

W. G. BETZ.
 EXPRESSION AND TEMPO INDICATOR.
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984,466.

Patented Feb. 14, 1911.

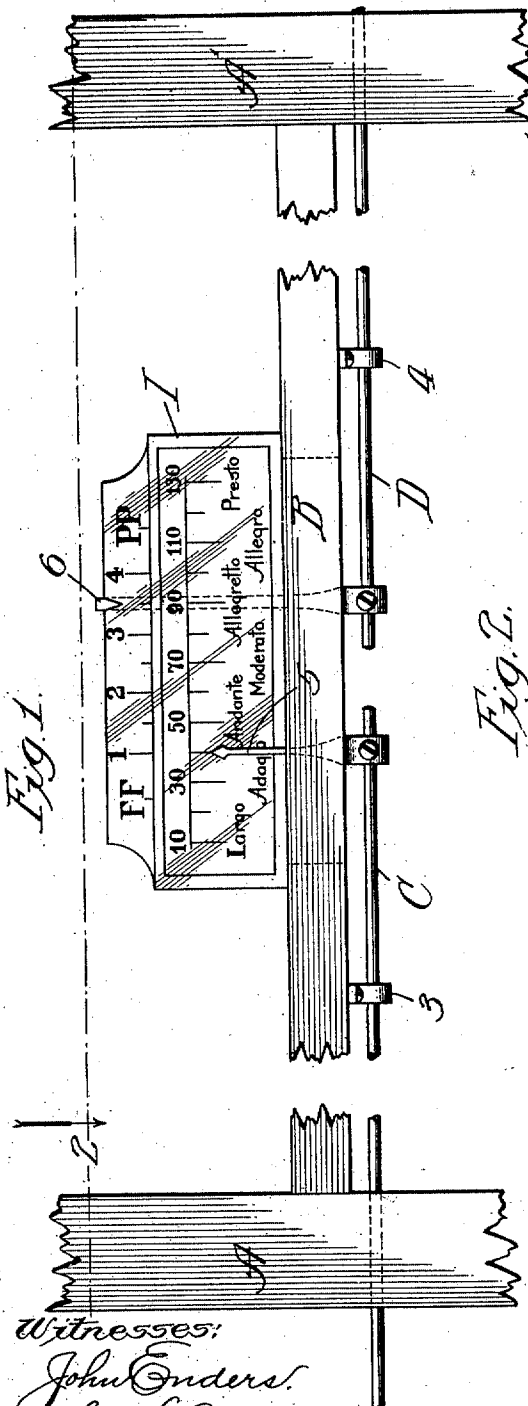


Fig. 1.

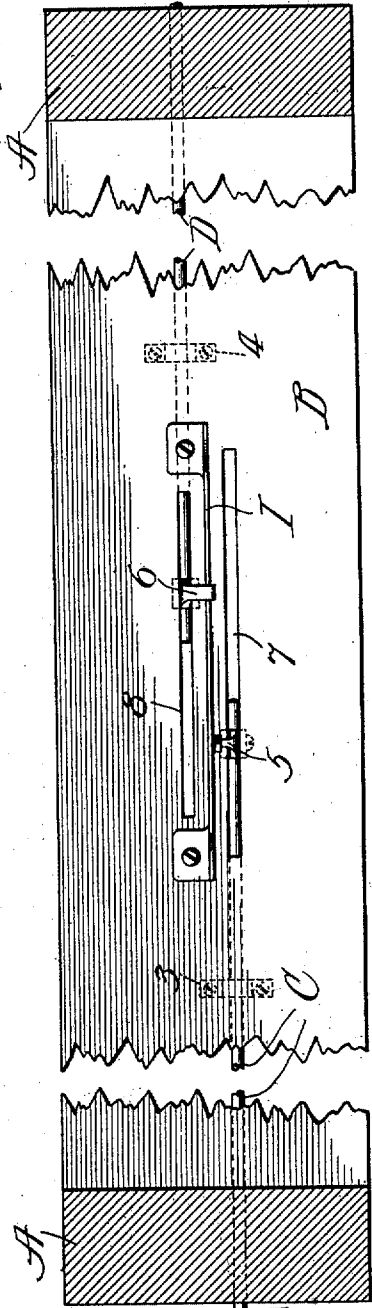


Fig. 2.

Witnesses:
 John Enders.
 Chas. H. Bull.

Inventor:
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 By Robert Catherwood
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UNITED STATES PATENT OFFICE.

WILLIAM G. BETZ, OF STEGER, ILLINOIS, ASSIGNOR TO STEGER AND SONS PIANO MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

EXPRESSION AND TEMPO INDICATOR.

984,466.

Specification of Letters Patent.

Patented Feb. 14, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM G. BETZ, a citizen of the United States, residing at the town of Steger, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Expression and Tempo Indicators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to expression and tempo indicators for mechanical musical instruments.

The object of the invention is to provide a simple and economical device of this character readily mounted in a musical instrument within convenient view of the operator and bearing compact and easily intelligible multiple indicia for directing the operator in manipulation of the expression and tempo devices. The invention does not require observation of a number of points in obtaining the proper time and expression, eliminates calculation, is adapted to indicate the proper manipulation of the tempo and expression mechanism in the interpretation of any standard method of writing expression and tempo directions, and can be used on any one of a variety of mechanical musical instruments.

In the accompanying drawings, I have illustrated a device embodying my invention in one of its preferred forms.

Figure 1 is a front elevation of an indicator, expression and tempo rods and a portion of the frame of an automatic piano. Fig. 2 is cross section on line 2 of Fig. 1.

In the drawings, A A' indicate the upright supports of the instrument frame and B a cross support. On the lower side of the cross support B are screwed the yokes 3 and 4, the former forward of the latter, so that their respective central openings are out of alinement. Supported in the yoke 3 is a longitudinally slidable rod C and in the yoke 4 the longitudinally slidable rod D; the former connected with tempo mechanism and the latter with expression mechanism in the usual manner. On adjacent ends of rods C and D are screwed or otherwise suitably secured two pointers, the pointer 5 on rod C and the pointer 6 on rod D. The pointer 5 is extended upward through a slot 7 in support B, which is sufficient in length to allow the pointer to travel freely

horizontally, as the rod operated by the tempo devices slides longitudinally. The pointer 6 is extended upward through a slot 8 in support B, which is sufficient in length to allow the pointer to travel freely horizontally as the rod D, operated by the expression devices, travels longitudinally. The pointer 6 is preferably hooked at the top over the top of the indicator I.

This indicator is constructed of any suitable material, upon the front of which lettering or indicia may be placed. The space where the pointer 6 rests when all of the expression devices are in operation is marked off by the lines or graduation marks 4 and P P and the space where it rests when all these devices are out of operation is marked off by the lines or graduation marks F F and 1. The intervening space is divided into three equal spaces separated by the lines or graduation marks 2 and 3. Each of the above described spaces is then subdivided into two equal parts by half lines as shown in Fig. 1.

The point which the pointer 5 reaches when the tempo devices are operated at their lowest speed is indicated by a line marked "Largo" and "10" and the point when they are operated at their highest speed is indicated by a line marked "Presto" and "130". The intermediate space is divided into six equal parts by lines marked as shown in Fig. 1, indicating the well known musical speeds or tempo and half lines the intermediate tempos.

This method of indicating expression and tempo corresponds to the standard method of writing expression and tempo directions on music sheets. It is obvious however that other methods could be substituted and the two scales divided on other multiples corresponding to any system of writing these directions.

I claim:—

1. In an indicator, a support, expression and tempo rods mounted thereon to slide longitudinally, pointers mounted on adjacent ends of said rods and arranged to travel horizontally one behind the other, and a combined tempo and expression indicator surface having indicia arranged thereon in two scales, whereby the movement of said rods is indicated in definite terms and directions given for manipulation.

2. In an indicator, a cross support having parallel slots therethrough, expression and tempo rods mounted to slide horizontally beneath said slots, pointers on said rods extending through said slots to scales marked with tempo and expression indicia on an indicator surface, whereby movement of said rods is indicated by the relative position of

said pointers and scales substantially as described.

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In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM G. BETZ.

Witnesses:

GUS UTTERBERG,
EMIL SWAMAN.