string, the jack-lever is lifted, which carries along the hammer-check lever, so as to apply the hammer-check to the shoe of the hammer as soon as the hammer has struck the string, as shown in Fig. 3. When the key-lever returns to its position of rest, the check *e* of the jack-lever C engages the hammer-check lever and returns the same with the jack-lever C and the hammer-check into its normal position, carrying also, by means of the bridle-wire and bridle, the hammer back into its normal position. When in quick repetition the key-lever is quickly oscillated, the hammer-check responds, by the elastic cushioning of its lever and the action of the check *e*, quickly to the oscillating motions of the key-lever, so as to check the shoe of the hammer-butt when the hammer is in its intermediate position between

the hammer-rest and the string, as shown in Fig. 2, and hold thereby the hammer in position for quick and effective repetition.

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

1. In an upright-piano action, the combination, with the fulcrumed jack-lever having an adjustable check-wire and a cushioning-spring at its front end, of a hammer-check lever piv-
10 oted to a fixed post of the jack-lever, said hammer-check lever being provided with a slotted opening for the check-wire, and a cushion for the same, substantially as set forth:

2. In an upright-piano action, the combination, with a fulcrumed jack-lever having an ad-
15 justable check-wire and a cushioning-spring at its front end, of a fixed post secured to the

check-lever, a hammer-check lever pivoted to said post and provided with a slot for the passage of the check-wire and a cushion for
20 the same, a hammer-check secured by a wire shank to the hammer-check lever, a bridle-wire, also secured to the hammer-check lever and a hammer the butt of which is provided with a shoe, and a bridle connected to the
25 upper end of the bridle-wire, substantially as set forth.

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

SIEGFRIED HANSING.

Witnesses:

PAUL GOEPEL,
JOHN A. STRALEY.