

(No Model.)

C. POTTER.
DRAINING FLOOR.

No. 596,540.

Patented Jan. 4, 1898.

Fig 1

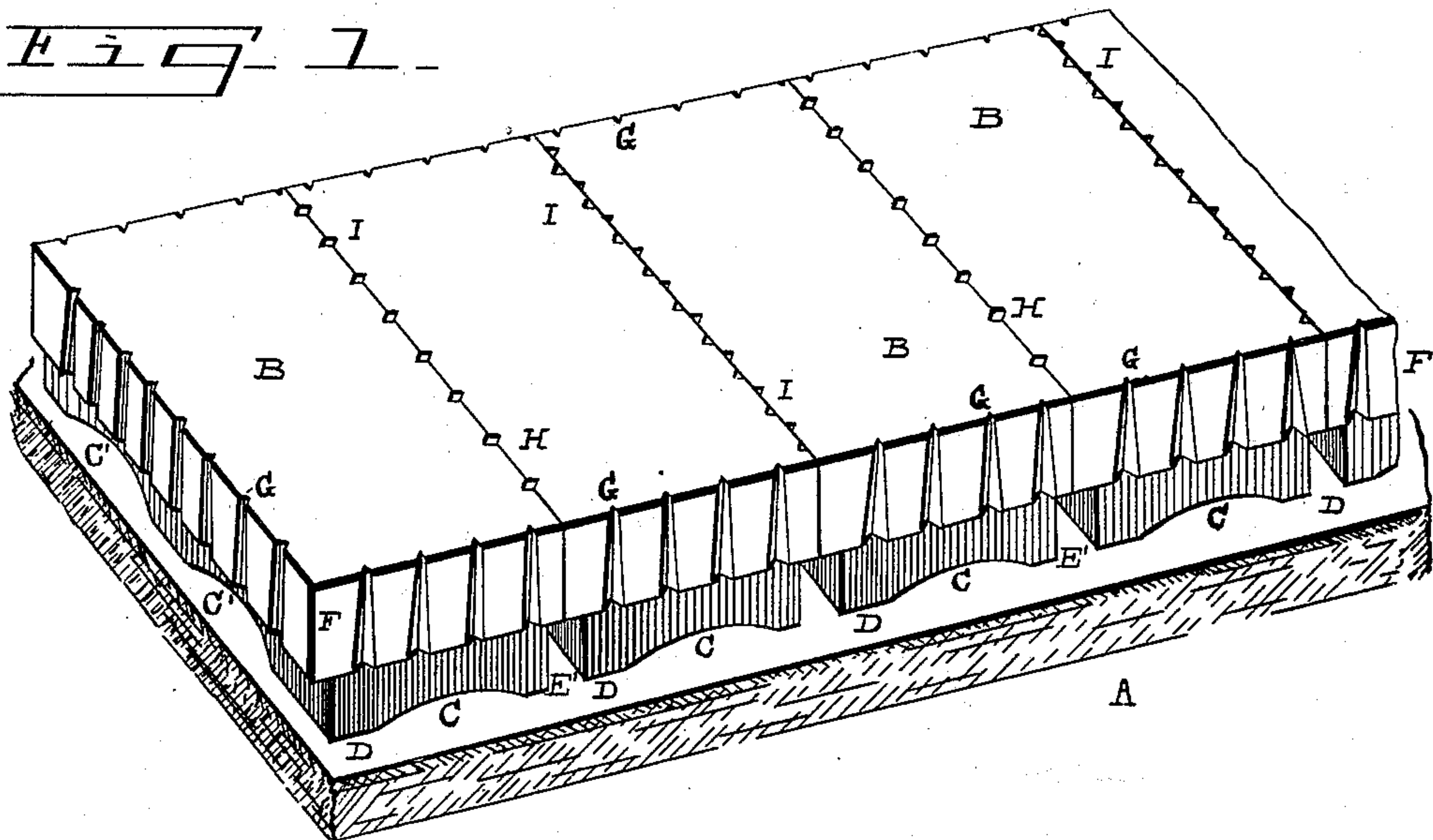


Fig 2

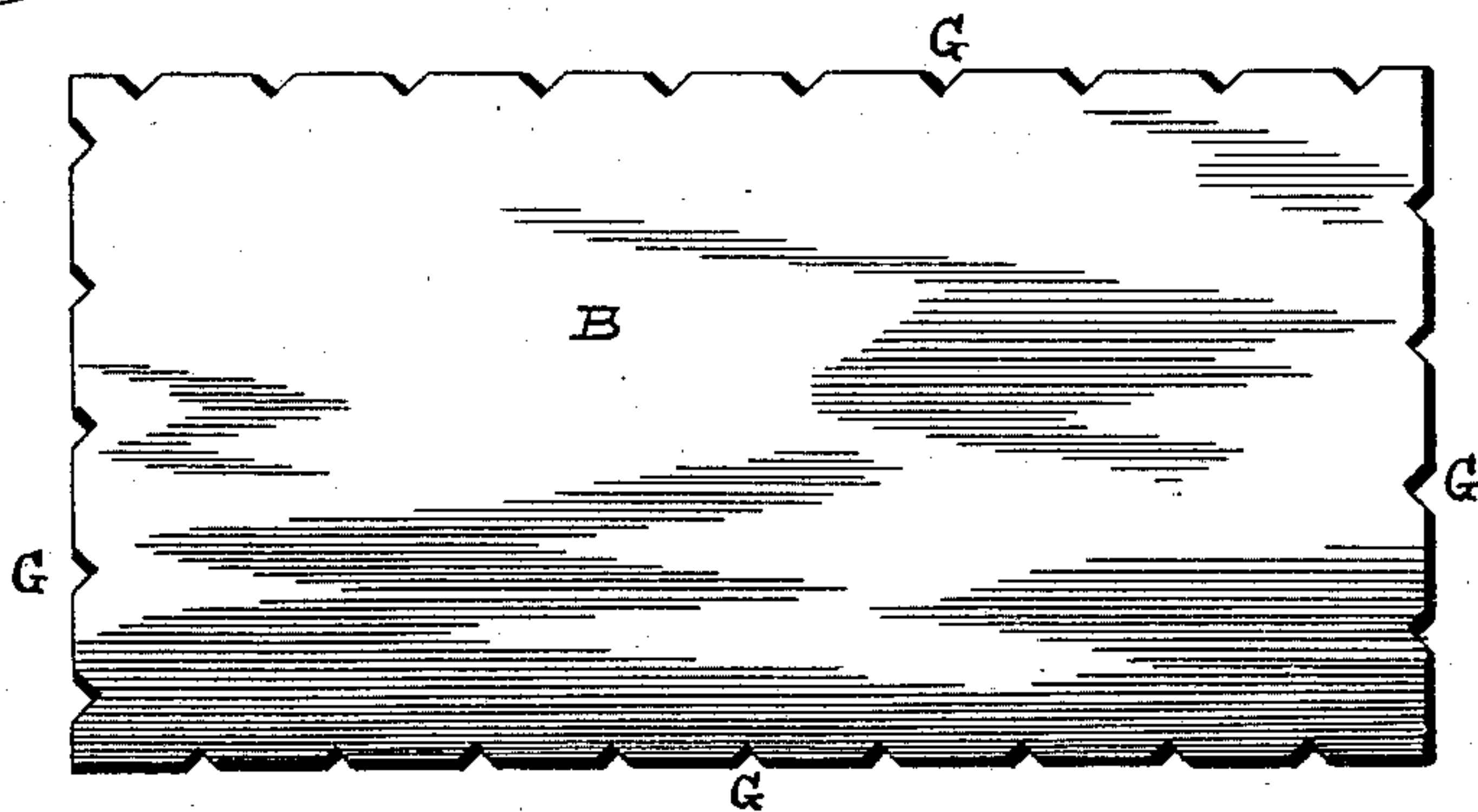


Fig 3

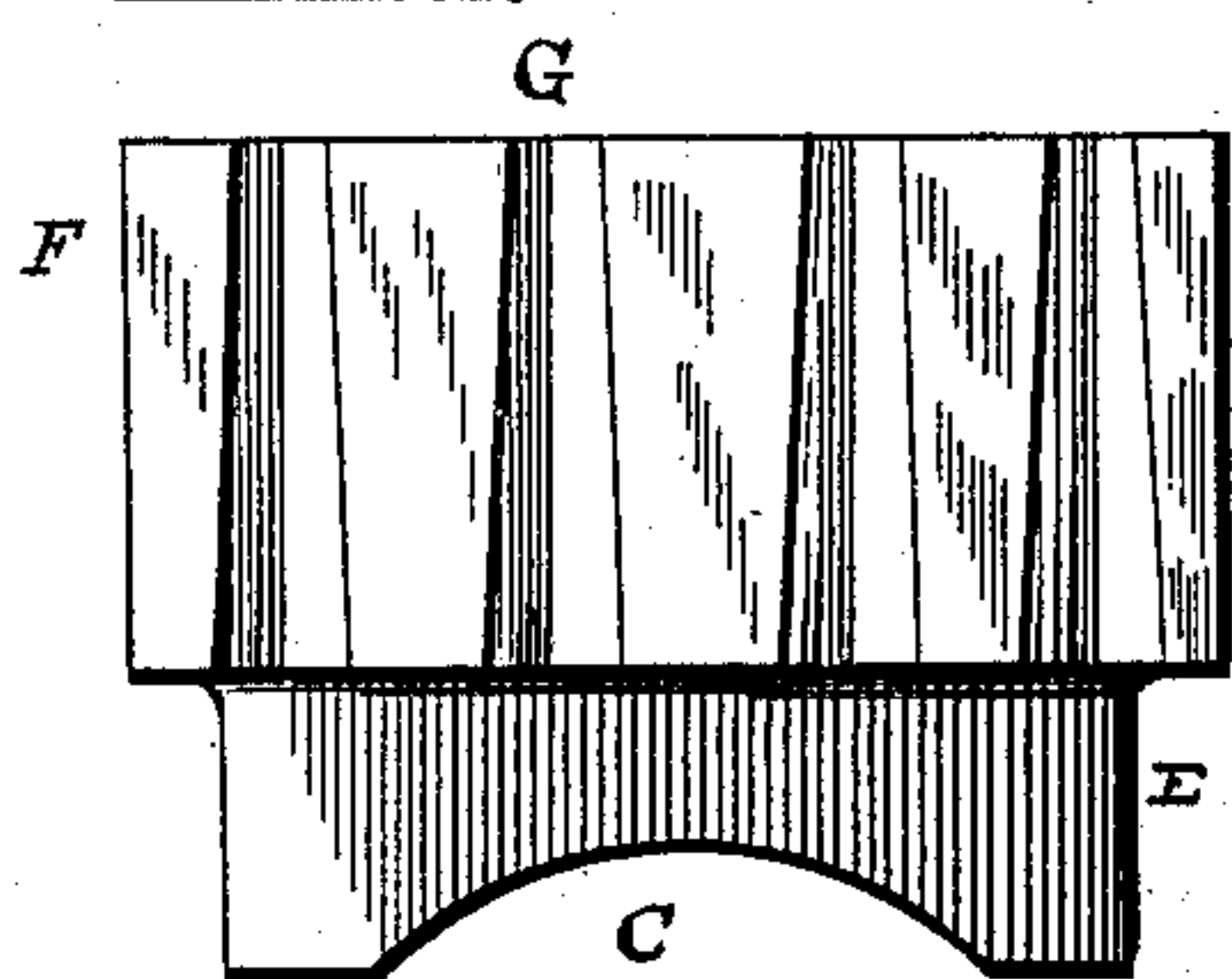
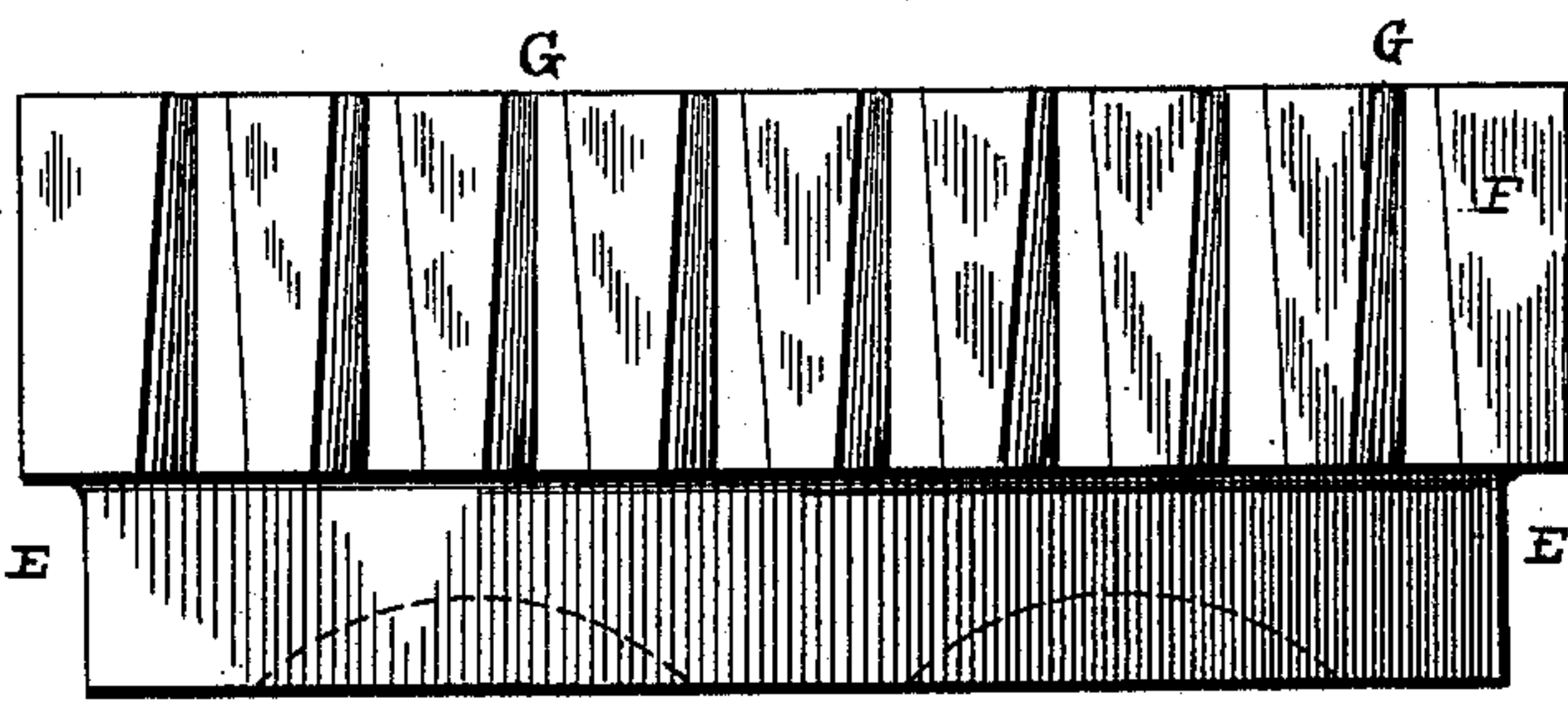


Fig 4



WITNESSES

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DRAINING-FLOOR.

SPECIFICATION forming part of Letters Patent No. 596,540, dated January 4, 1898.

Application filed May 27, 1897. Serial No. 638,353. (No model.)

To all whom it may concern:

Be it known that I, CHARLES POTTER, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Draining-Floors, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to the floors of draining tanks or vats used in paper manufacture and for other similar purposes.

The object of the invention is to produce a floor which will permit the liquids or chemicals in a mass of paper-pulp to escape from the mass without discoloration of liquid or pulp and without permitting the escape of the half-stuff, pulp, or fiber to any large extent, and to this end the floor of the drainer is constructed of an impermeable base, such as concrete or cement, and a porous covering of bricks, tiles, or blocks of peculiar form, as hereinafter described.

Figure 1 is a perspective view of a broken section of the floor, showing the brick, tile, or block covering. Fig. 2 is a top plan of the brick or block. Fig. 3 is an end view of the brick or block, and Fig. 4 a side view.

The foundation or base A may be a flooring of any suitable material impermeable to liquid, and is preferably a concrete flooring with a smooth surface, inclining to one side or corner, so that liquids will flow in the direction of the incline. This is the permanent floor of a bleaching or straining vat, in which the pulp is stored, generally for several days or weeks, to permit the escape of liquid and a thorough bleaching of the stock. On this permanent floor I form a draining-floor of bricks B. These bricks may be of clay, concrete, glass, or other material not much subject to the action of the chemicals used in bleaching paper-stock. The bricks may be about the size of building-bricks or smaller or larger, according to circumstances.

Each brick B has a plane upper surface as smooth as convenient. The base has an arched concavity C, extending from end to end of the brick or block and preferably formed in the mold before the burning or consolidation of the material of which the brick or block is composed. This arch C is to permit liquid to run along under the body of the brick, the

brick being supported on floor A by side ribs D D at each side of the arch or concavity C.

The body of the brick is in form of a parallelogram; but there is a recess E along each side and end of the lower portion, so that when a floor is covered with the bricks, as in Fig. 1, open passages E' will be found along the sides and ends of the bricks, said passages extending up for perhaps one-fourth or one-third the thickness of the brick or block.

The overhanging edges F of each brick or block above the recesses E has notches G, extending in vertical direction. The notches G are broadest and deepest at their lower ends and narrowest at the upper corner of the brick, so that liquid and also particles of pulp or other material which may enter these notches or grooves will have a constantly-enlarging passage as they move downward and thus there will be no tendency for the notches or passages to clog or fill up. The notches terminate at the bottom of the overhang F, and anything passing down these passages will find much freer passage when it reaches the passages E'.

The notches on one end and one side of the brick are not in line with or directly opposite to the notches on the other side and end of the brick. In fact, the notches may differ both in number and position. This enables the paver to so lay the brick floor that the notches in two bricks may come opposite each other, as at H H, Fig. 1, when openings or passages nearly rectangular will be formed by the notches in two adjacent bricks, or by turning the brick around the notches will not be in line and triangular passages, as at I I, will thus be made by the notches in the edges of the bricks.

In general the liquid which passes down the notches or openings between the edges of the bricks may flow off by the passages E' until it finds a lateral passage of similar character, along which it may pass until it enters the arched passages C; but as a modification of my invention the base of the bricks or of some of them may have lateral arched passages C', as well as longitudinal arched passages C. Care should be taken that the base-ribs D of the bricks or blocks be not cut away to such an extent as to give an insufficient support to the brick or block.

It will be seen that bricks of the form described permit of a considerable variety in the character of the draining-floor covered by them, and that excellent opportunity is afforded for the escape of the liquid, while excluding all solids too large to pass through the notches in the edges of the overhanging part of the bricks or blocks. The passages beneath the overhang at the sides of the brick or block are not likely to fill up with pulp or fiber conveyed down through the small notches, as the liquid will flow quite freely along these passages and carry off any small pieces of pulp which have escaped through the notches at the sides of the brick.

The number of notches in the edge of the brick will depend on the size of the brick and the material of which it is composed. The notches should not be so near together that the projections between them will be easily broken, nor so far apart as to preclude good drainage.

I am aware that a drain tile or brick with arched passages along and across one face, but without the overhang, has been known.

What I claim is—

1. The brick or block for a draining-floor,

having an overhanging notched edge, and a recessed or cut-away portion under said edge, substantially as described.

2. The brick or block for a draining-floor, having notched edges, the notches in one edge being out of line with the notches in the other edge, substantially as described.

3. The block or brick for a draining-floor, having an overhanging upper portion with notches in the edge of such overhang, a recess or cut-away portion below said overhang at the sides and ends of the brick, and an arched passage extending lengthwise under the base of the brick.

4. The block or brick for a draining-floor having an overhanging upper portion with notches in the overhang, recesses below this notched overhang, and lateral and transverse arched passages under the body of the brick, substantially as described.

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

CHARLES POTTER.

Witnesses:

W. A. BARTLETT,
CHAS. K. DAVIES.