

(No Model.)

2 Sheets—Sheet 1.

F. FEILING.

PIANISSIMO PEDAL FOR PIANOS.

No. 387,503.

Patented Aug. 7, 1888.

Fig. 1.

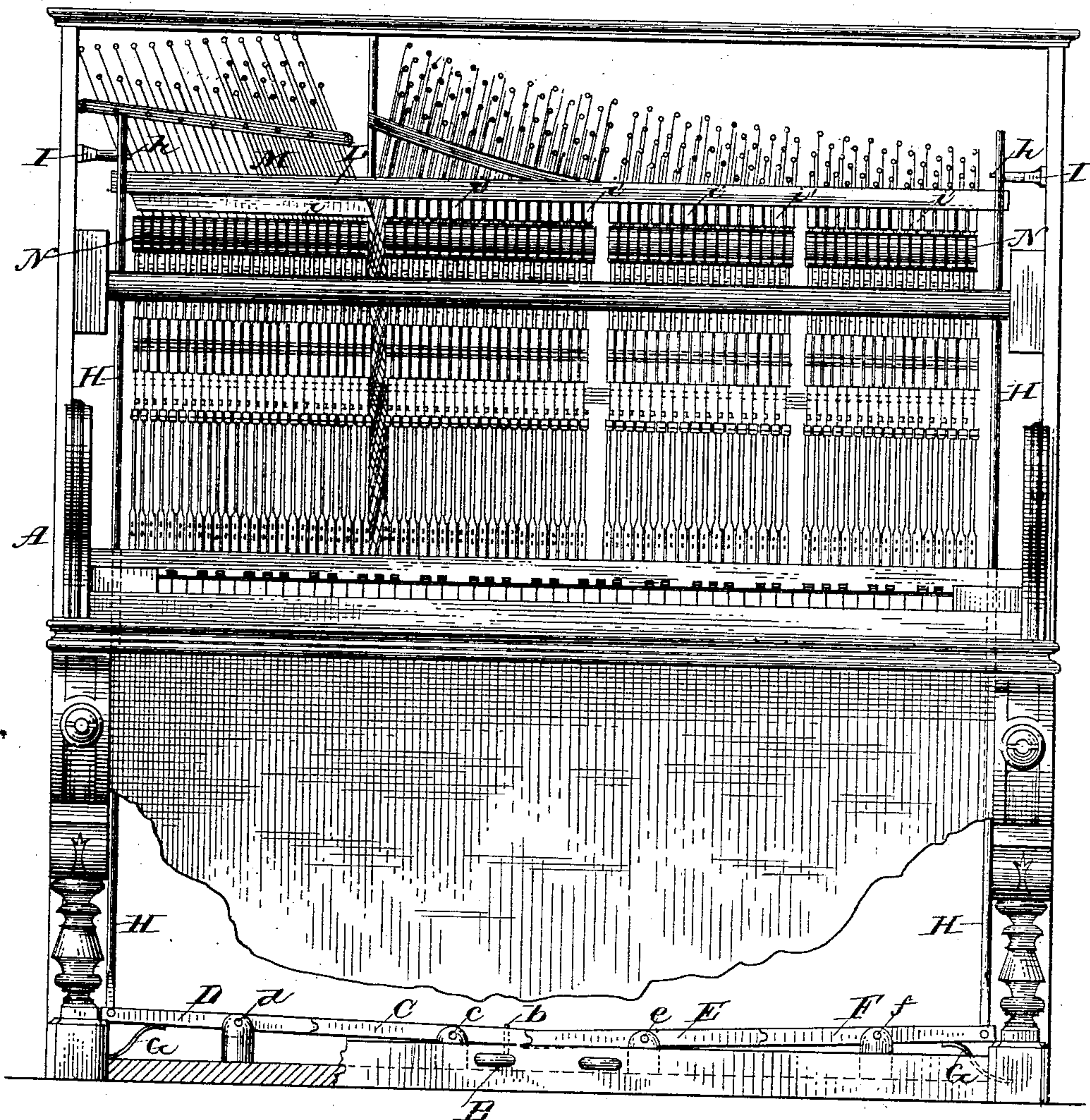
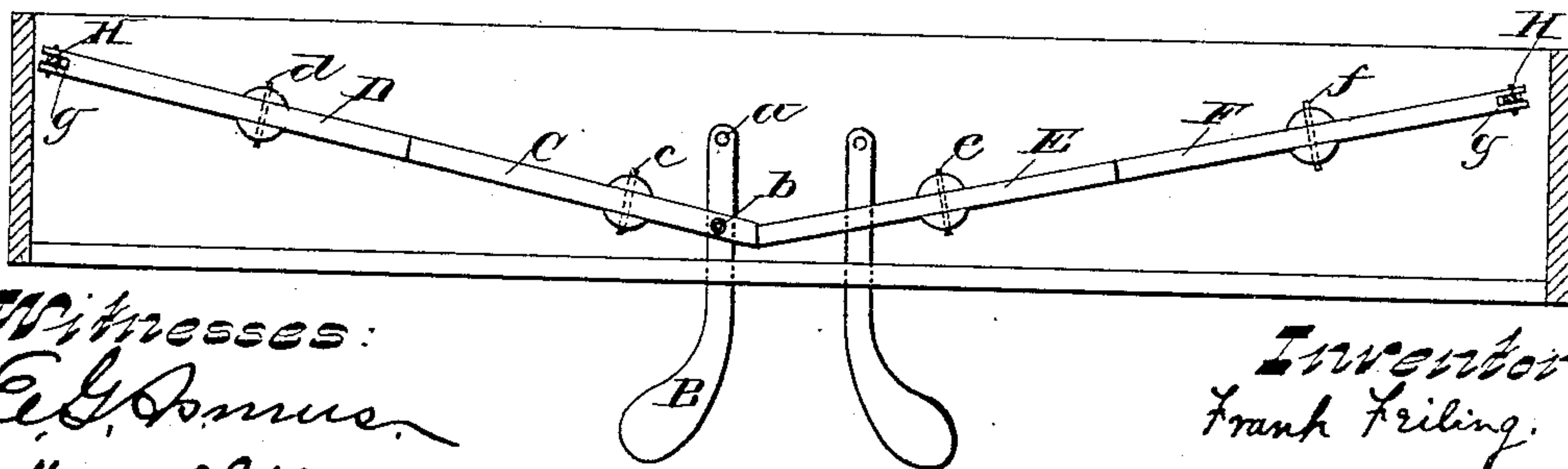


Fig. 2.



Witnesses:
E. G. Brown.
N. E. Oliphant.

Inwitness:
Frank Firling.
By Stout & Underwood,
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(No Model.)

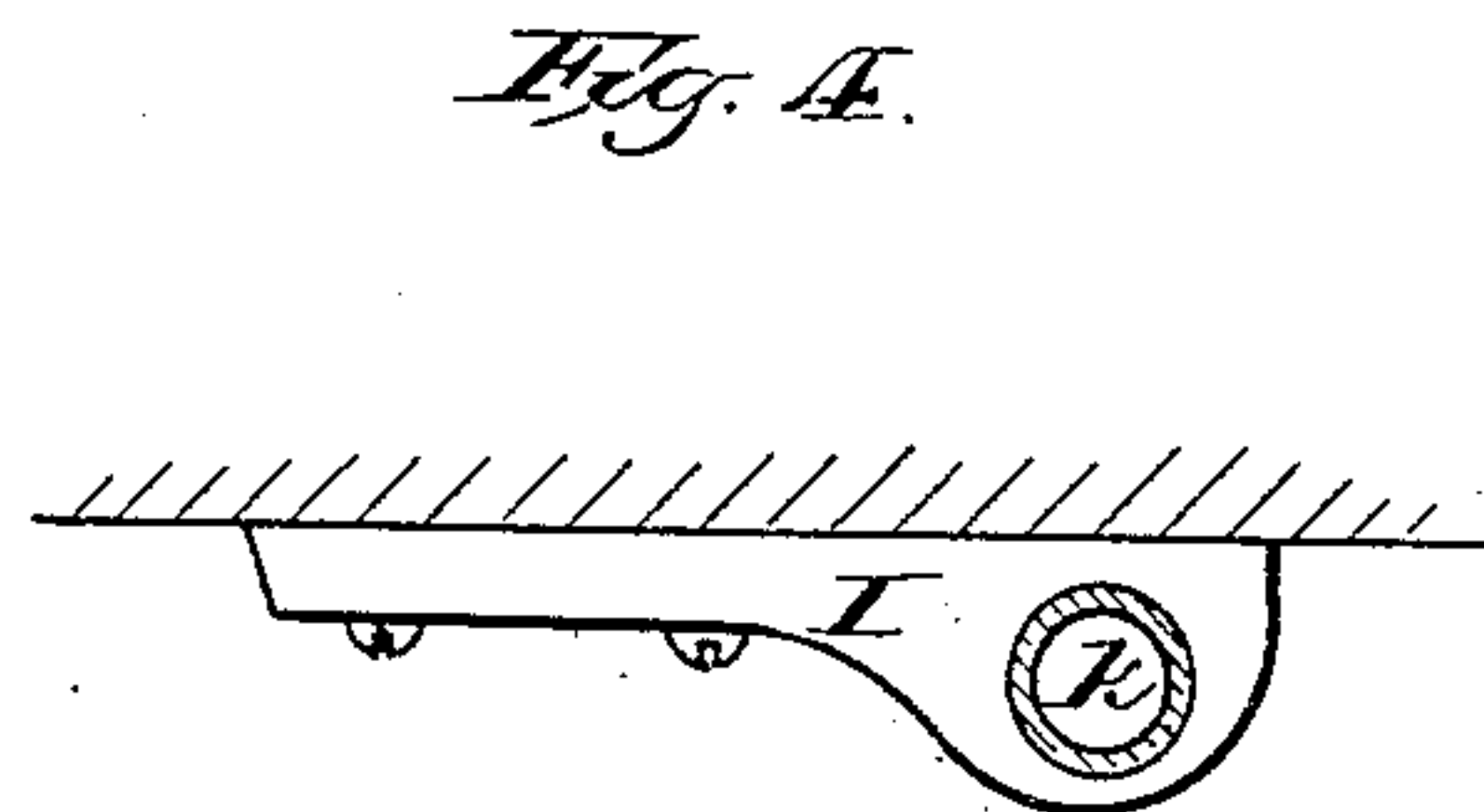
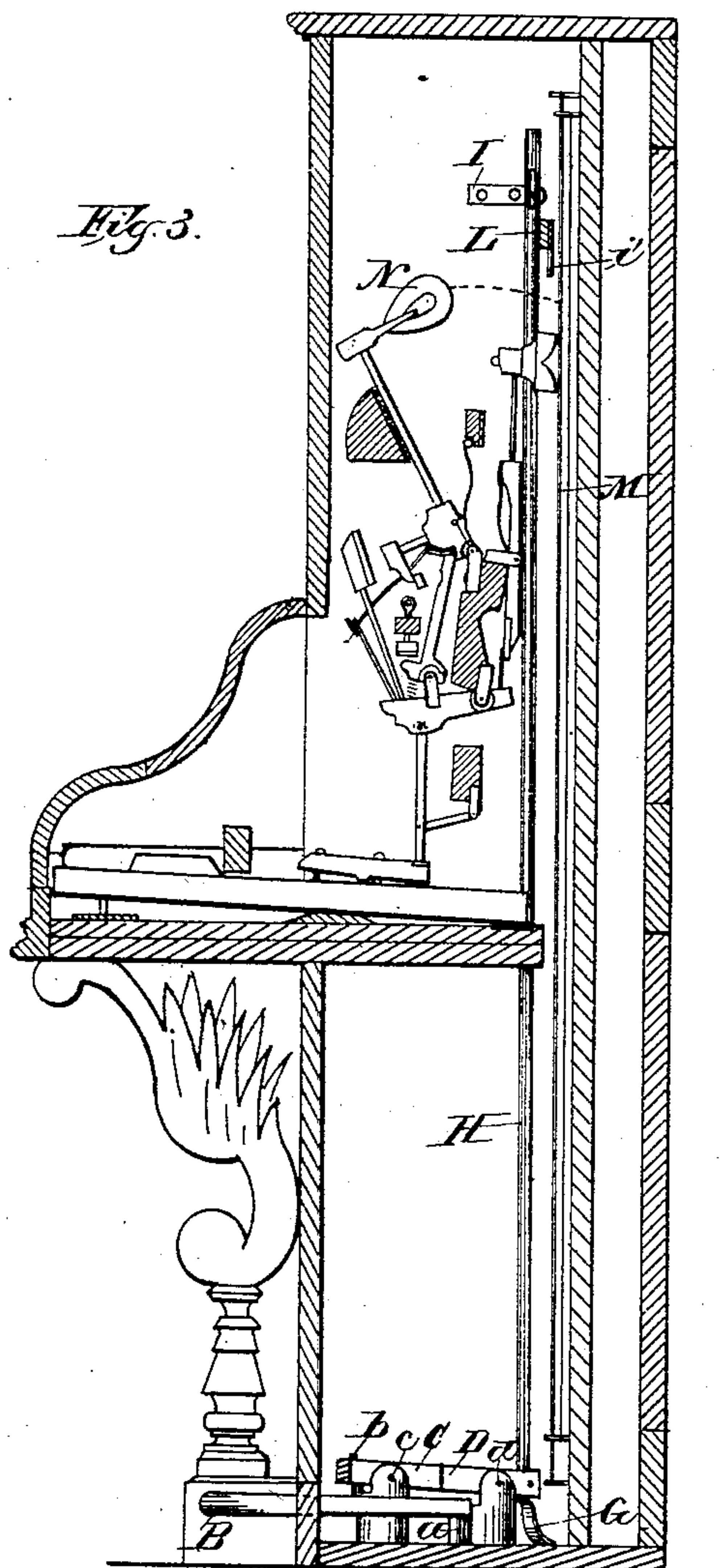
2 Sheets—Sheet 2.

F. FEILING.

PIANISSIMO PEDAL FOR PIANOS.

No. 387,503.

Patented Aug. 7, 1888.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK FEILING, OF MILWAUKEE, WISCONSIN.

PIANISSIMO-PEDAL FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 387,503, dated August 7, 1888.

Application filed November 9, 1885. Serial No. 182,243. (No model.)

To all whom it may concern:

Be it known that I, FRANK FEILING, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Soft-Pedal Mechanism for Upright Pianos; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to soft-pedal mechanism for upright pianos; and it consists in certain peculiarities of construction, as will be hereinafter described with reference to the accompanying drawings, in which—

Figure 1 represents a front elevation of an upright piano with the casing above the keyboard removed and that below said keyboard partly broken away to show the application of my invention; Fig. 2, a plan view of the treadle action; Fig. 3, a vertical transverse section of the piano embodying my invention, and Fig. 4 a detail plan view of a bracket for the connecting-rods.

A represents an upright piano of the ordinary construction and action.

B is the soft-pedal, having its inner end supported at *a*, said pedal being provided with a vertical pin, *b*, adapted to engage a lever, C, fulcrumed at *c*. This lever has its ends flexibly joined to other levers, D E, respectively fulcrumed at *d e*, said lever E being also flexibly joined to another lever, F, which latter is fulcrumed at *f*. The outer ends of the levers D F have a bearing on springs G and are formed with sockets or grooves *g*, adapted to receive and have secured therein the lower ends of vertical rods H. The upper ends of these rods are slotted and engage pins *h*, projecting from brackets I, secured to the inside of the piano casing. Suitably fastened to the vertical rods H, near their upper ends, is a horizontal bar, L, having secured thereto depending strips *i i'*, of any suitable material, preferably felt, said strips being designed to be interposed between the strings M and the hammers N of the instrument by depressing the pedal B. The felting or other material designed to come between the bass-strings and their respective hammers is preferably of one continuous strip, as shown at *i*, while for the other strings I prefer to employ a single strip, *i'*, for each tone. It is obvious, however, that

the entire felting may be of one strip extending from end to end of the horizontal bar, the particular arrangement of the felting being only a matter of convenience or adaptability.

In Fig. 4 I have shown another form of bracket for the vertical rods H, said bracket being provided with a perforation, *k*, instead of a pin, *h*, as above described. This perforation is preferably lined with felting or other suitable packing and adapted to receive and guide its respective rod as the latter is vertically operated. In the operation of my invention when the pedal B is depressed the lever C is actuated through the medium of the pin-connection *b*, and in turn actuates the levers D E, flexibly joined to its respective ends. At the same time the lever F, flexibly joined to the one E, is also actuated. By this action of the levers the outer ends of the ones D F are simultaneously lowered, thereby drawing down the rods H, which carry the horizontal bar L, to thus interpose between the hammers and strings the felting strip or strips depending from said bar. These strips receive the blows of the hammers, but are normally far enough away from the strings so as not to retard the vibrations, their contact with and recoil from said strings being instantaneous. When the pedal B is released, the springs G automatically raise the depressed ends of the levers D F and force the rods H and the bar L, connecting said rods, upward, so as to carry the depending felting strips out of range of the hammers.

By the soft-pedal mechanism above described I am enabled to soften the tone of the several strings without lessening the force of the hammers or in any way affecting the general action, and at the same time by permitting the hammers to have their full stroke a more clear and sustained tone can be had from the several strings when the soft-pedal is operated than is usual in the ordinary softening mechanism applicable to upright pianos.

A further advantage of my mechanism lies in the fact that the tones of the strings may be varied from loud to very soft by the movement of the soft-pedal—that is to say, when the pedal is but slightly depressed only a limited portion of the felting strip or strips is interposed between the strings and hammers of the instrument, and thus when the keys are struck

the tones are but slightly softened. At the same time as the pedal is further depressed the felting is brought further into action, so as to relatively soften the tones until the treadle is fully depressed, when at this time the tones will be their softest, owing to the fact that the greatest portion of the felting is brought into contact with the strings by the striking of the hammers.

10 Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 In an upright piano, the combination, with a pedal having a vertical pin, *b*, of the lever *C*, adapted to engage said pin, levers *D E*, flexibly joined to the one *C*, and another lever, *F*, similarly joined to the one *E*, two vertical sliding rods united at their lower ends to said levers *D F*, brackets *I*, secured to the interior 20 of the piano-casing and provided with pins

passing through slots in the upper part of the rods, a horizontal bar, *L*, fastened at its ends to said rods, a continuous strip of felting or other suitable material, *i*, and a series of strips, *i'*, of similar material, pendently secured to 25 said horizontal bar, and the springs *G*, arranged to come in contact with the outer ends of the lever system at or near their points of juncture with the vertical rods, all arranged to operate substantially as and for the purpose 30 set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

FRANK FEILING.

Witnesses:

S. S. STOUT,

H. G. UNDERWOOD.