(No Model.)

4 Sheets—Sheet 1.

A. JACKSON.

METHOD OF AND MEANS FOR PRODUCING PATTERNS UPON PRINTING BLOCKS.

No. 274,944. Patented Apr. 3, 1883.

Fig. 1.

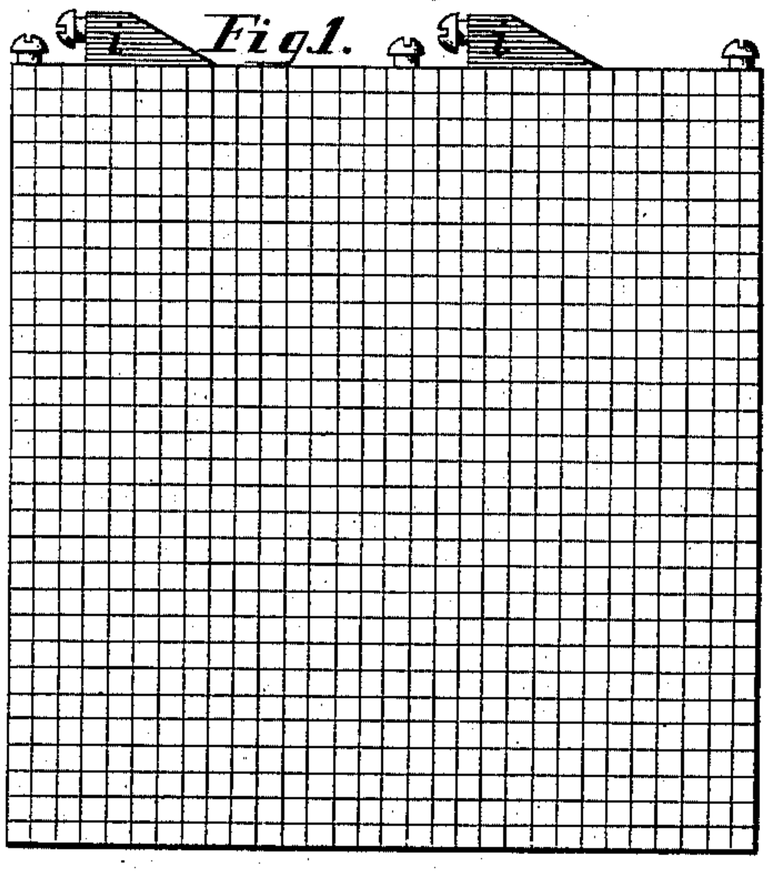


Fig. 5.

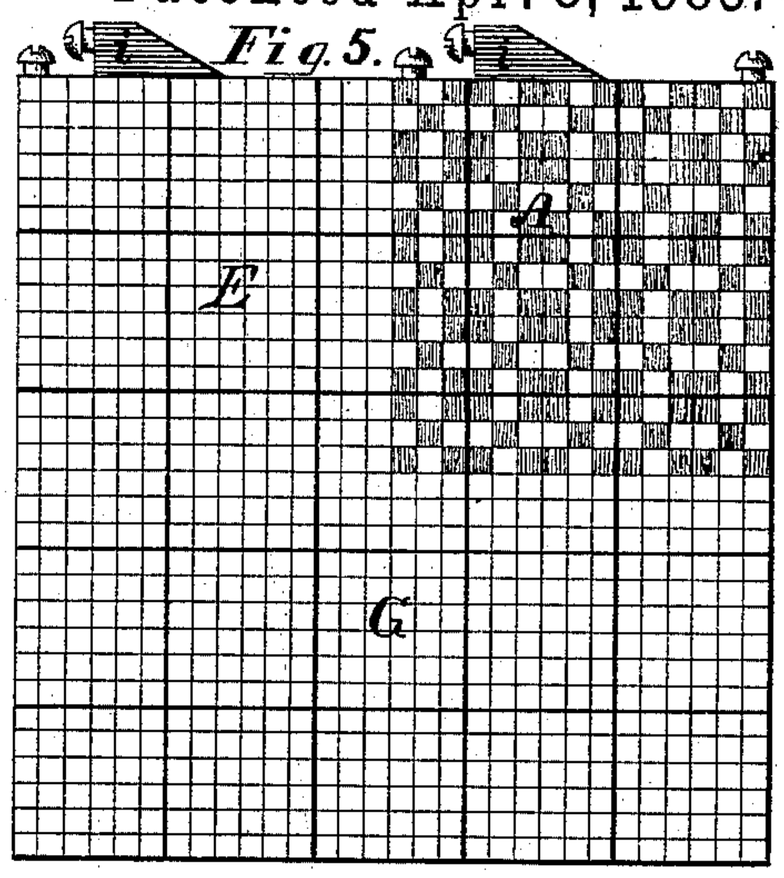


Fig. 2.

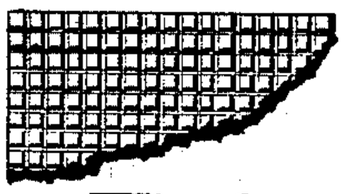


Fig. 4.

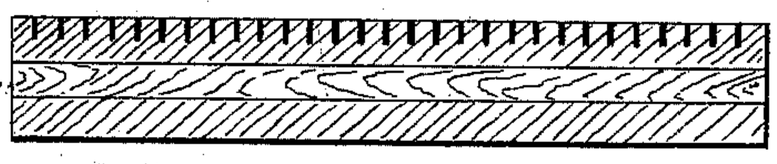


Fig. 6.

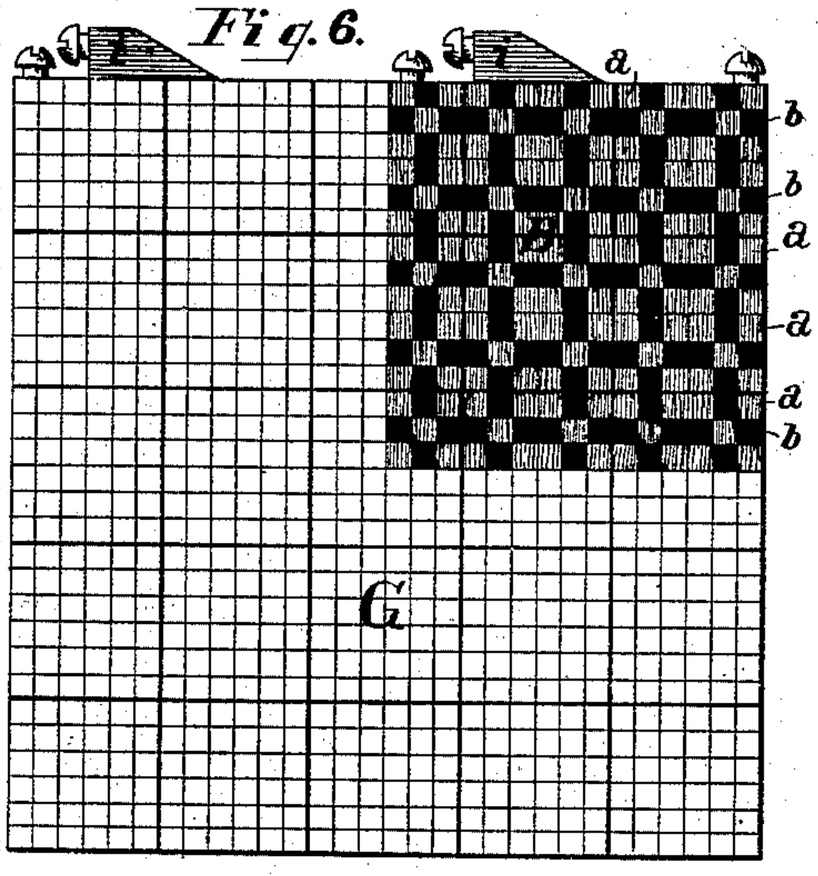


Fig. 7.

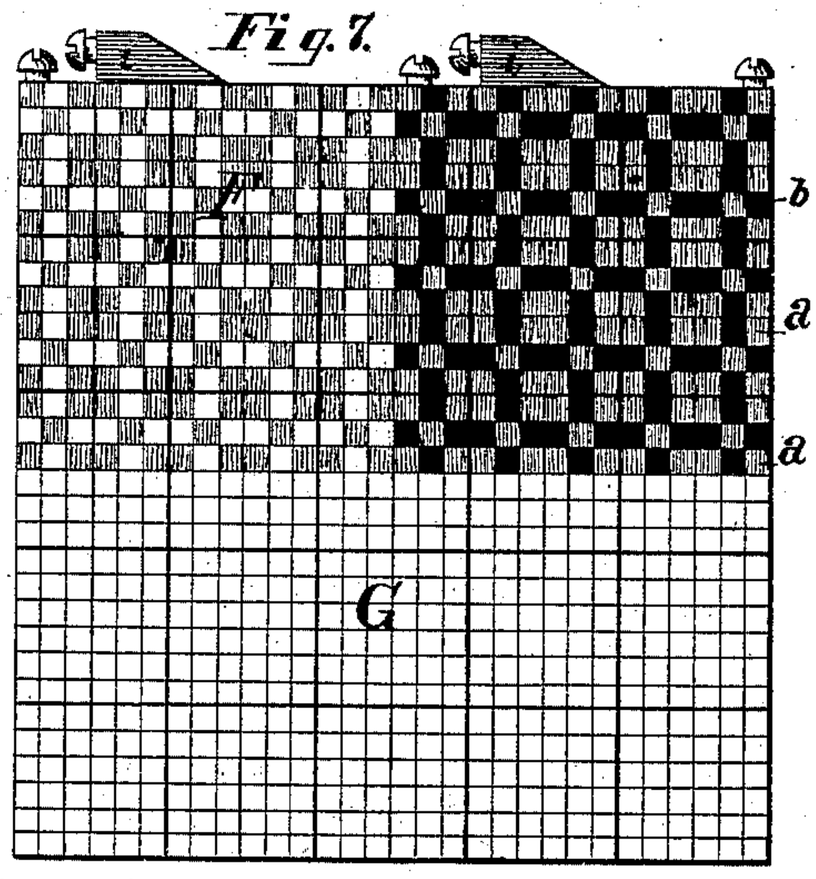


Fig. 3

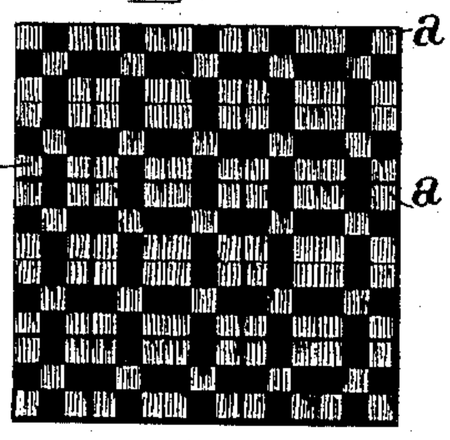
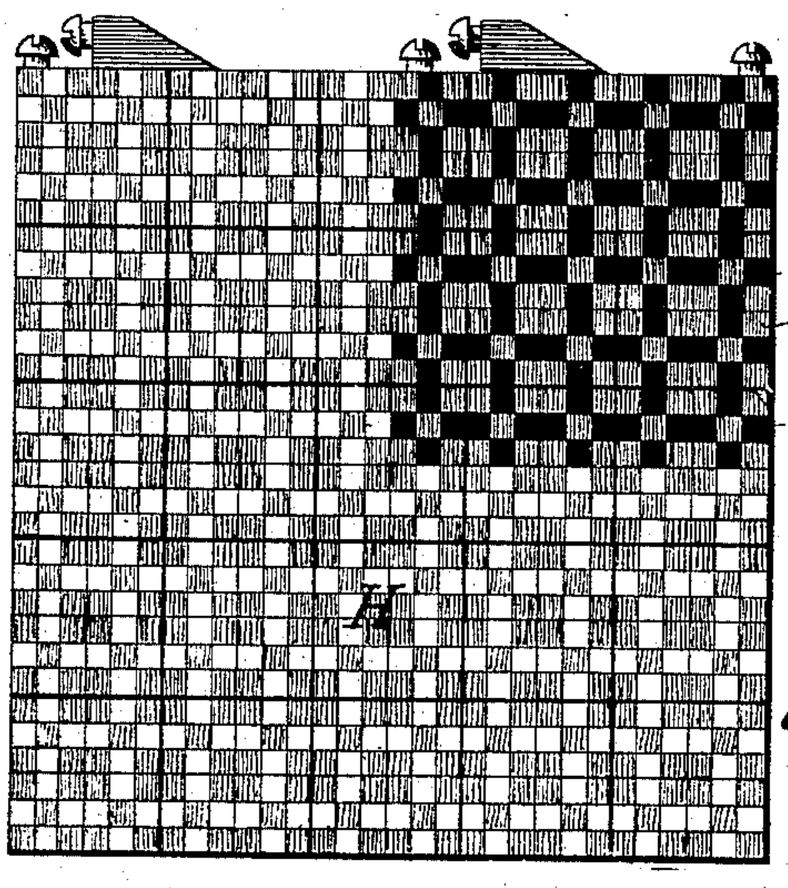


Fig. 8.



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(No Model.) 4 Sheets—Sheet 2.

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METHOD OF AND MEANS FOR PRODUCING PATTERNS UPON PRINTING BLOCKS.

No. 274,944. Patented Apr. 3, 1883.

Fig. 9.

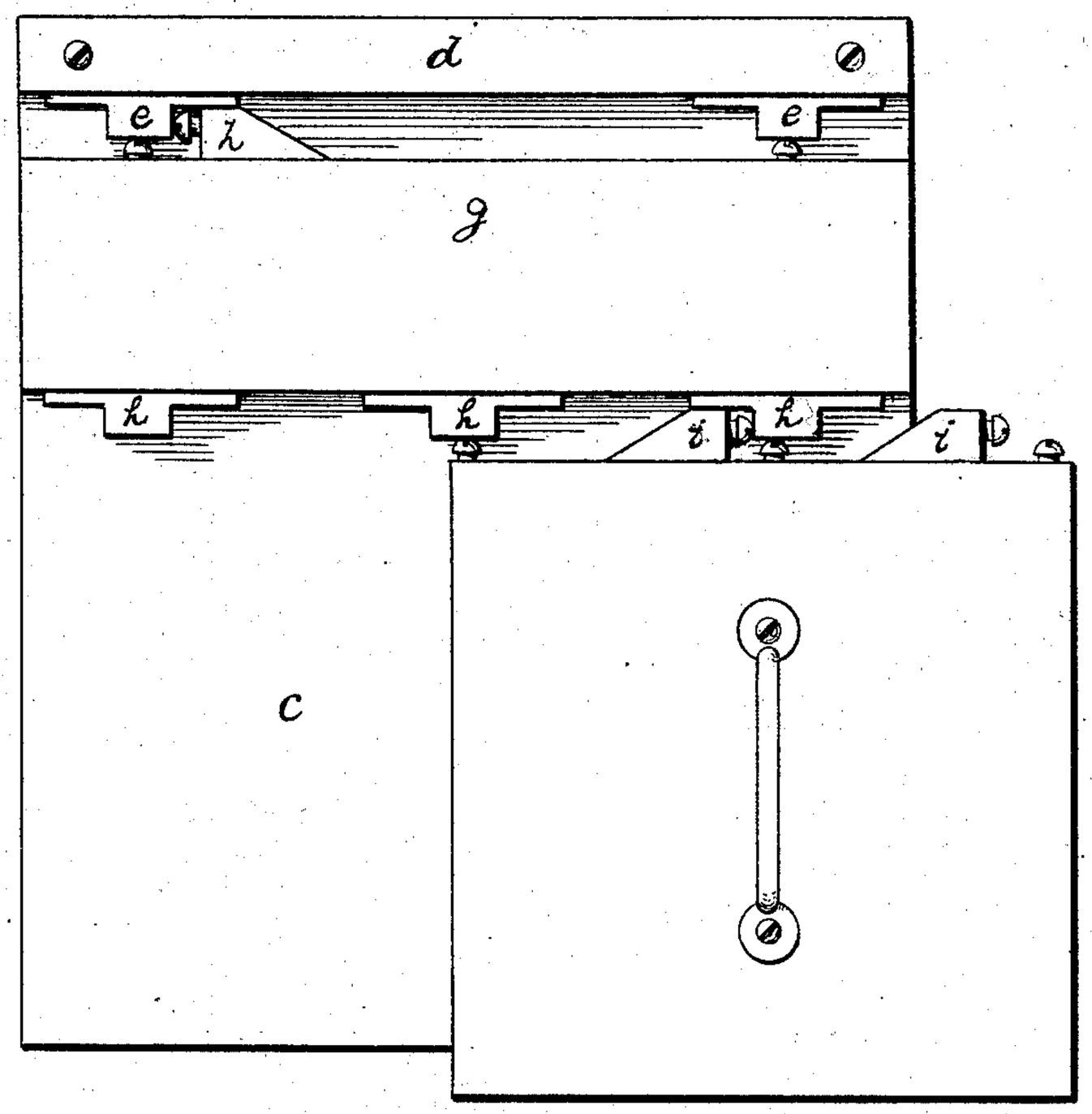

Fig. 10.

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4 Sheets—Sheet 3.

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METHOD OF AND MEANS FOR PRODUCING PATTERNS UPON PRINTING BLOCKS.

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Fig. 11.

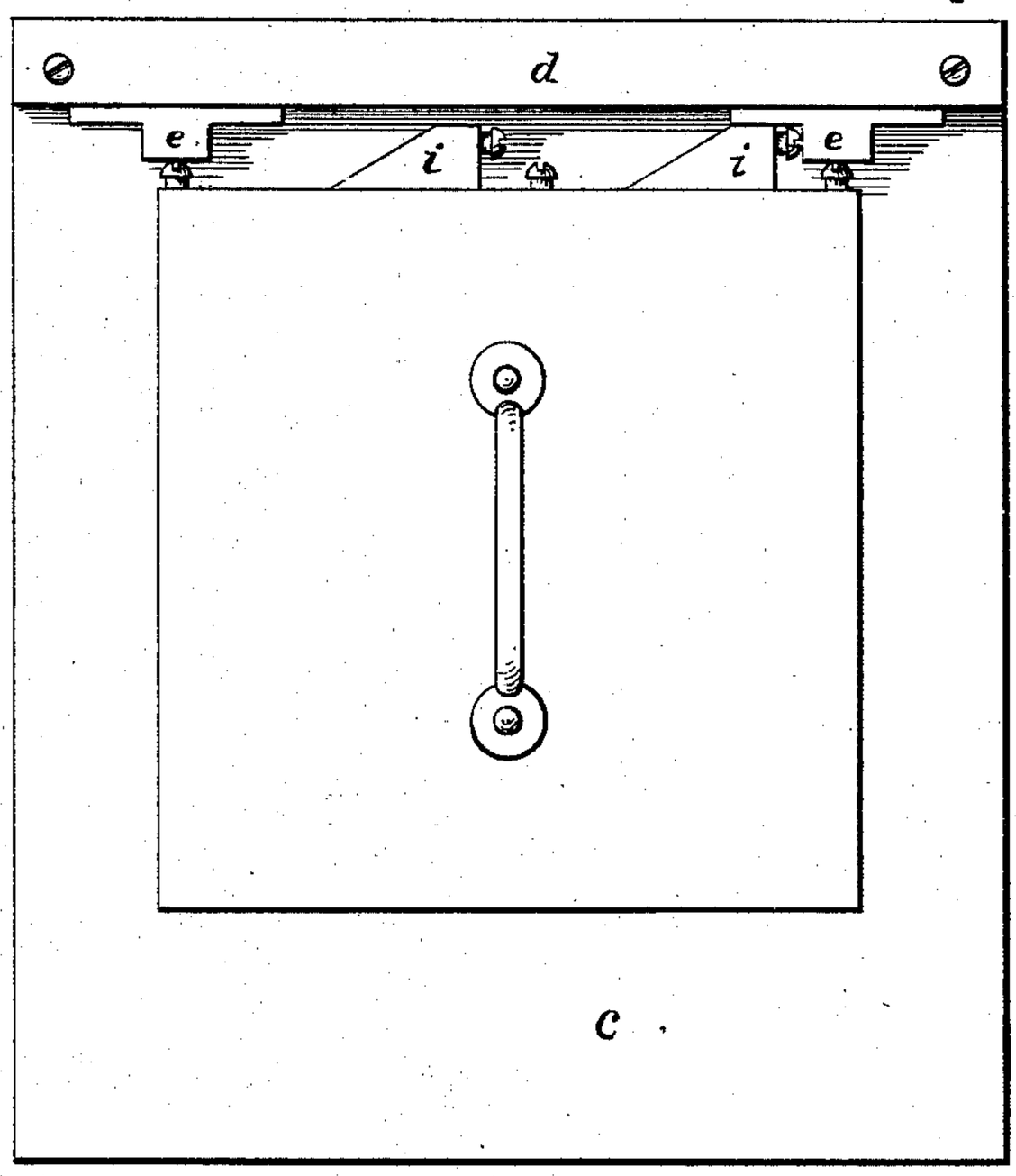
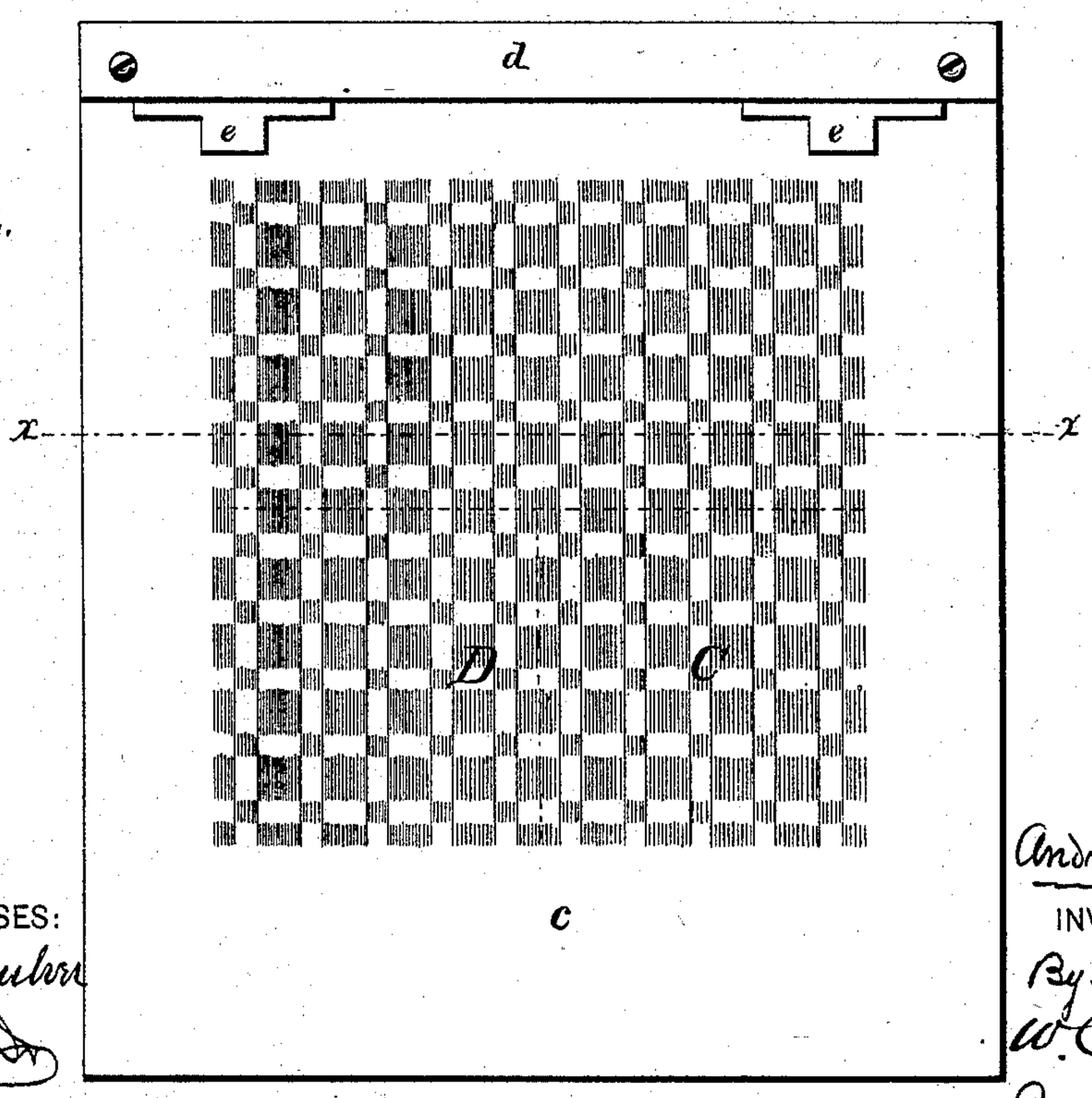


Fig. 12.



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METHOD OF AND MEANS FOR PRODUCING PATTERNS UPON PRINTING BLOCKS.

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Fig. 13.

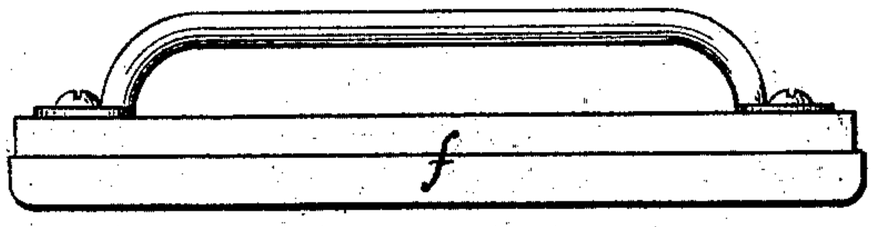


Fig. 14.

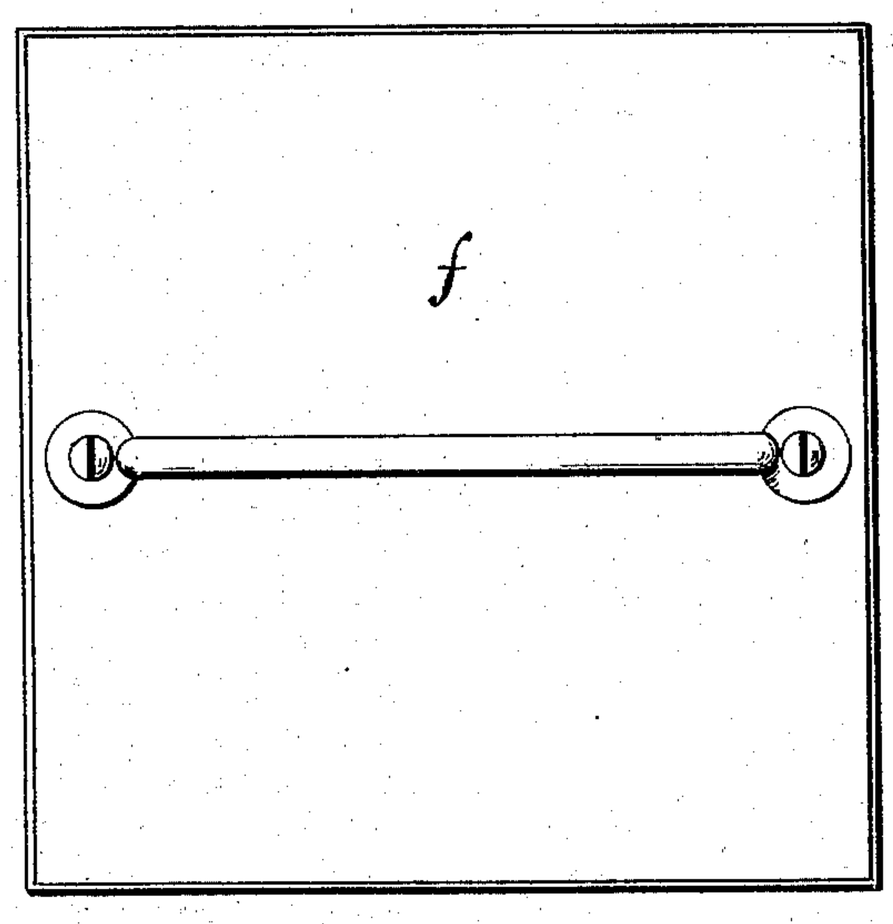
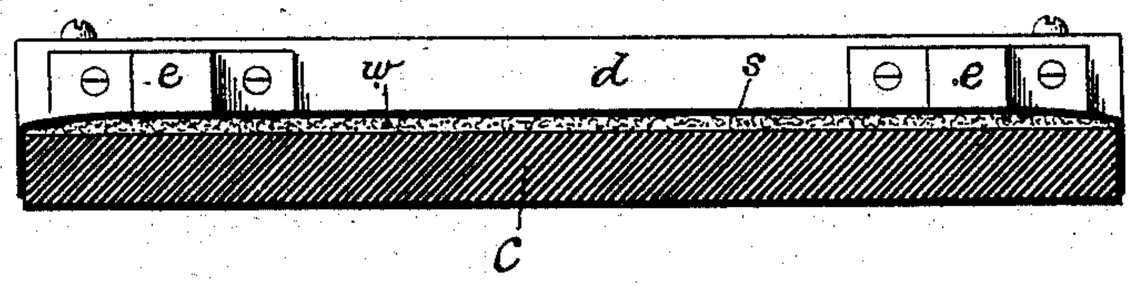


Fig. 15.



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UNITED STATES PATENT OFFICE.

ANDREW JACKSON, OF CHESTER, PENNSYLVANIA.

METHOD OF AND MEANS FOR PRODUCING PATTERNS UPON PRINTING-BLOCKS.

SPECIFICATION forming part of Letters Patent No. 274,944, dated April 3, 1883.

Application filed November 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANDREW JACKSON, of Chester, Pennsylvania, have invented certain Improvements in Methods of and Means for Producing an Ornamental Design or Pattern upon Oil-Cloth Printing and other Printing Blocks, of which the following is a specification.

An oil-cloth printing-block, as is well known, is made of a large rectangular or other shaped piece of wood—such as box-wood, maple, or the like—which is usually eighteen inches square, and the lower surface or printing-face of which is first made perfectly level, and is then scored or incut transversely in two directions, after the manner of a checker-board pattern into a very large number of squares, technically called "pins," "pegs," or "shapes," each of which is, for instance, a twelfth to a sixteenth of an inch square upon its operative surface. The pattern is produced by chipping out certain of the pegs and leaving others untouched to constitute the ornamental printing-surface proper.

Heretofore these printing-blocks, scored and in readiness to have the pattern marked upon them, and to be then chipped or engraved in accordance with such pattern, have had the design or pattern printed upon them by hand without the aid of any mechanical contrivance. A paper pattern of one-quarter the face area of the block—say, nine by nine inches—marked or laid off in a manner correspondent with the scorings on the block and painted with the desired design, is then laid beside the block, and the block-cutter is compelled to transfer by hand, laboriously and by careful measurement, all the markings of a certain color on the pattern to the block, four times reproducing all the markings of a certain color on the paper-pattern on the block.

The object of my invention is to obviate this quadruple manual transfer from the pattern to the block, and to enable the block-cutter to transfer to one quarter or other predetermined fractional face area of the block all the markings of a certain color on the pattern, and to then mechanically and without further artistic hand transfer print the remainder of the block with the pattern.

The above object I accomplish by the practice of a method and the use of contrivances of the character hereinafter described and claimed.

In the accompanying drawings, I have represented a preferred form of apparatus for the convenient practice of my invention, and have illustrated the practice of the method invented in its various stages as well as it is possible to do by means of pictorial illustrations.

I first take an oil-cloth printing-block of the usual character, a plan view of the operative face of which is represented in Figure 1, an end view in Fig. 4, and a more exact view of the scorings of which is represented in the partial plan view of Fig. 2, and, further, take a painted paper pattern (represented in Fig. 3) of one-quarter the face area of the block, and, laying the pattern beside the block, mark conveniently, by water-color paint, upon a corresponding portion of the block, in any preferred manner, such portions, *a*, for instance, of the pattern of Fig. 3 as are represented by vertical shade-lines in said pattern, with the result that one-quarter (in the proportions of parts illustrated) of the block designated by A is marked to correspond with the portions *a* of the pattern, as is well represented in Fig. 5. The block so marked is then, to the extent of the area marked, chipped out or engraved as to the pins or pegs not marked, with the result that only the marked pins of the marked area remain. The appearance of the marked and engraved portion of the block in this stage is represented in Fig. 6, and designated by B, the portions *b* of the block represented in solid black being the portions from which the pins have been chipped, and the portions *a* in shaded lines representing the marked pins which remain. The block so engraved as to a quarter of its area (it is to be remembered that while I speak in terms of quarter-areas, the invention may be practiced with respect to any fractional other than quarter-areas) is in readiness for that mechanical transfer by which the design of the marked portion is to be transferred to the other portions which have not been marked, and by which the artistic hand transfer of the design heretofore essential as to the entire surfaces of the block is obviated as to all portions, save that frictional portion, which is engraved.

The mechanical transfer is conveniently effected in the following manner:

c, Figs. 9, 10, 11, 12, and 15, is a prepared pad or table covered with cotton, *s*, or other fit material, stretched over an interlining, *w*, to which ink or other suitable transferable pigment will adhere. The table is preferably of larger face area than the block square and provided with a fixed gage, *d*, extending across one side. The fixed gage is equipped with gage-studs *e*, as shown in the drawings.

The above-described padded table is well suited for the carrying out of my invention. I do not, however, desire to restrict myself to the precise construction of padded table represented and described, as it will be obvious that many other prepared receptive surfaces which are not strictly padded tables may be employed with equal profit for the carrying out of the mechanical transfer hereinafter set forth.

The first step of the process is to coat the engraved portion of the block, or that portion represented in Fig. 6 by B, conveniently by means of an inking-pad, *f*, represented in side elevation and in top plan view in Figs. 13 and 14, with such suitable ink or pigment as will readily transfer; to further apply a false or removable gage, *g*, against the fixed gage upon the face of the table in the manner represented in Fig. 9, and then to apply the block of Fig. 6, coated with the transferable ink or pigment, against the false gage, face downward, upon, for instance, the right-hand lower portion of the table in the manner and position represented in Fig. 9—that is to say, so as to bring the engraved portion B of said block over that quarter-area of the table which is designated by C in Fig. 12. The block is gaged to this or any other predetermined position upon the table by means of gage-studs *h* upon the false gage and other gage-studs or adjusting devices, *i*, applied to one of its sides. The block, applied as above to the table, is tapped or pressed firmly down thereupon until its engraved portion B produces upon the area C of the table its exact imprint in paint. Upon the lifting of the block from off the table this imprint, in a tacky condition, remains on the surface C of the table. The block is then replaced upon the table in the position represented in Fig. 10—that is to say, in such position as will bring its engraved portion B, Fig. 6, upon the lower left-hand portion of the table, (the area marked D in Fig. 12,) and as will bring its upper quarter portion (marked E in Fig. 5) in exact alignment with the tacky imprint upon the right-hand lower portion C, Fig. 12, of the table, so as to reproduce such imprint upon the left-hand upper quarter, E, Fig. 5, of the block in the manner indicated by the shaded lines of the area marked F in Fig. 7. After the block has been lifted from this, its second, position the false gage is removed from the table and the block is again applied to the table against the fixed gage in the position represented in Fig. 11, which is the third position of application. In this third position the tacky imprint which has been produced across the entire lower portion of the table—*i. e.*, across the two areas marked C and D in Fig. 12—by the application of the block in the two positions of Figs. 9 and 10, will come in exact alignment with the lower half portion of the face of the block, or that portion which is represented by the letter G in Figs. 5, 6, and 7, and which is not yet printed in the representation of the partially-printed block of Fig. 7, and will print or transfer itself upon said lower portion G of the block, with the result that said lower portion of the block—that is again to say, its two lower quarters—will be simultaneously printed with the design and caused to assume the appearance represented by the area marked H in Fig. 8.

By the above-described means the entire design of the pattern has been mechanically transferred upon three-fourths of the entire face area of the block, and all that remains to be done to fit the block for printing is to engrave or chip out the pins or pegs not imprinted with the design.

In Fig. 12 is represented the appearance which the printing-table assumes after the three applications of the block, showing how its entire surface receives the imprint of the pattern.

Any desired construction of table may be resorted to, that represented in the sectional view of Fig. 15, which is taken on the line *x* *x* of Fig. 12, being convenient, the construction represented being, as hereinbefore stated, that of an intermediate lining between the material of the table and that of its covering.

The pigment or ink employed to effect the transfer may be applied to the engraved quarter of the block by other means than the inking-pad represented—as, for instance, by brush or inking-roller—and the application may be renewed before each subsequent application of the block to the table.

That arrangement of gages which I have represented is a convenient one; but other gaging devices or contrivances for securing exact registry or alignment of the areas to be brought in contact may be resorted to without departure from my invention.

It is advisable in the practice of my invention with different designs to have a separate printing-table for each design, so that should any of the transferring-ink remain fresh upon the table in a given pattern, the possibility of imprinting the wrong peg may be avoided.

As heretofore stated, the invention is applicable when other areas than a quarter are employed. Thus, for instance, an eighth of the face of the block might be engraved, if the pattern permitted it, and the transfers made by the employment of three false gages and a larger number of applications of the block. I regard the quarter-division as the quickest, best, and most advisable, because

the present practice of preparing paper patterns of oil-cloth designs is to embrace either the whole design or a quarter part of it on said pattern.

The same care in the application and gagging of the block upon the table is to be exercised in the practice of this invention as would be exercised in the printing of oil-cloth fabric with the block.

The method of transfer is of course applicable in blocks which are not scored or incut, but which are manually engraved by means of carving-tools or graver's implements, the practice of the mechanical transfer of a prepared and cut area of block to another area not prepared remaining the same, whether the block be a scored one and engraved by chipping or one having a true surface engraved by actual section.

Having thus described my invention, I claim—

1. The method of producing an ornamental design or pattern upon an oil-cloth printing or other printing block hereinbefore described, which consists, first, in engraving or otherwise providing a given area of the block with a predetermined design; second, in coating the engraved area with a transferable pigment or ink; third, in printing a padded table with the imprint of the coated engraved portion of the block; and, fourth, in imprinting the unengraved portion of the block by contact with the imprint of the engraved portion upon the padded table.

2. As a convenient apparatus for effectuating the method above set forth, a table provided with a fixed gage, in combination with a false or removable gage, substantially as and for the purposes set forth.

In testimony whereof I have hereunto signed my name this 25th day of October, A. D. 1882.

ANDREW JACKSON.

In presence of—
J. BONSALL TAYLOR,
JOHN JOLLEY, Jr.