



A.D. 1840 N° 8526.

Pianofortes and Harps.

HAWLEY'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN HAWLEY, of Frith Street, Soho Square, in the County of Middlesex, Watch-maker, send greeting.

WHEREAS, in consequence of a communication from a certain foreigner residing abroad, I am in possession of an Invention of "IMPROVEMENTS IN PIANOS AND HARPS;" and whereas Her present most Excellent Majesty Queen Victoria, by Her Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the First day of June, in the third year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Hawley, Her especial license that I, the said John Hawley, my eñors, and assigns, or such others as I, the said John Hawley, my eñors, admñors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, the said Invention; in which said Letters Patent is contained a proviso, obliging me, the said John Hawley, by an instrument in writing under my hand and seal, particularly to describe and ascertain the nature of the said Invention, and in what manner the same is to be performed, and to cause the same to be inrolled in Her said Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said John Hawley, do hereby declare the nature of the said Invention to consist

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in the application to pianos and harps of strings made of tempered steel, which give to the said piano or harp a very strong and harmonious tone, and which being once fixed to the instrument and tuned, will not again require tuning for several years, and will not break so easily as the strings now in use. And in further compliance with the said proviso, I, the said John Hawley, do 5 hereby declare the manner in which the said Invention is to be performed, by the following statement thereof (that is to say):—

I make the said strings of different lengths and sizes out of steel wire, which, when made red hot, I dip into a composition of tallow, beef suet, beeswax, olive oil, powdered staghorn, and mercury, in the proportions herein-after 10 described, and afterwards allow to cool. Such strings being so tempered, I submit them to a second heating, and untemper them sufficiently to enable them to be made straight, and give them the colour I require, and by the degree of heat which I use I make them of different colors, but such colors do not at all affect their tone or quality. The major part of such steel strings I 15 make of the ordinary cylindrical form only, and the same diameter from one end to the other of such strings; but I make the strings for the bass or deeper toned notes much thicker in the central parts than at the ends, and in forms either cylindrical, conical, or angular, and I so arrange them on the piano as that the hammer shall strike on the thickest part, whether conical, cylindrical, 20 or angular. I make such strings conical, cylindrical, or angular, by means of a wire drawing iron with an adjusting screw, which enables me, by compression or expansion, to draw the metal of greater or less diameter during the progress of the drawing process as I may require; for I use a file to bring such strings to the form and dimensions I require. For the purpose of fixing such steel 25 strings on the screws or pins of pianos or harps, I totally untemper the ends by means of heat, so that they will bind round such screws and pins without breaking. The proportion of the composition into which I dip the heated steel in order to temper it as aforesaid, is as follows:—Five pounds of tallow, six pounds of beef suet, one pound of beeswax, five pounds of olive oil, 30 quarter of a pound of powdered staghorn, and thirty grains of mercury, all which I mix well together.

Now whereas I claim as the said Invention, the application of such strings as aforesaid, so tempered as aforesaid, to pianos and harps; and such said Invention being to the best of my knowledge and belief entirely new, and 35 never before used within that part of Her said Majesty's United Kingdom of Great Britain and Ireland called England, Her said Dominion of Wales or Town of Berwick-upon-Tweed, I do hereby declare this to be my Specification of the same, and that I do hereby verily believe this my said Specification

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doth comply in all respects fully and without reserve or disguise, with the proviso in the said herein-before in part recited Letters Patent contained; wherefore I do hereby claim to maintain exclusive right and privilege to the said Invention.

5 In witness whereof, I, the said John Hawley, have hereunto set my hand and seal, this First day of December, One thousand eight hundred and forty.

JOHN (L.S.) HAWLEY.

10 **AND BE IT REMEMBERED**, that on the First day of December, in the year of our Lord 1840, the aforesaid John Hawley came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

15 Inrolled the First day of December, in the year of our Lord One thousand eight hundred and forty.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1857.