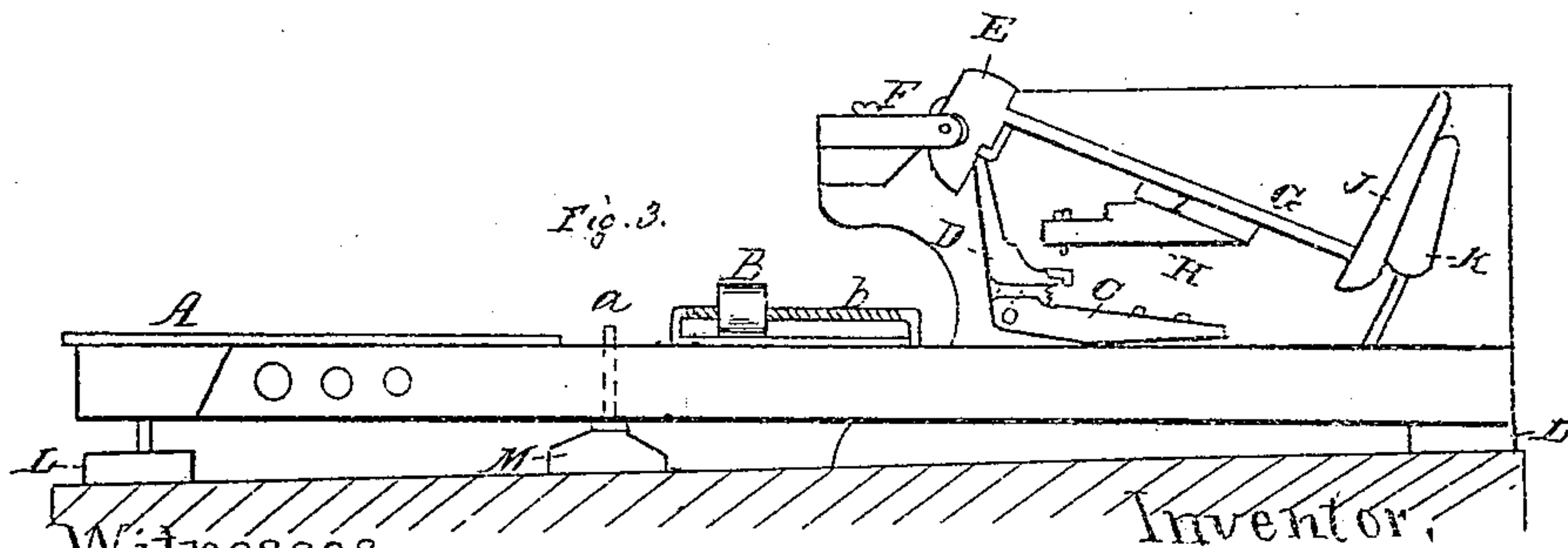
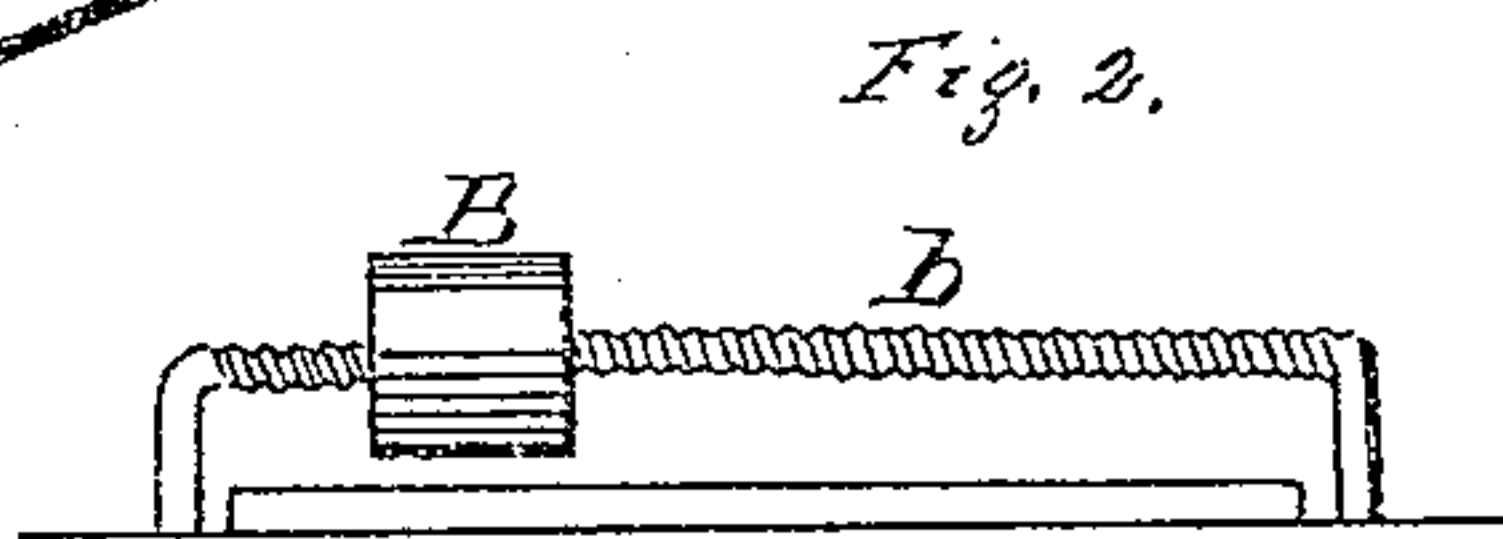
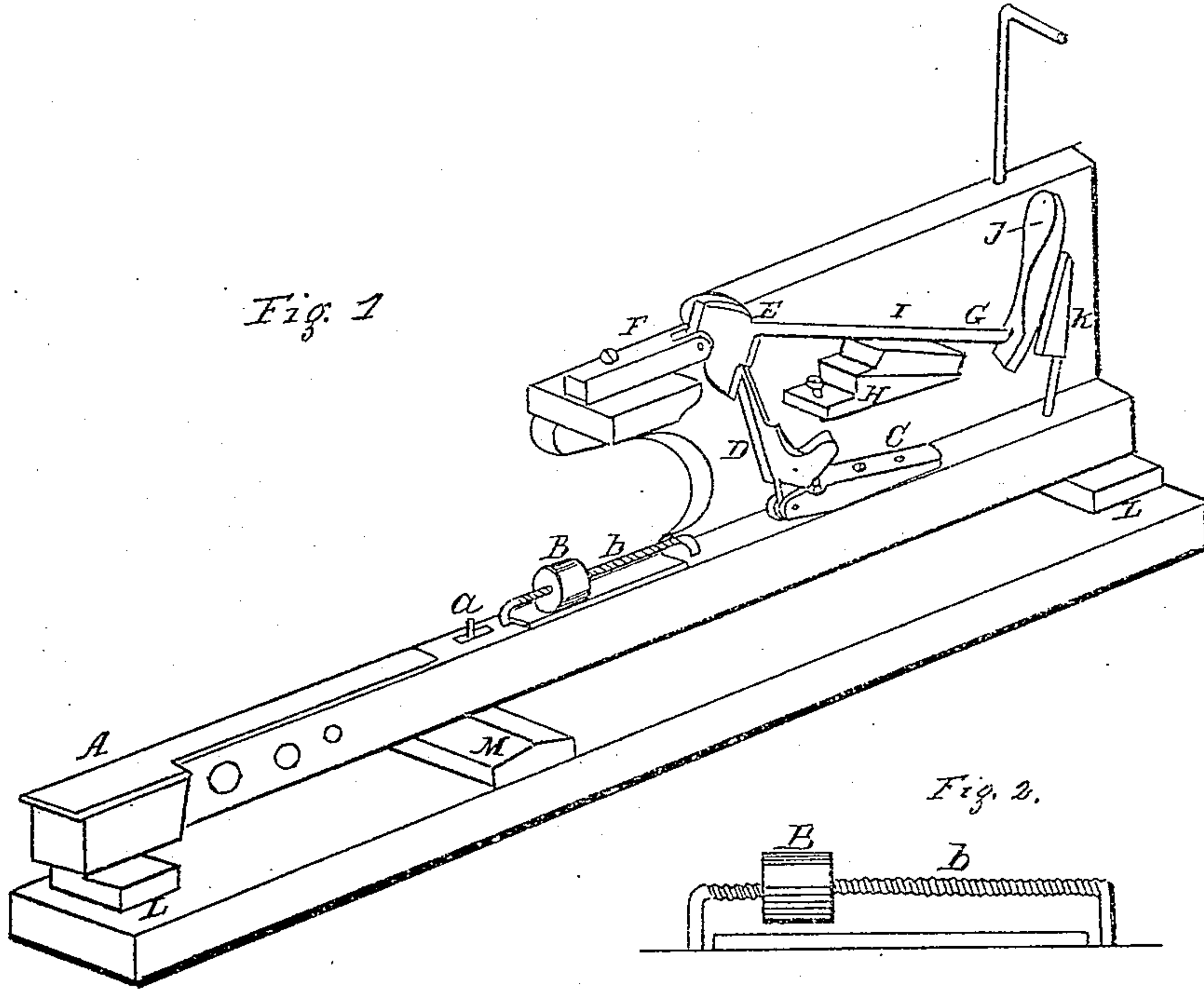


F. J. Steinhauser,
Piano Action.

No. 93,243

Patented Aug. 3, 1869



Witnesses.

John H. Osmer
S. R. Everts

Inventor,

Frank J. Steinhauser

United States Patent Office.

FRANK J. STEINHAUSER, OF LANCASTER, PENNSYLVANIA.

Letters Patent No. 93,243, dated August 3, 1869.

MODE OF BALANCING THE KEYS OF PIANOS, &c.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRANK J. STEINHAUSER, of the city of Lancaster, in the State of Pennsylvania, have invented a new and useful Mode of Balancing and Adjusting the Keys on Musical Instruments like the Piano-Forte, Melodeon, and Organ; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved balance in place.

Figure 2, the balance detached, say half size.

Figure 3 is an outline view of the several parts, to illustrate the action of the ordinary key.

The nature of my invention consists in providing a means which may be applied either on the upper or lower surface of the key A, and to do away with the tedious and uncertain mode of balancing the keys heretofore in use, by means of leaden rivets, or when necessary to weight the keys, to provide a certain means of balancing each key to a certain given weight or touch desired, so as to secure a perfect uniformity with ease and dispatch.

To enable others skilled in the art to make and use my invention, it is only necessary to inspect the drawings.

Fig. 2 shows a weight, B, having a thread cut in it, for the bent screw a, as shown.

Simple as this invention may seem, it is of the utmost utility, and affords the means of adjusting the balance of each key with the greatest exactness, by

moving the weight B back or forward on the long screw-loop b, and using a weight on the outer end of the key, to indicate the force of touch desired. Thus the exact degree of touch will act with uniformity throughout, and in trilling, running, and brilliant passages, such uniformity of touch is of the first importance in execution, as the action of the key is reliable, and will not disappoint the performer, by striking harder than expected, or not with the force intended. The balancing of the keys heretofore was a tedious process, depending mainly on the judgment and experienced guesswork of the machinist; but by this method the professor of music can adjust the balance of the keys for himself, and give the instrument a greater or less degree of required force, so that it can be regulated to yield to the touch of a child, or for the heavier hand of the adult male performer, or intermediate adaptations.

I am aware that balancing the keys of pianos is not new, but I am not aware that this simple and efficient device was ever known or used for such a purpose or so applied.

What I claim as my invention, and desire to secure by Letters Patent, is—

The application of the weighted screw or adjusting-balance B b, when employed on the keys of musical instruments, in the manner and for the purpose specified.

FRANK J. STEINHAUSER.

Witnesses:

JNO. M. AMWEG,
S. R. EVERTS.