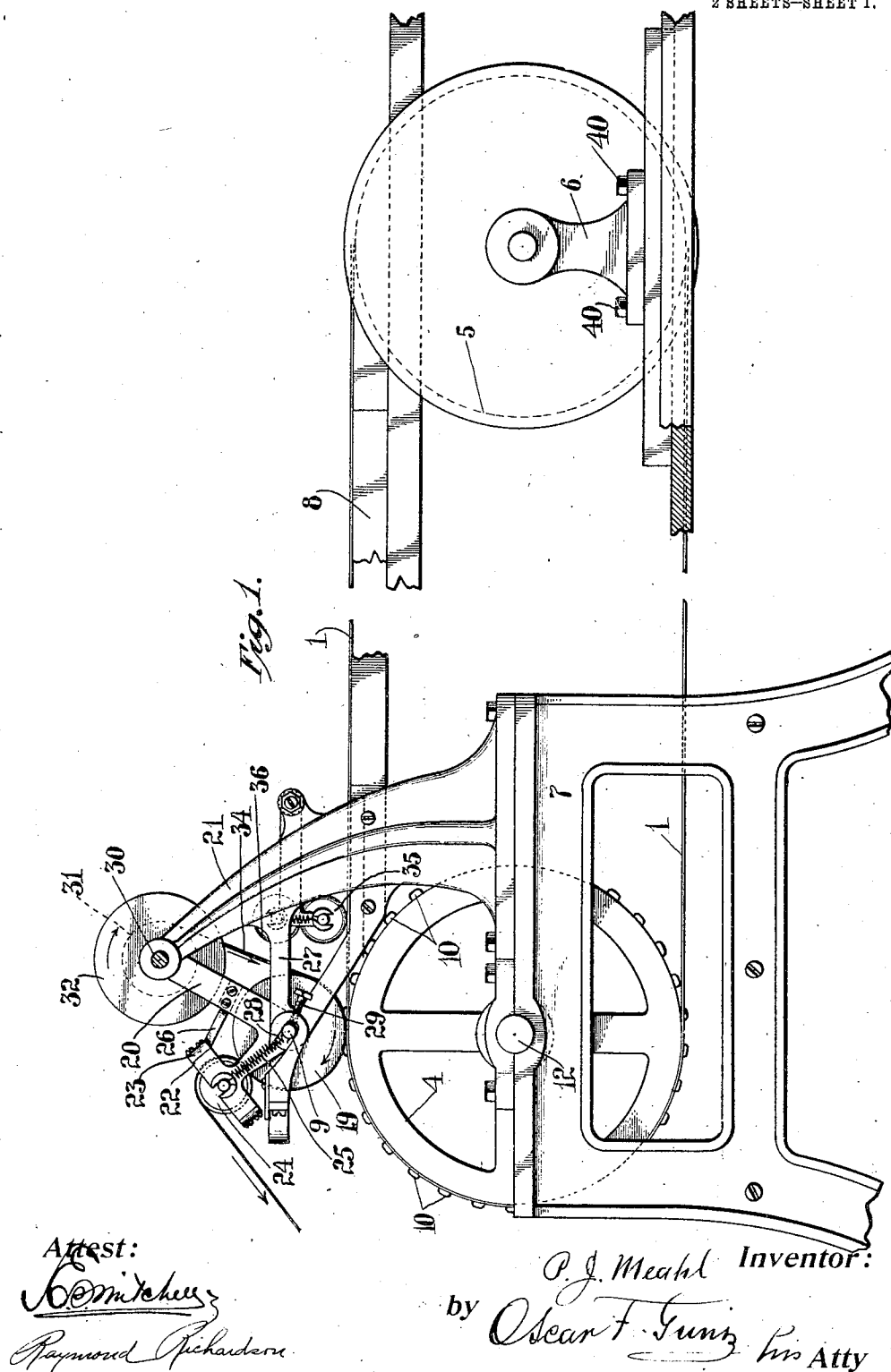


P. J. MEAHL.
 PERFORATED MUSIC ROLL MARKING MACHINE.
 APPLICATION FILED DEC. 30, 1910.

1,055,644.

Patented Mar. 11, 1913.

2 SHEETS-SHEET 1.

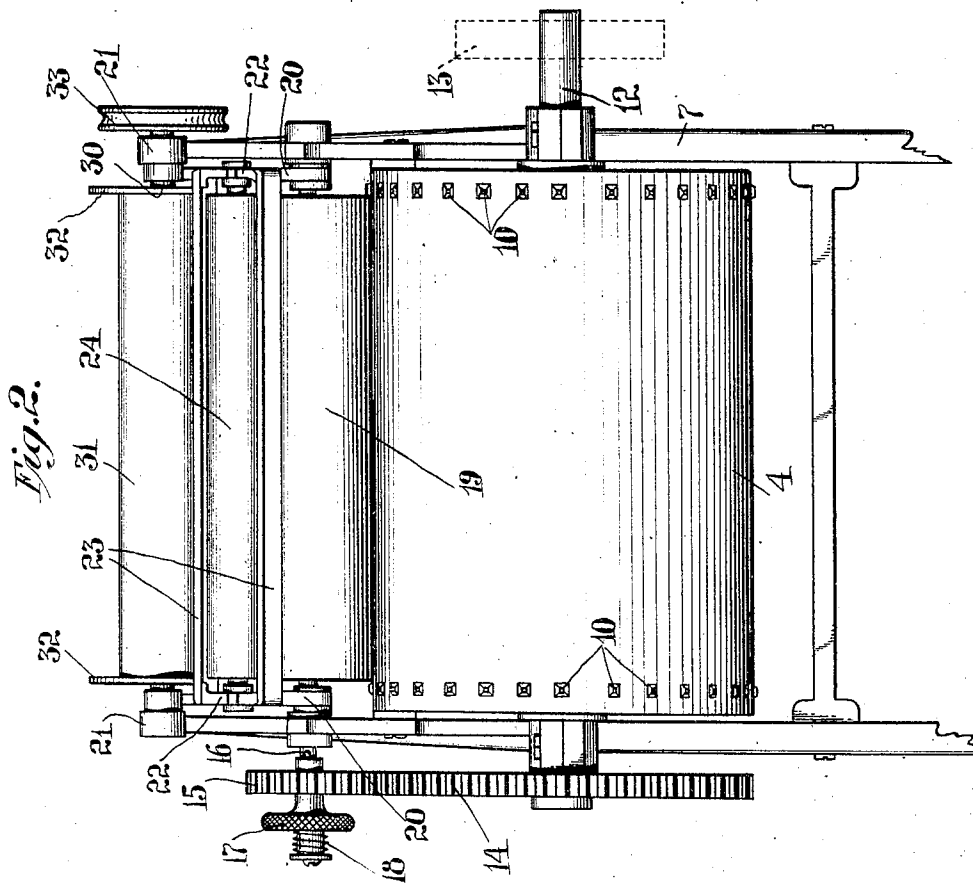
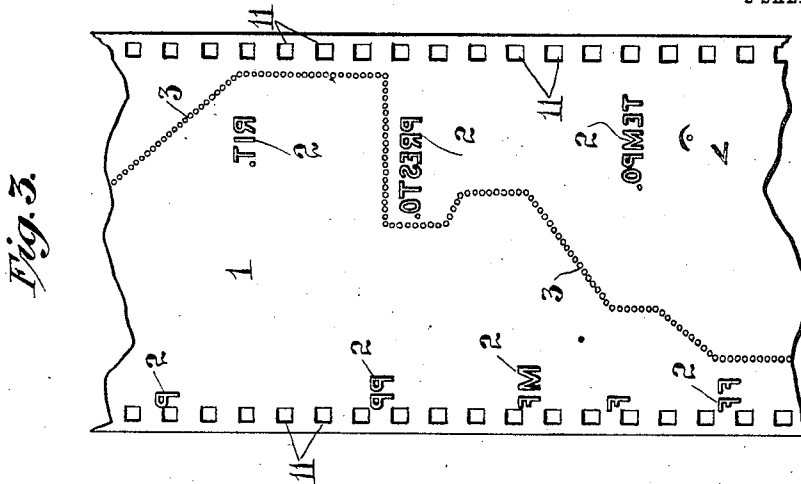


Attest:
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 by *Oscar F. Gunn* Per Atty

1,055,644.

2 SHEETS—SHEET 2.



~~Attest:~~

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UNITED STATES PATENT OFFICE.

PHILIP JACOB MEAHL, OF BAYONNE, NEW JERSEY.

PERFORATED-MUSIC-ROLL-MARKING MACHINE.

1,055,644.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed December 30, 1910. Serial No. 600,023.

To all whom it may concern:

Be it known that I, PHILIP J. MEAHL, a citizen of the United States, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Perforated-Music-Roll-Marking Machines, of which the following is a specification.

This invention relates to improvements in machines for marking perforated music rolls such as are used on automatic or semi-automatic music playing devices.

It is customary to provide perforated music rolls, such as referred to above, with the dynamic and rhythmic signs or indications given by the composer on the staff notation so that as the perforated sheet when in use on a playing attachment passes the tracker these dynamic or rhythmic signs appear to view successively and give the performer or player the required information. Lines are also produced on the sheets, extending lengthwise and laterally and by their positions on the tracker board indicate loudness of playing corresponding to the directions given by the well known signs "PP" etc., to "FF."

The object of my invention is to provide a new and improved machine of simple construction, which rapidly, reliably and correctly prints such indications, and the line or either upon the perforated music roll.

In the accompanying drawings in which like letters of reference indicate like parts in all the figures: Figure 1 is a side view of my improved machine for marking perforated music rolls, parts being broken away. Fig. 2 is a front elevation of the same. Fig. 3 is a detail view of part of the pattern sheet.

The endless pattern sheet 1 which consists of a sheet of paper or other suitable material, on which are produced in raised type the dynamic or rhythmic marks shown at 2, and also in raised type an indicating line shown at 3, is passed over two drums 4 and 5, the latter being mounted in standard 6 and the former in a frame 7. The top part of the endless pattern sheet rests upon a suitable support or table 8 to prevent undue sagging. The drum or roller 4 is provided at its ends on its periphery with teeth 10 which can engage into openings 11 formed along the side edges of the pattern sheet in the nature of an endless rack so as to insure a uniform feed and movement.

The shaft 12 of the drum 4 carries at one end a driving pulley 13 shown in dotted lines in Fig. 2 but for the purpose of clearness omitted from Fig. 1, and the opposite end of the shaft 12 carries a cog wheel 14 engaging a pinion 15 mounted on a shaft 16 in such a manner that it can slide lengthwise on the shaft, but turns with the shaft. This pinion is provided with a handle knob 17 by means of which the pinion 16 can be temporarily withdrawn from engagement with the cog wheel 14. A suitable spring 18 serves to keep the pinion and cog wheel normally in engagement.

Gudgeons 9 of an impression roll 19 resting upon the top of the drum 4, that is, upon the pattern sheet at the top of the said drum are mounted in L-shaped arms 20 at the angles of said arms, which L-shaped arms are each pivoted at their upper end to the upper end of a curved standard or arm 21 on the top of the machine frame. On the shorter arm of each L-shaped arm 20, a cross head 22 is formed, the ends of which at opposite sides of the machine are united by the bars 23 forming a rectangular frame in which a pressure roller 24 is mounted which is pressed upon the periphery of the impression roll 19, by springs 25 attached to the end pivots of the roller 24 and to the gudgeons 9. This pressure roller 24 which is pressed upon the periphery of the impression roll 19 by springs 25 is so mounted in the frame that its gudgeons or end pivots have a slight play in their openings, that is to say, the openings into which the said pins or gudgeons pass are so much larger than the pins that the pins can give slightly for a very minute distance and can be pressed by springs attached to the gudgeons of said roller 24 to exert the yielding pressure upon the paper on the impression roll 19 as stated above. The upper end of the cross heads 22 are also connected by bars 26 with the L-shaped arms 20. Each curved standard or arm 21 is provided with horizontal brackets 27 in the upper edge of which an arc-notch 28 is formed and on the bottom of said notch the gudgeons 9 can rest. A set screw 29 extends into the bottom of each notch and forms a stop for the downward movement of the gudgeons 9 and by means of these set screws adjustment can be made so that the impression roll 19 will rest properly upon the paper on top of the drum 4. The shaft 30 forming the pivots

on which the L-shaped arms 20 swing is mounted in the upper ends of the curved standards 21 and carries the drum 31 provided with end-disks 32 upon which the
 5 perforated sheet to be provided with expression lines and marks is wound, by rotating this drum by means of a belt passed over the pulley 33 at one end of the shaft 30 as shown in Fig. 2, which pulley, for clear-
 10 ness, has also been omitted from Fig. 1. The perforated music sheet 34 is drawn from the roller 31 under the impression roller 19 and over the pressure roller 24 and withdrawn from the machine in the direc-
 15 tion indicated by the arrow. An inking roller 35 is in contact with the inking supply roller 36 and the inking roller inks the type before it arrives at the impression roller 19.

20 By disengaging the pinion 15 from the cog wheel 14 the impression roller 19 and the drum 4 can be adjusted independently of each other in such a manner that the proper part of the perforated music sheet
 25 34 is in contact with the pattern sheet at the top of the drum 4 when the operation of printing begins. The impression roller 19 and pressure roller 24 can be swung upward from the position shown in Fig. 1 to
 30 permit of introducing the paper or applying another pattern sheet on the drums 4 and 5. The pattern sheets are not of uniform length and after the endless pattern sheet has been passed around the drums 4 and 5
 35 the drum 5 is moved from the drum 4 until the pattern sheet is substantially taut and then the drum 5 is secured in place on its support, for example, by the bolts 40. After the parts have been adjusted in the

manner previously set forth, the drum 4 is rotated as the pattern sheet passes over the drum it prints figures, lines, etc., upon the perforated music sheet, then a fresh music sheet is mounted upon the drum 31 and the above operation repeated and so on. When
 45 a change of pattern is required the endless pattern sheet is opened and removed from the drums 4 and 5 and replaced by another, and so on.

Having described my invention what I 50 claim as new and desire to secure by Letters Patent is:—

The combination with an endless pattern sheet having raised type on its face and rack openings formed along its edges, of 55 two drums over which said endless pattern sheet is passed, one drum being provided on its periphery with teeth for engaging the rack openings in the pattern sheet, an impression roll resting upon the drum, 60 gearing on the impression roll and drum for driving the impression roll positively from the drum, a spool for perforated music sheet, a pressure roller mounted to be capable of a slight movement toward and from 65 the impression roll, a frame in which said pressure roll is thus mounted and springs connected with the gudgeons of the pressure roller to press the paper to be printed against the impression roll, substantially as 70 set forth.

Signed at New York city, in the county of New York, and State of New York, this 22nd day of December, A. D. 1910.

PHILIP JACOB MEAHL.

Witnesses:

LOUIS J. BERNSTEIN,
 ROSE G. BREEN.