

No. 719,718.

PATENTED FEB. 3, 1903.

JOHN BARNETT, COMMONLY KNOWN AS JOHN FRANCIS BARNETT.

DEVICE FOR CLEANING THE WIRES OF PIANOFORTES.

APPLICATION FILED MAY 1, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

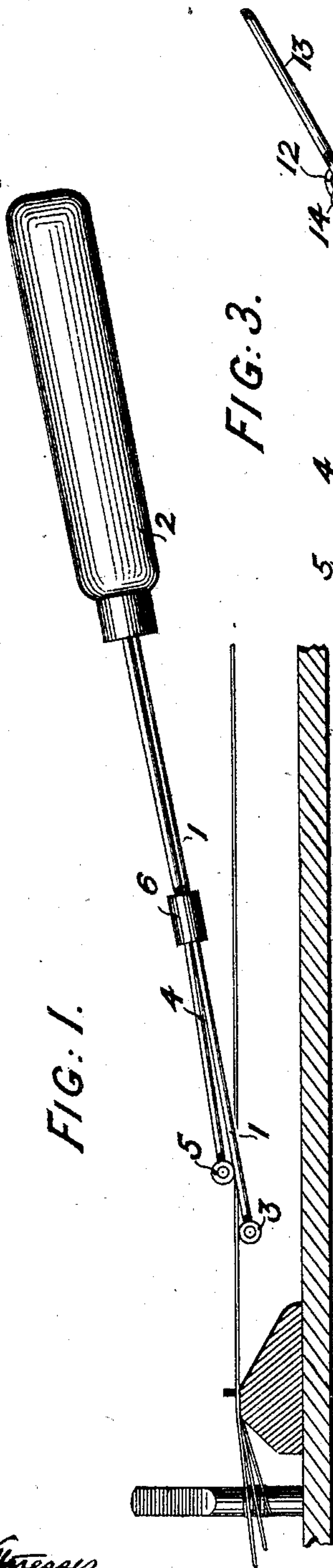


FIG: 1.

FIG: 3.

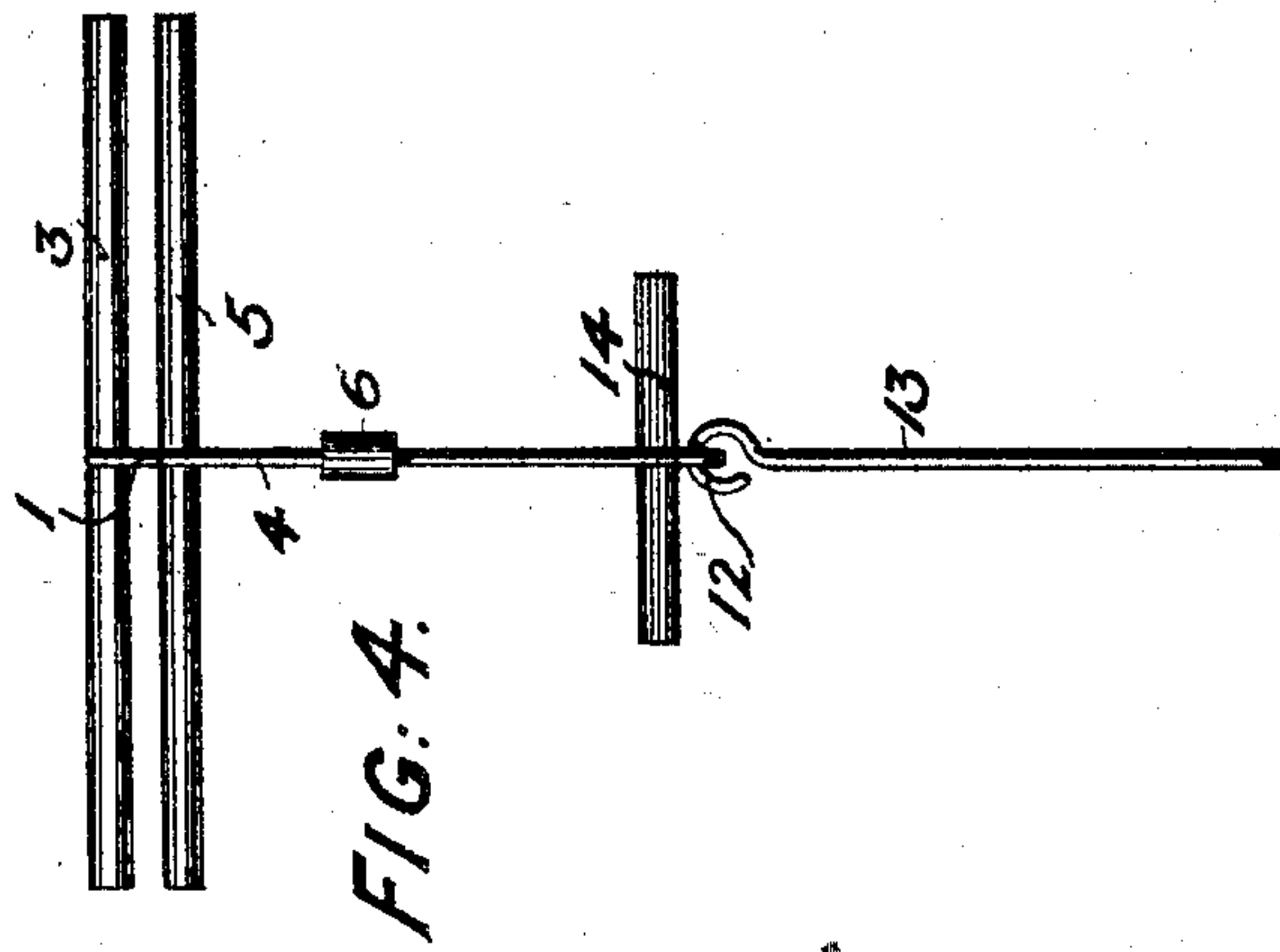
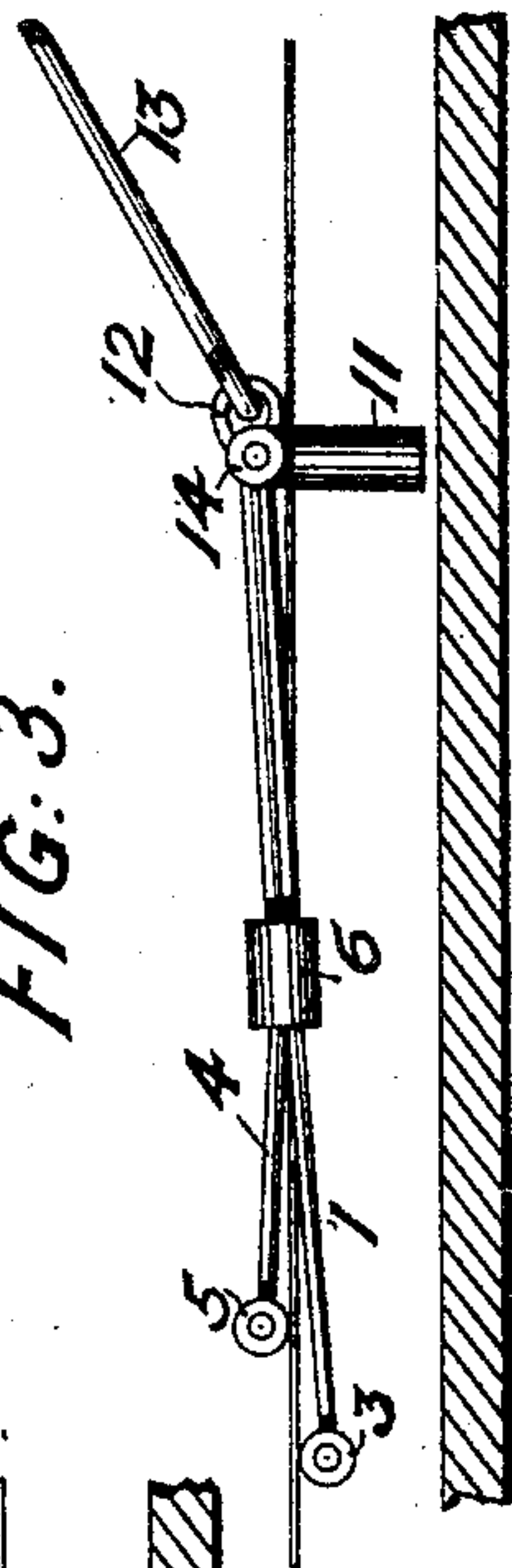


FIG: 4.

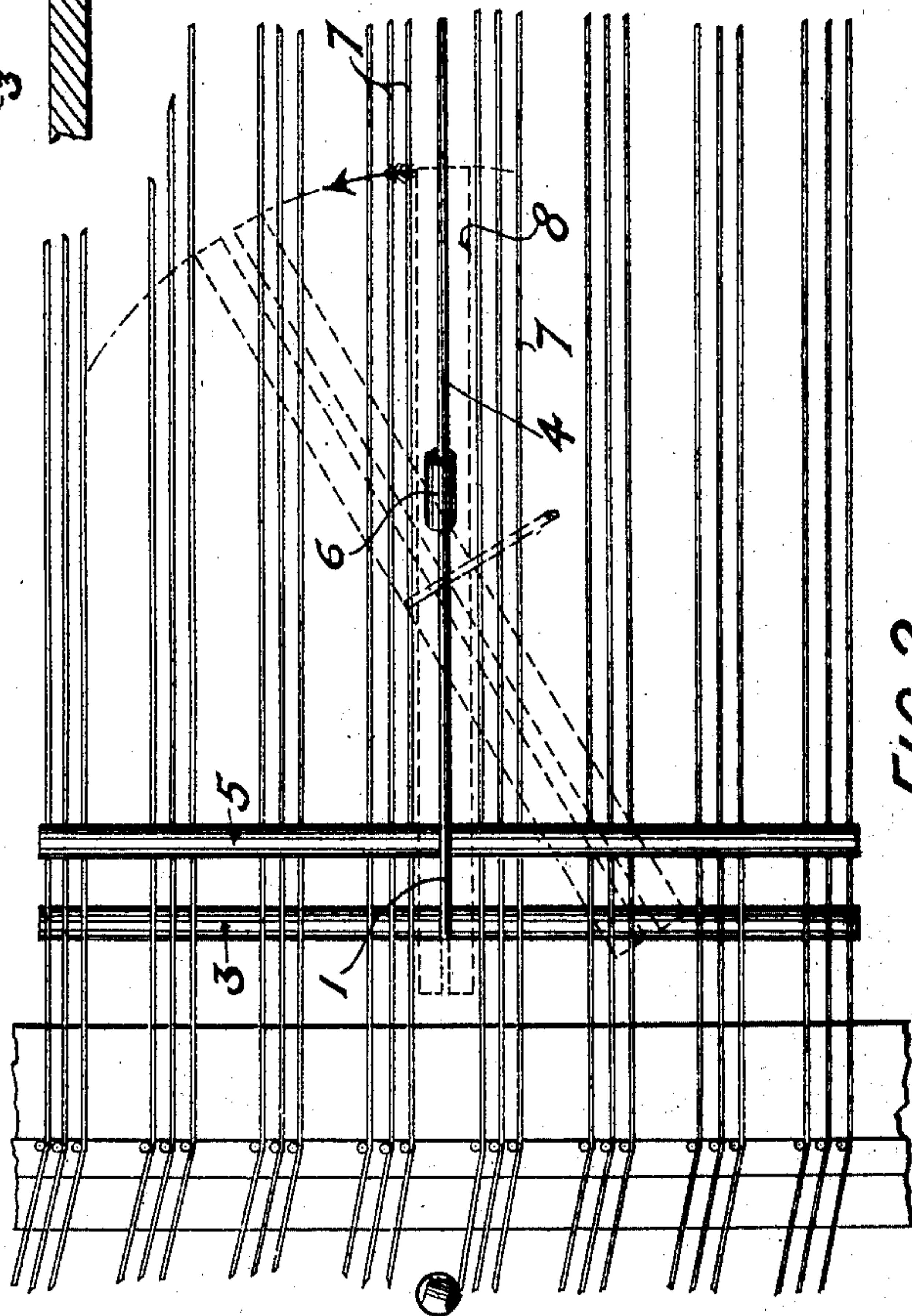


FIG: 2.

Witnesses

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J. Staib

Inventor

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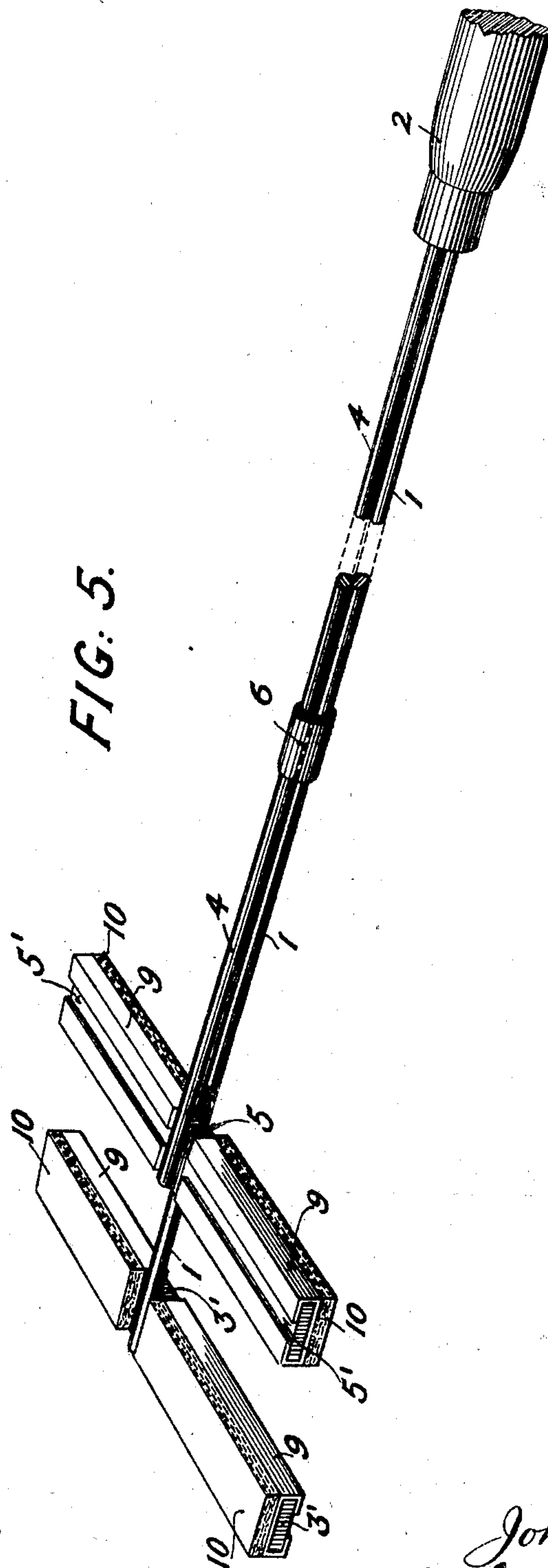
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UNITED STATES PATENT OFFICE.

JOHN BARNETT, COMMONLY KNOWN AS JOHN FRANCIS BARNETT, OF
LONDON, ENGLAND.

DEVICE FOR CLEANING THE WIRES OF PIANOFORTES.

SPECIFICATION forming part of Letters Patent No. 719,718, dated February 3, 1903.

Application filed May 1, 1902. Serial No. 105,533. (No model.)

To all whom it may concern:

Be it known that I, JOHN BARNETT, commonly known as JOHN FRANCIS BARNETT, professor of music and composer, a subject of the
5 King of Great Britain, residing at 28 Carlton Hill, St. Johns Wood, in the county of London, England, have invented certain new and useful Improvements in Devices for Cleaning the Wires of Pianofortes, (for which I have
10 made application for patent in Great Britain under No. 24,286 and date November 29, 1901,) of which the following is a specification.

Not only are the wires or strings of pianofortes liable to become rusted, but also a considerable amount of dust collects in course of time upon the front faces of the strings (which are easily accessible) and also on the rear
15 faces of the strings, (which are practically inaccessible.) The collection of dust or rust upon the strings, as well as upon the sound-board of the instrument, I have found to materially and prejudicially affect the quality and quantity of the tone capable of being produced. Being in possession of this knowl-
20 edge, the object of my invention is to provide a device by which the strings can be effectively and rapidly cleaned while in position upon the instrument without straining or
30 damaging the same.

The present invention, therefore, refers to a novel device by which the strings of pianofortes and of any similar musical instrument can be effectively cleaned and maintained in
35 good condition, the said appliances being capable of conveniently operating upon both the inner and upper surfaces of the strings and also upon the side surfaces thereof, to the great improvement of the quality and tone
40 and to the general renovation and preservation of such instruments.

The device according to my invention consists of two parallel operating-bars each carrying or being covered by suitable material
45 to be brought into contact with the pianoforte-strings. These bars are each carried at the end of a wire, the wires being adjacent to each other, forming a stem, and being fitted into a suitable handle at the terminal ends.
50 One of the wires composing the stem is shorter

than the other, so that the bars carried thereby are at a distance apart and practically in the same plane and are usually parallel with each other and at right angles to the stem. One of these bars is placed parallel with the
55 strings to be cleaned, passed between same, and then turned at right angles thereto, the operating-handle brought nearer to the instrument-strings, and traversed backward and forward longitudinally of same. 60

I will describe my invention in greater detail with reference to the accompanying drawings, wherein—

Figure 1 is an elevation, and Fig. 2 a plan view, illustrating one of my devices in a position of use. Fig. 3 is a side elevation, and
65 Fig. 4 is a plan view, of a modified arrangement of the device. Fig. 5 is a perspective view of my device on a somewhat larger scale than the previous views in order to show the
70 application thereto of removable cleansing-pads.

Referring to Figs. 1, 2 of the drawings, one of the bars 3 is fixed at the end of a length of a steel wire 1, the other bar 5 being fixed at
75 the end of a similar piece of steel wire 4, which is shorter in length than wire 1. The bars are arranged parallel to each other at a short distance apart, almost in the same plane, and the wires 1 4 aforesaid, lying practically in
80 contact with each other, are then fitted into a handle, and so the wires 1 4 form a flexible stem. By employing two wires, such as 1 and 4, the parallel bars 3 and 5 are capable of being separated by the springing apart of the
85 wires 1 and 4, and by this means I avoid gripping the strings of the musical instruments with such a rigid force as would be exerted if the bars were upon a single wire. In the
90 construction which I have shown and which I consider preferable the distancing apart of the bars 3 and 5 is controlled by a slide 6, consisting of a ferrule which embraces both the
95 wires 1 and 4 and is itself capable of being slid along same. As the ferrule is moved toward the bar 5 the resistance of the bars 3 5 to being separated becomes greater. In cases where owing to the construction of the
100 pianoforte it would be inconvenient to carry the bars upon wires 1 4 of such a length as

would be required to enable the bars to be operated to the full extent of the strings, I then arrange the same as shown by Figs. 3 and 4, where the wires 1 4 terminate in a loop 5 12, and to this loop is freely connected a spring-metal rod 13 by means of a loop formed at its end, the rod 13 being fitted with a handle 2, (not shown at Figs. 3 and 4, but similar to that shown at Fig. 1,) by which the device is operated. There being thus a joint 10 between the wires 1 4 and the rod 13, a guiding-arm 11 is provided, which is fixed at the terminal ends of the wires 1 4, and this guiding-arm enters between the strings of the instrument and maintains the bars 3 5 in position as they are traversed backward and forward along the strings. A short cross-bar 14 is also fitted at this part at the rear ends of the wires 1 4, and the cross-bar 14 rests upon 20 the strings and further supports the device in its traverse motion.

In Figs. 1 to 4 both the bars 3 5 are covered with material, such as felt or fabric, suitable for being brought into contact with the 25 strings of the instrument which are to be cleaned, and this covering of the parts should be of such character that the strings will partially sink into the covering material, and the latter will thus be brought into contact with 30 the sides of the strings. I do not limit myself to any particular covering material for the bars; but the character of material should be selected which will suit the condition of the strings to be cleaned. In some cases it 35 would be quite sufficient to employ material of a soft character, which would simply remove the dust, while in other cases, where there is some amount of rust to be removed, a material should be employed which would 40 have a stronger abrading action. Considering the varying conditions of the strings to be cleaned in a number of instruments, it is obvious that for one of my appliances to be suitable for cleaning a number of pianofortes 45 it would be of considerable advantage to render the coverings of the bars detachable, so that coverings of varying character might be applied to the same bars, and I have shown by the perspective view at Fig. 5 an example 50 of construction which I have found to answer the purpose well. In this construction the bars 3' 5' are fitted with sliding sheaths 9, there being two for each bar, and these sheaths are capable of being easily slid on 55 or off the said bars. Upon the sheaths 9 I fix the covering material which is to be brought into contact with the strings of the instrument, and in the drawings, Fig. 5, this material is marked 10 and should be of a 60 character which is suitable to effectively act upon the said strings of the instrument in order to clean the same. The sheaths are very readily slid off and on, so that a single device may be sold along with a considerable number of sheaths fitted with covering materials 10 of varying characters. Thus

one of the devices may be supplied and fitted with those particular sheaths carrying a covering material suitable for use in any particular case. 70

The instrument is used as follows: Referring to Fig. 2, the bars 3 5 are first placed parallel with the strings 7, as indicated by the dotted lines, Fig. 2, and in this position the bar 3 is passed between the sets of strings 75 7 and is then turned in the direction of the arrow, Fig. 2, until the bars are at or about right angles with the said strings. The wires 1 4, forming the stem, and the handle 2 are then brought to less than a vertical right angle 80 with the strings 7, as is shown at the illustration at Fig. 1, and so that the bars 3 5 are caused to press upon the strings with more or less force, according to the angle the stem 1 4 is placed at relatively to the strings of 85 the instrument and according to the position of the movable ferrule 6. Thus if the ferrule is placed near to the bars 3 5 the latter will not be so free to spring apart as if the ferrule was farther away from the bars, and so the 90 bars can be applied to the strings with greater or less pressure, according to the position of the ferrule. The appliance being now so placed, as shown by full lines at Fig. 2, it is traversed backward and forward lengthwise 95 of the strings, and the latter are cleaned and polished upon their under or rearward surfaces by the friction and pressure of the material upon the bar 3, while the upper or front surfaces are cleaned and polished by the friction 100 and pressure of the material upon the bar 5. Considerable pressure may be applied upon the strings by the bars 3 5, if desired, owing to the mechanical advantage obtained by the lever action of the handle 2. 105

I claim as my invention—

1. A device for cleaning and polishing the strings of pianofortes while the said strings are in position upon the instrument, comprising a stem composed of two parallel wires of 110 different lengths, a handle on one end of the stem by which the device is gripped, a cross-bar attached at about the center of its length to the end of one of the wires forming the stem and adapted to be passed between and 115 brought to about right angles with the strings of the pianoforte to act upon the under surfaces of the latter, a second cross-bar attached at about the center of its length to the end of the other wire forming the stem the second 120 cross-bar being at a short distance from and parallel with the first cross-bar, and adapted to be brought into contact with the outer surface of the strings of the pianoforte, and coverings attached to the bars to form rubbing- 125 surfaces to act by contact with the instrument-wires, substantially as set forth.

2. A device for cleaning and polishing the strings of pianofortes while the said strings are in position upon the instrument, comprising a stem composed of two parallel wires of 130 different lengths, a handle upon one end of

the stem by which the device is gripped, a cross-bar attached at about the center of its length to the free end of the longer of the two wires composing the stem, a second cross-
5 bar attached at about its center to the free end of the shorter of the two wires composing the stem the two cross-bars being parallel to each other and at a short distance apart, coverings attached to the cross-bars to form rubbing-surfaces to act by contact with the said
10 instrument-strings, and a sliding sleeve embracing the two wires composing the stem to hold the same together and to regulate the degree of force required to spring the cross-
15 bars apart by pressure against the pianoforte-strings, substantially as set forth.

3. A device for cleaning and polishing the strings of pianofortes while the said strings are in position upon the instrument, comprising two wires of different lengths composing
20 a stem, a handle on one end thereof by which the device is gripped, a cross-bar attached at about the center of its length to the free end of one of the wires composing the stem, a second cross-bar attached at about the center of
25 its length to the free end of the second wire composing the stem so as to be a short distance from and parallel with the first cross-bar, sheaths adapted to be slid endwise onto
30 the cross-bars on each side of the carrying-rod, and surface-coverings on the sheaths to form rubbing-surfaces to act by rubbing con-

tact upon the instrument-strings, substantially as described.

4. A device for cleaning and polishing the
35 strings of pianofortes while the said strings are in position upon the instrument, comprising two wires of different lengths composing a stem, a handle upon one end of the wires
40 composing the stem by which the device is gripped, a cross-bar attached at about the center of its length to the free end of the longer of the two wires composing the stem, a second cross-bar attached at about its center
45 to the free end of the shorter of the two wires composing the stem the two cross-bars being parallel to each other and at a short distance apart, sheaths adapted to be slid endwise onto the cross-bars on each side of
50 the carrying-stem, and surface-coverings on the sheaths to form rubbing-surfaces to act by rubbing contact upon the instrument-strings, and a sliding sleeve embracing the two stem-wires to hold the same together and
55 to regulate the degree of force required to spring the cross-bars apart by pressure against the pianoforte-strings, substantially as set forth.

JOHN BARNETT,

Commonly known as John Francis Barnett.

Witnesses:

WM. W. MARSHALL,
W. M. HARRIS.