

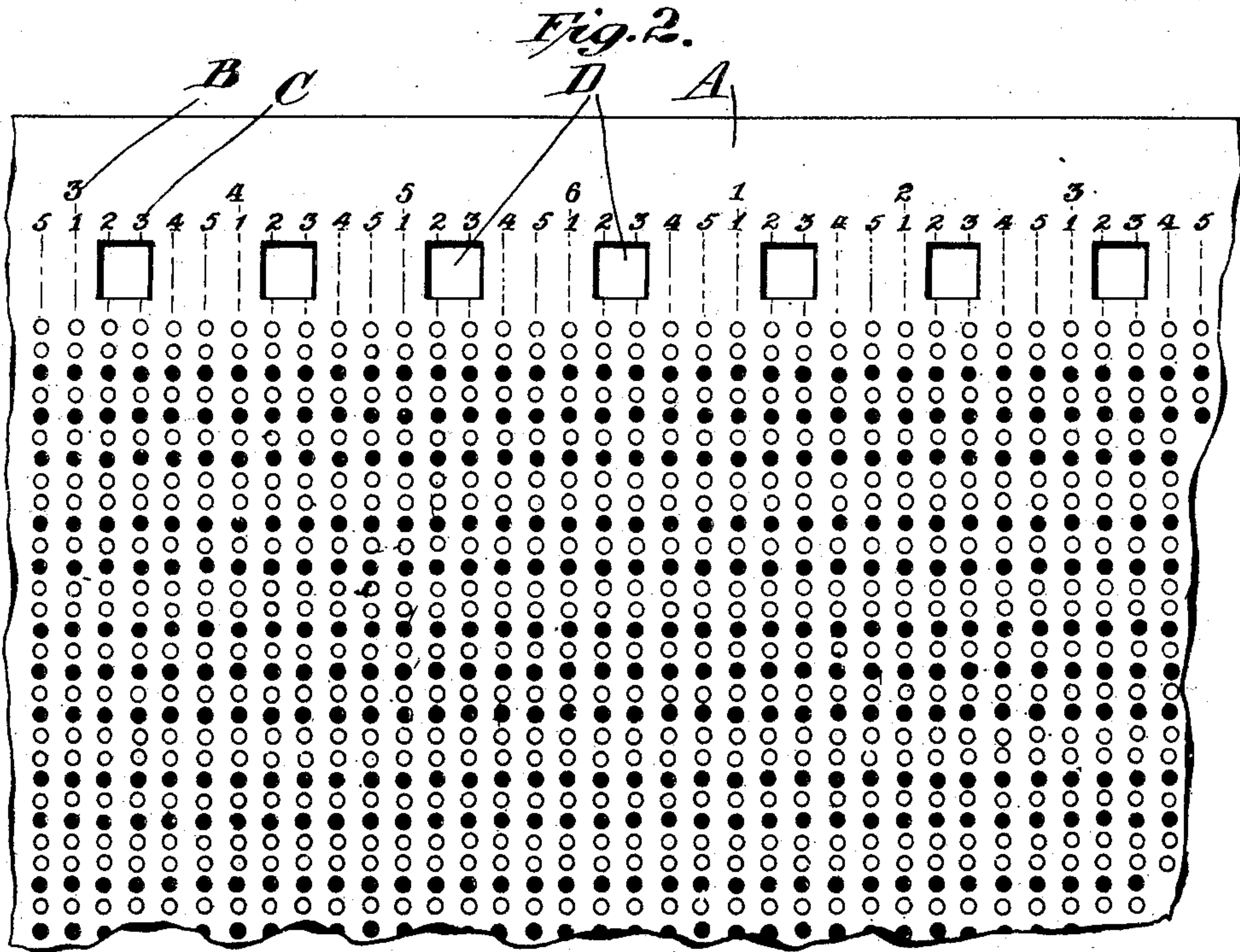
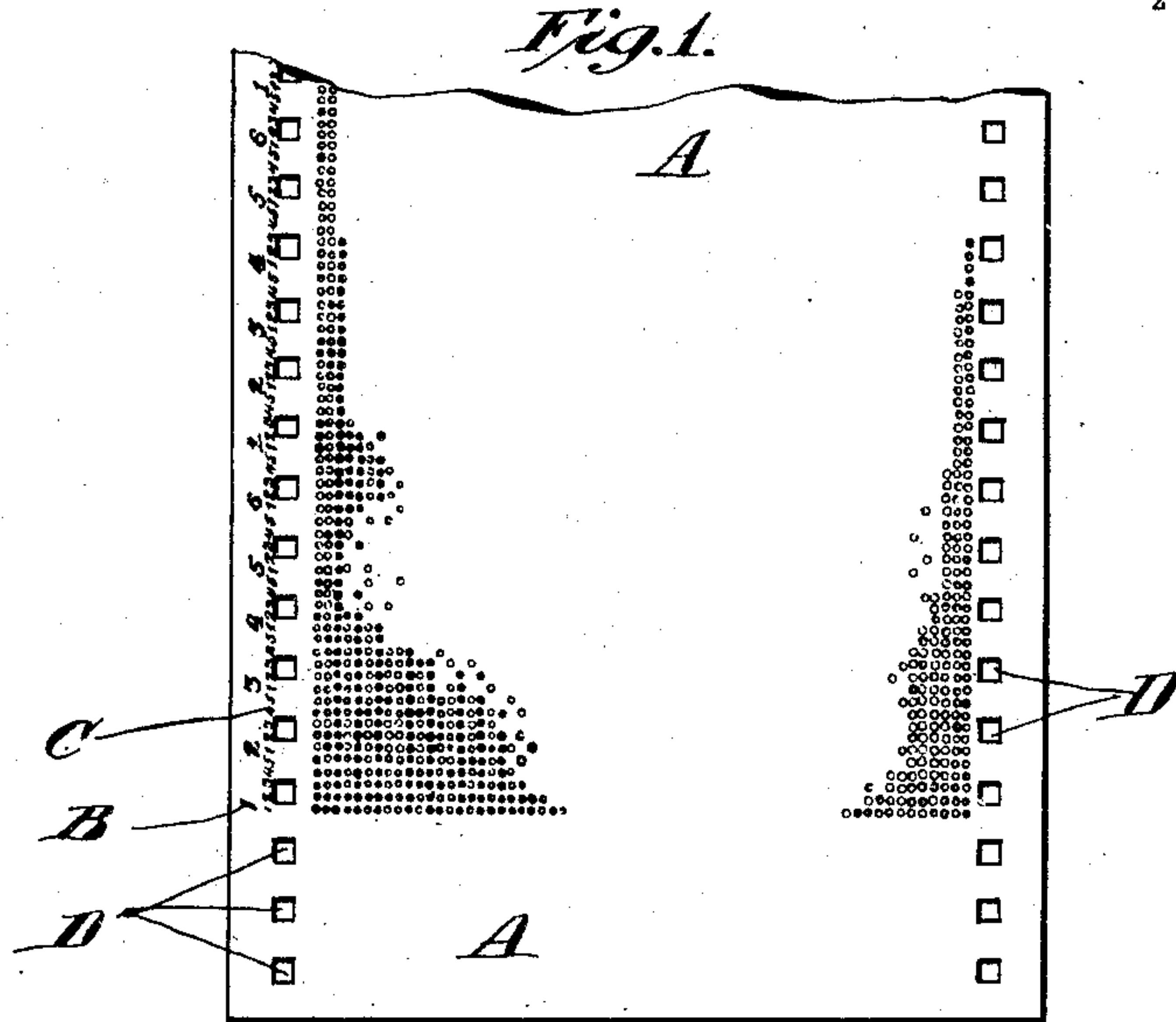
No. 885,772.

PATENTED APR. 28, 1908.

P. J. MEAHL.  
MASTER SHEET.

APPLICATION FILED MAR. 8, 1907.

2 SHEETS—SHEET 1.



Attest:  
*Comptroller*  
C. L. Ashley

P. J. Meahl Inventor:  
by *Osbert Gunn*  
his Atty

No. 885,772.

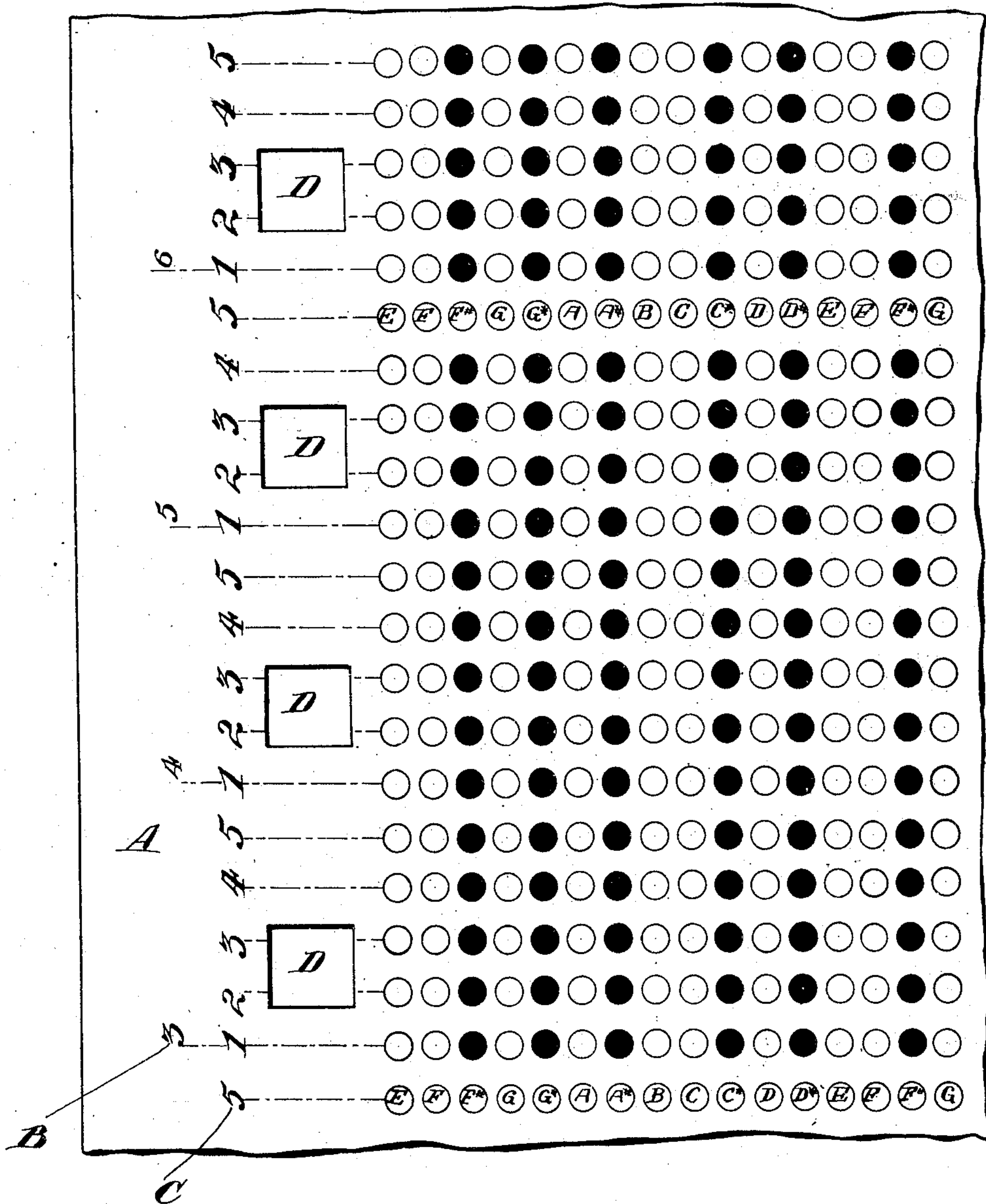
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2 SHEETS—SHEET 2.

*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

PHILIP J. MEAHL, OF BAYONNE, NEW JERSEY.

## MASTER-SHEET.

No. 885,772.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed March 8, 1907. Serial No. 361,365.

*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 Master-Sheets, of which the following is a specification.

This invention relates to improvements in master sheets to be used in machines for making perforated or slotted music sheets. Such master sheets are marked by a skilled operator who has the music in staff notation before him and according to the time value and pitch of the notes in the staff notation makes corresponding marks of the master sheet along which marks the master sheet is then punched out either in the form of a short hole or a long slot, according to the time value of the note to be represented. This master sheet is made on a much larger scale than the resultant music sheet to be produced by the perforated machines. A master sheet is placed into the perforating machine and controls the operation of the punches as whenever a hole or slot appears in the master sheet which corresponds to a certain punch this punch will be operated for a length of time corresponding to the length of hole or slot.

The object of my invention is to provide a new and improved master sheet which is accurate and reliable, permits of readily finding any desired note representation of the same, and of accurately marking the sheet in accordance with the desired musical and time value of the slot or perforation to be produced on the music sheet.

In the accompanying drawings, in which like letters of reference indicate like parts in all the figures:—Figure 1 is a face view part of my master sheet, parts being broken away and others omitted. Fig. 2 is an enlarged view of part of the same. Fig. 3 is an enlarged detail view of a slightly modified form.

The master sheet A is made of paper or card board and along each side edge is provided with a series of equi-distant openings D for receiving sprocket teeth or analogous projections on a cylinder for feeding the master sheet into contact with the perforating machine selectors on which it is to be used. The master sheet is provided with as many longitudinal rows of dots or marked spaces as there are to be longitudinal rows of note slots or perforations in the music sheet for

example, sixty-five or eighty-eight such rows of slots or perforations. As these dots are equi-distant from each other the dots will appear not only in longitudinal rows but also in equi-distant transverse rows. Lengthwise of the sheets the dots are spaced equally the spaces depending on the amount of reduction desired and in the specimen shown they are spaced equally transversely to the sheet. A step of one twentieth of an inch is most commonly used in perforated music sheets and by spacing the dots of the pattern sheet three-sixteenth of an inch, the reduction is 3.75, which is about the limit of minimum length of the master sheet yet allowing for openings therein which give the machine selectors proper accuracy.

For the purpose of readily ascertaining to which musical note any one longitudinal row of dots pertains these dots are marked or colored in accordance with the arrangement of the keys of a piano, for example, as shown in Fig. 3, on a transverse row, and beginning with two white dots, then a black dot, then a white dot, then a black dot, and then two white dots and then a black dot, and so on, in precisely the same succession as the black and white keys appear on a key-board. As stated this greatly facilitates transcribing the corresponding notes of the score. For the purpose of still more facilitating such correct transcribing and preventing mistakes certain transverse rows may be provided with letters indicating the musical pitch of the piano keys corresponding to these dots in a transverse row. As shown in Fig. 3, every fifteenth transverse row instead of being marked black and white is marked with such letters for example, as E, F, F sharp, G, G sharp, A, A sharp, B, C, C sharp, D, D sharp and so on. The smallest possible opening that can be produced on the music sheet is represented by one dot of the master sheet which corresponds to a single punch stroke and thus it follows that no note on the music sheet can be represented by anything less on the master sheet than one dot, but for each note, whether the same be represented by a single dot on the master sheet or by a number of dots a certain bridge space of paper must be left between this one slot in the music sheet and the following one and this bridge cannot be represented by less than three dots of the master sheet so that at least four dots of the master sheet are required to express the note of the smallest time value, in the note sheet.



In the present case I have selected as a precaution five dots as representing the space for the smallest note. Assuming that the composition is to be written in three four 5 time and the smallest note is an eighth, it will be seen that six groups of five dots will be required for a measure, that is thirty dots and these six groups of five dots each are numbered from one to six respectively, as indicated by the outer row of numerals B in the 10 drawings. The individual dots of each group of five are numbered from one to five respectively in an adjacent row C. The numerals of the row B indicate time, the numerals of 15 the row C indicate steps of the perforating machine. Of course I may also divide the dots into groups of four in which case the numbers in the row B of numerals would correspond to every fifth dot, and likewise ac- 20 cording to the different time the numerals in the row B may be repeated in groups of four or eight or whatever the time of the composition may require.

Having described my invention what I 25 claim as new and desire to secure by Letters Patent is:—

1. A master sheet for use in music sheet cutting machines, having a series of parallel longitudinal rows of equi-distant dots which 30 dots in transverse direction are provided with visible distinctions on the same order as the keys of a piano-forte key-board, substantially as set forth.

2. A master sheet for use in music sheet 35 cutting machines, having a series of parallel longitudinal rows of equi-distant dots, which dots in transverse direction are provided

with visible distinctions on the same order as the keys of a piano-forte key-board, one of these transverse rows being provided with 40 markings indicating the name of the notes represented by the said dots in the transverse row, substantially as set forth.

3. A master sheet for use in music sheet cutting machines, having a series of parallel 45 longitudinal rows of equi-distant dots, which dots form transverse rows and these transverse rows are divided into groups each containing an equal number of transverse rows, the number of transverse rows of dots in each 50 group corresponding to the number of dots required to represent the smallest note in a composition, the beginnings of such groups being numbered, substantially as set forth.

4. A master sheet for use in music sheet 55 cutting machines, having a series of parallel longitudinal rows of equi-distant dots, which dots form transverse rows and these transverse rows are divided into groups each containing an equal number of transverse rows, 60 the number of transverse rows of dots in each group corresponding to the number of dots required to represent the smallest note in a composition, the beginnings of such groups being numbered, and the transverse rows in 65 each group being also numbered, substantially as set forth.

Signed at New York in the county of New York and State of New York this 18th day of February A. D. 1907

PHILIP J. MEAHL.

Witnesses:

OSCAR F. GUNZ,  
OLIN A. FOSTER.