

No. 719,123.

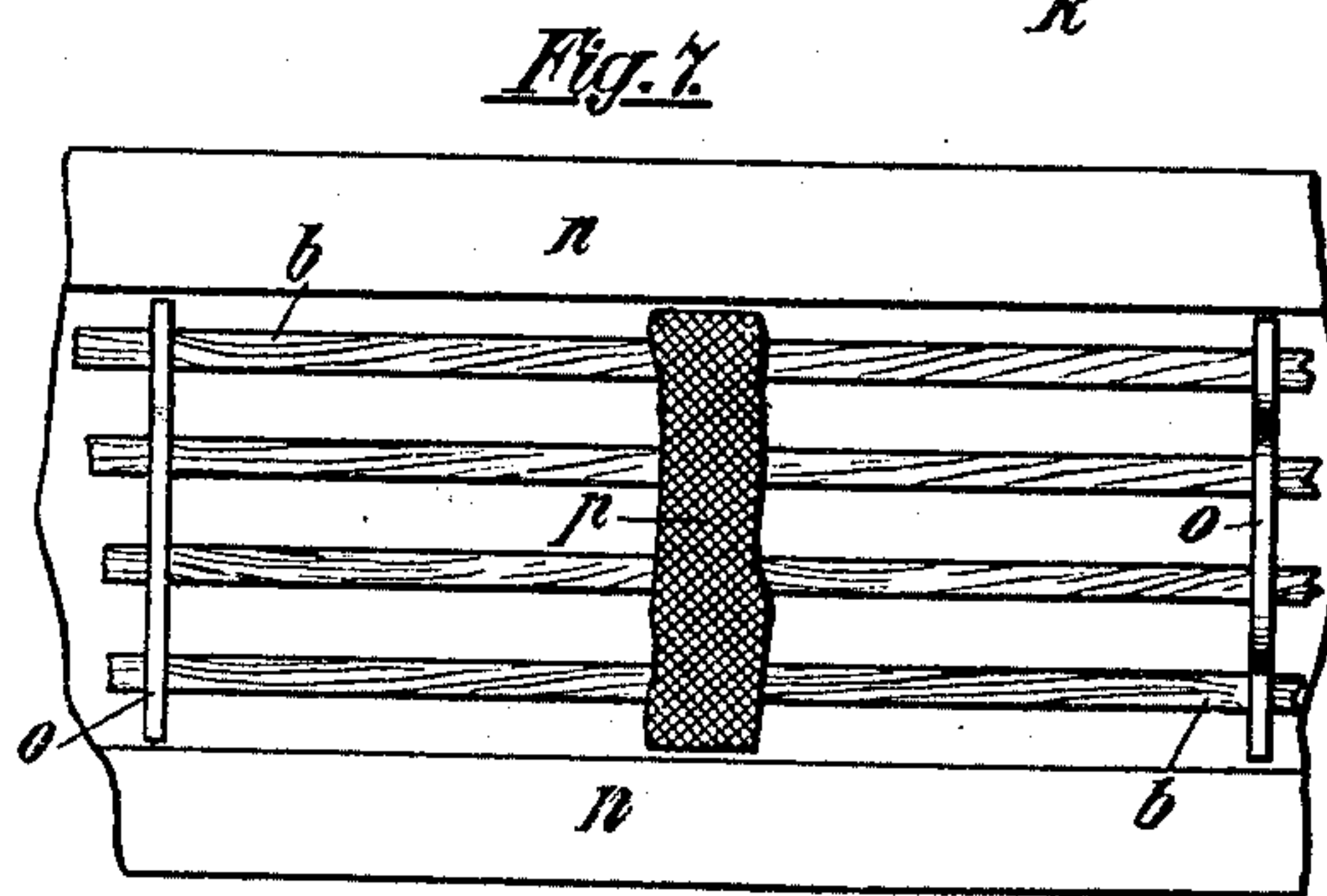
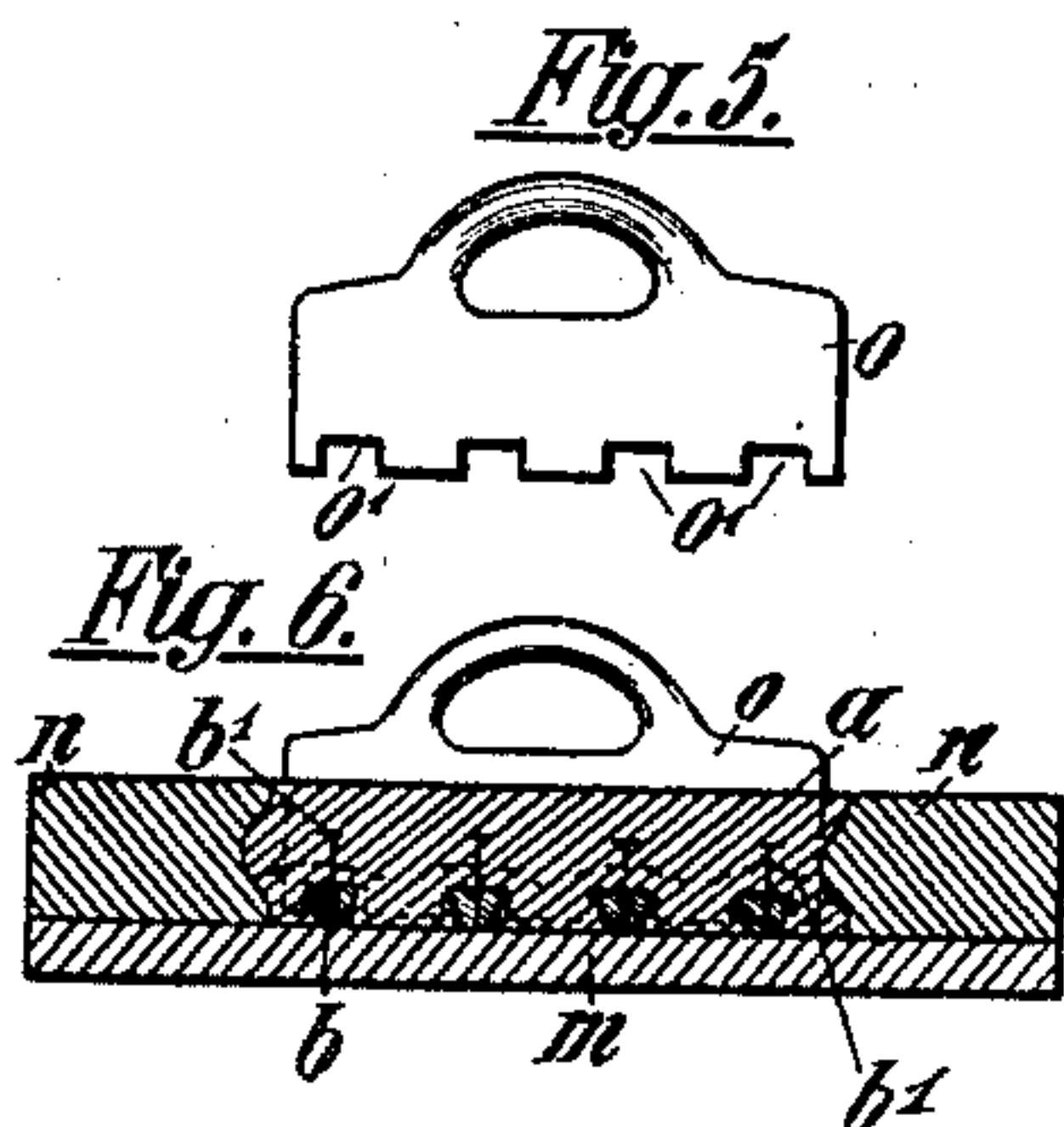
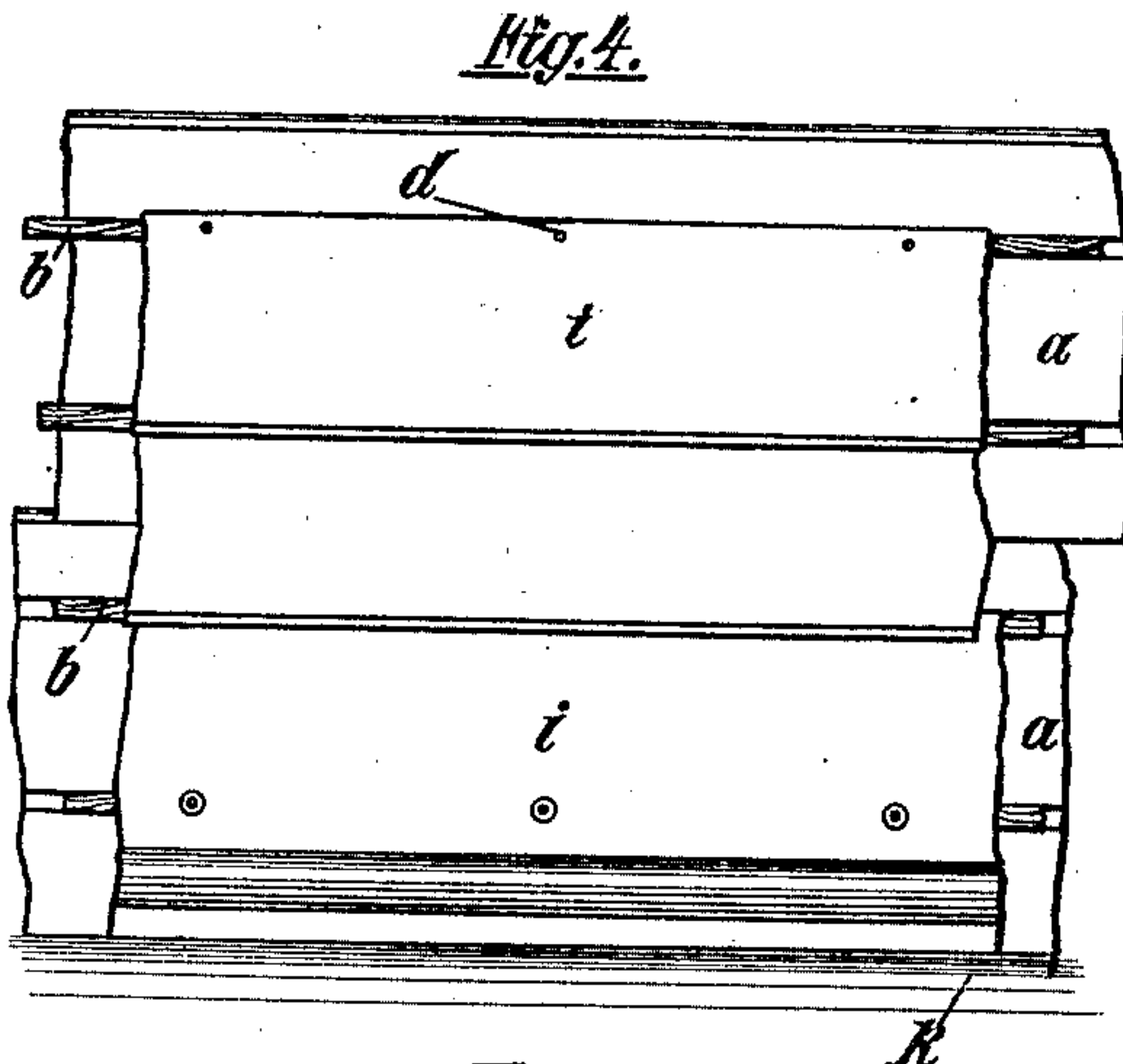
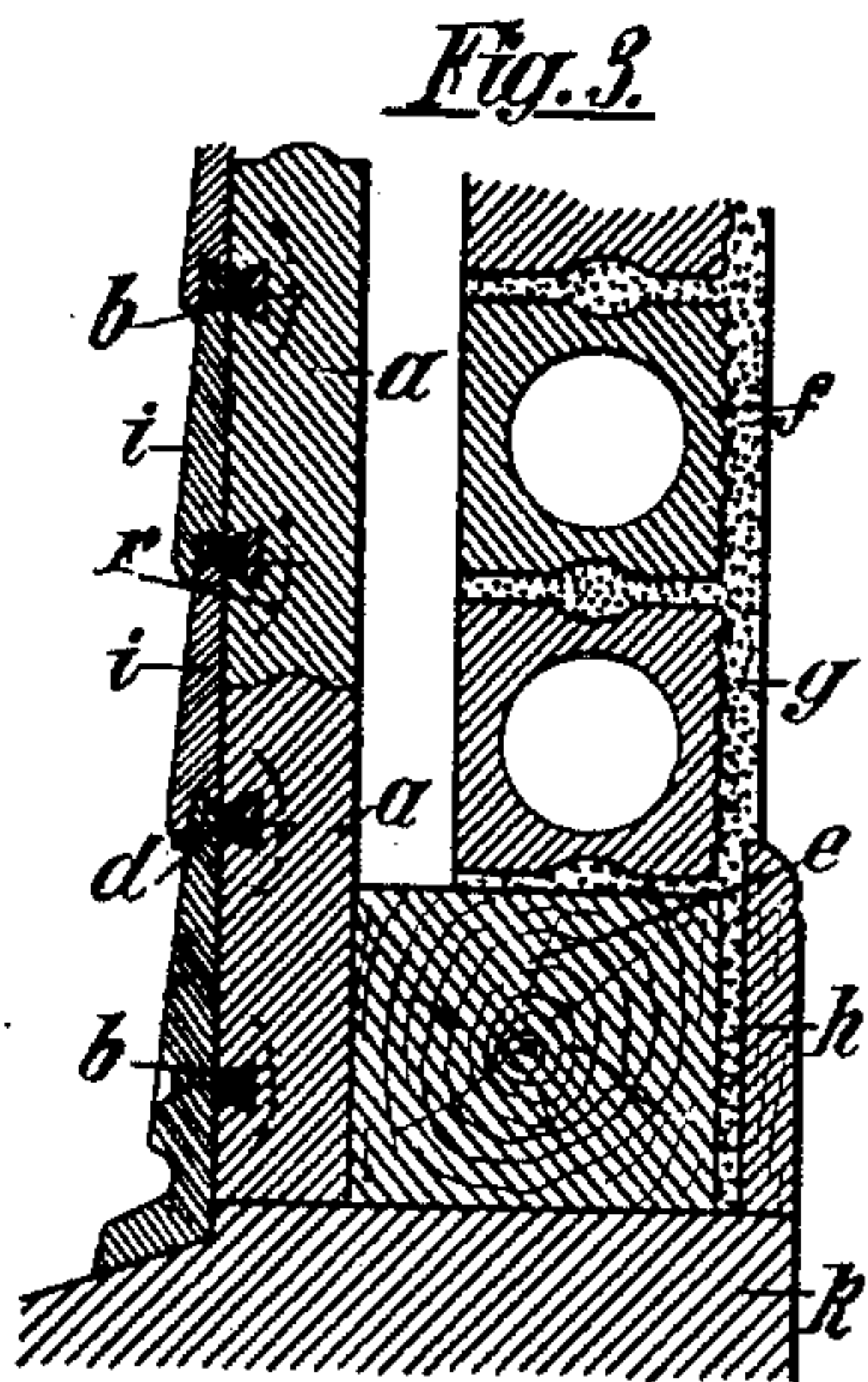
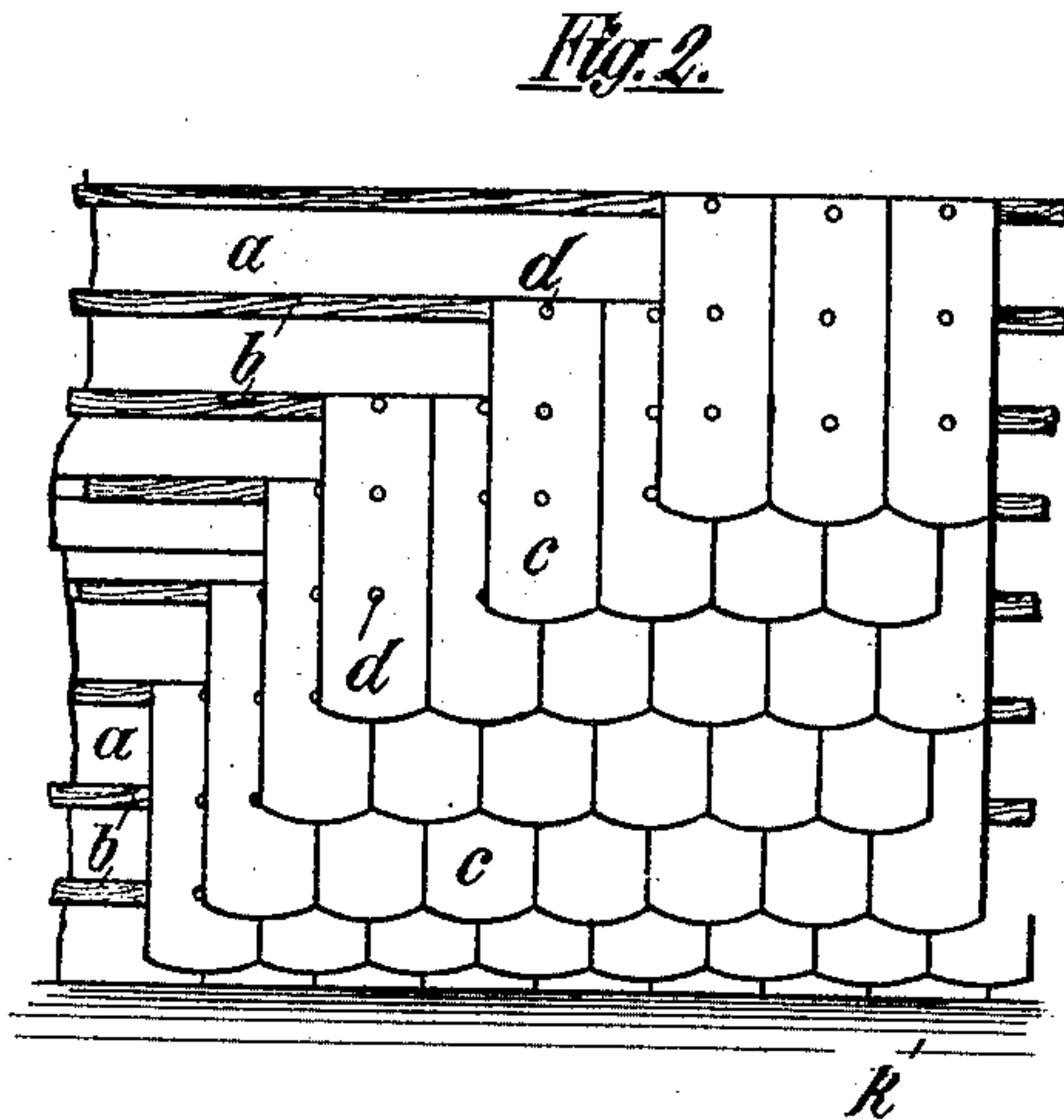
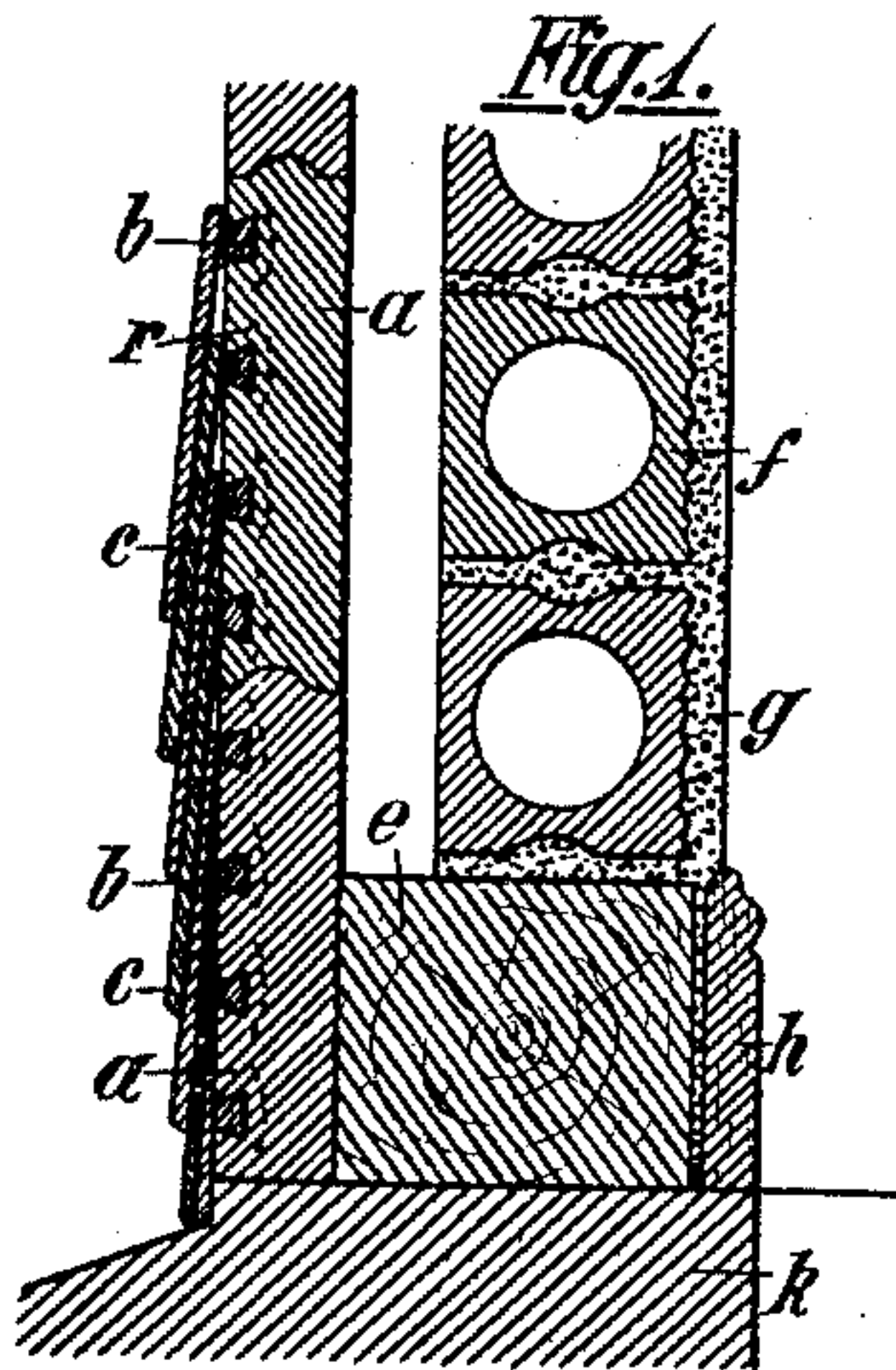
PATENTED JAN. 27, 1903.

A. MACK.
SLAB OR BLOCK FOR BUILDING PURPOSES.

APPLICATION FILED MAR. 18, 1901.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
Anton A. Chelner
M. C. Mackie

Inventor:
Adolf Mack,
by Max Ingü
Attorney.

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2 SHEETS—SHEET 2.

Fig. 8.

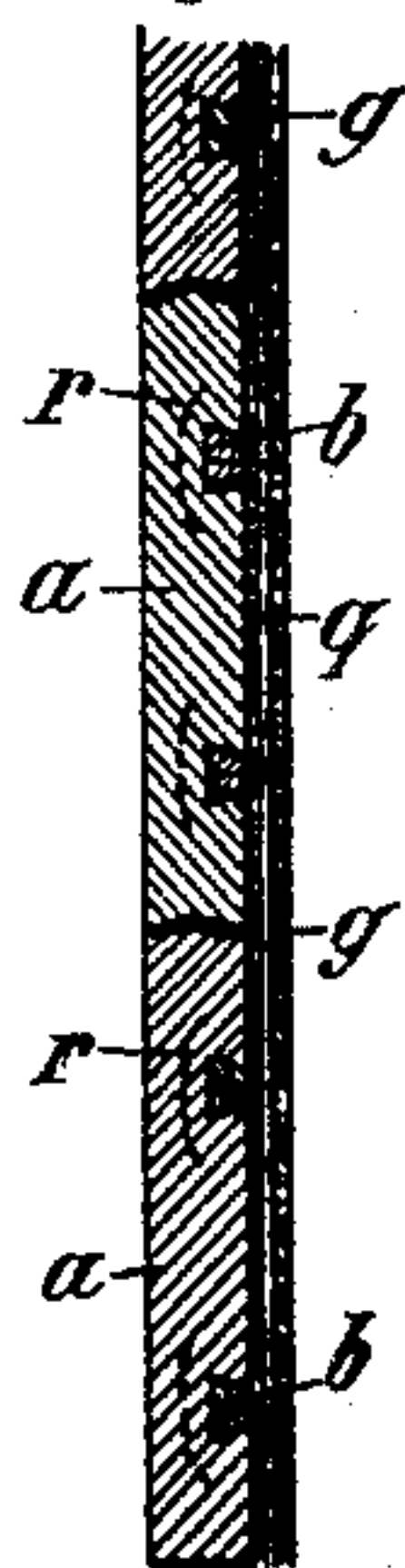


Fig. 9.

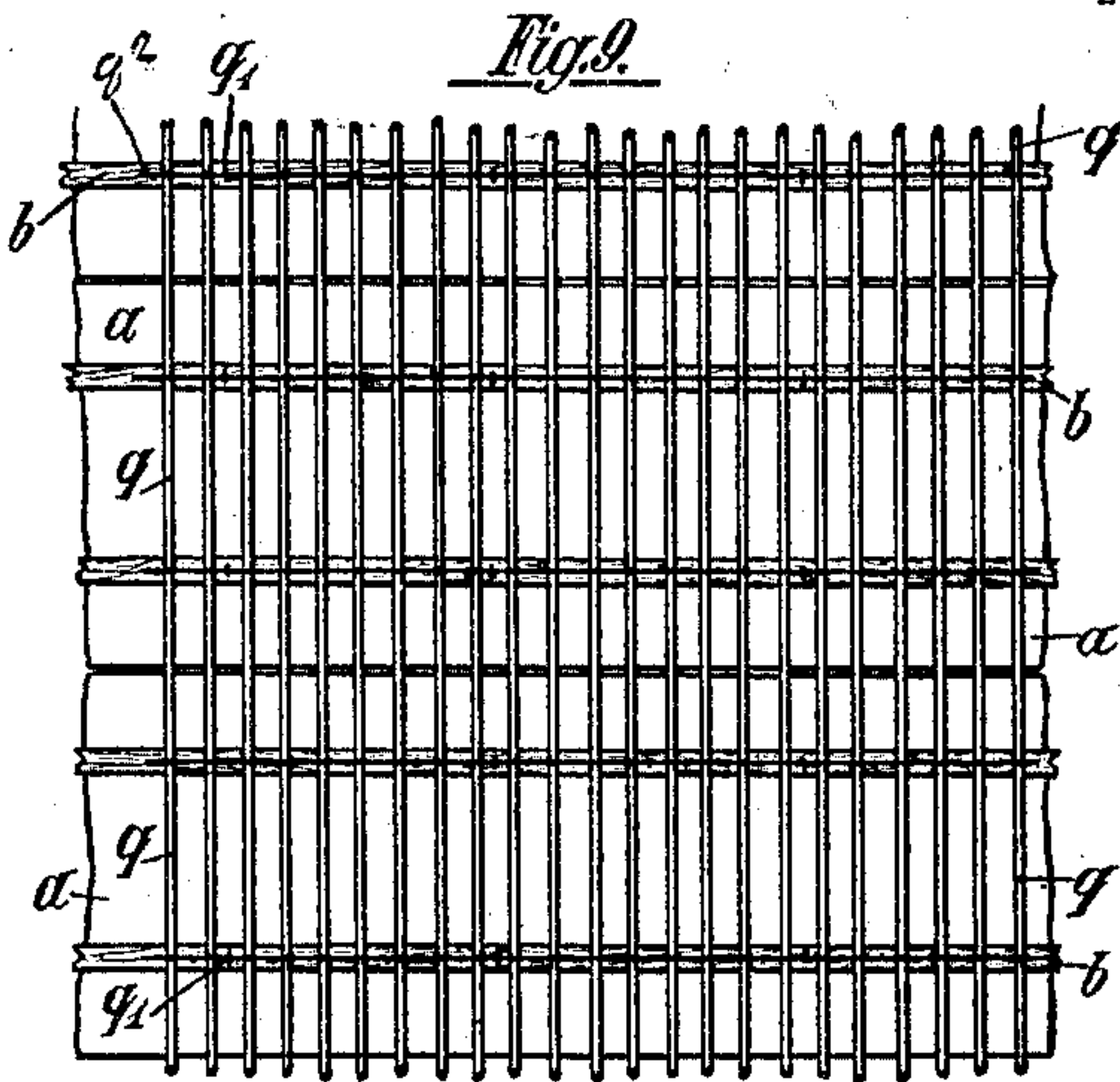


Fig. 10.

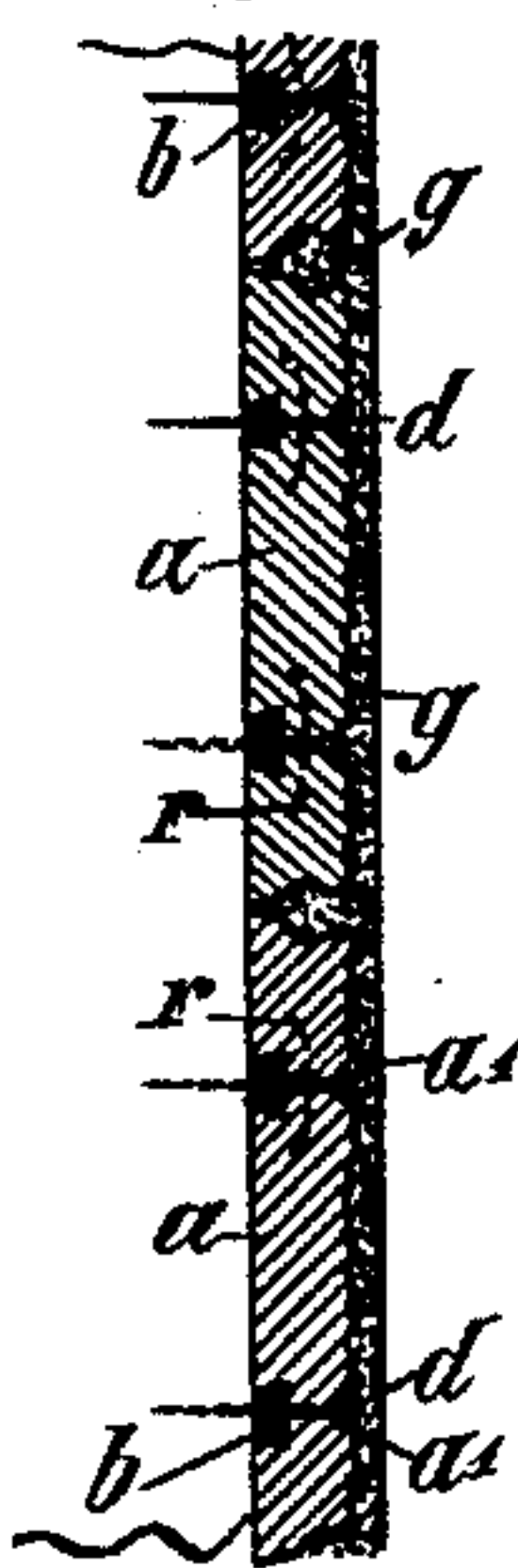


Fig. 11.

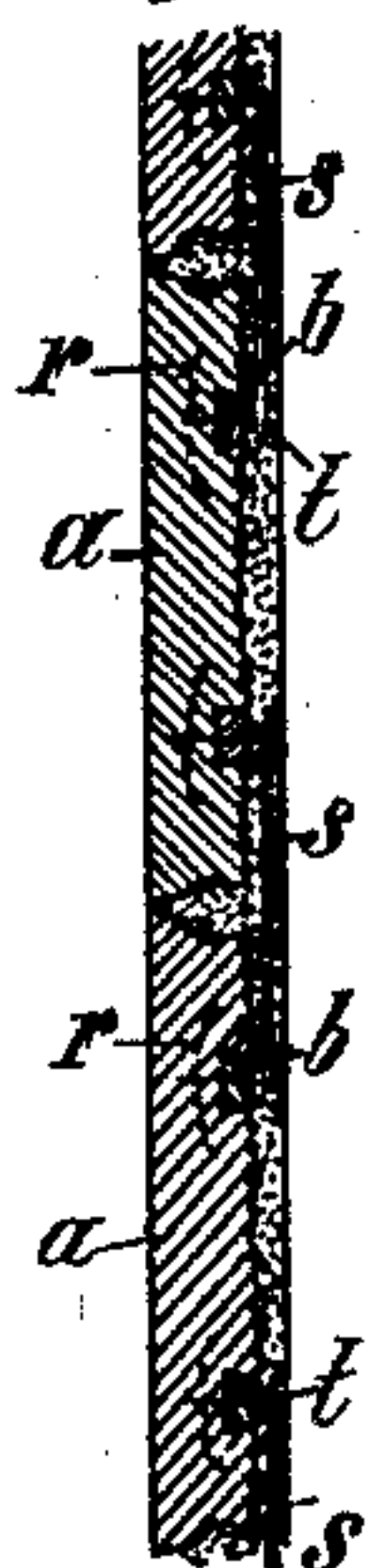


Fig. 12.

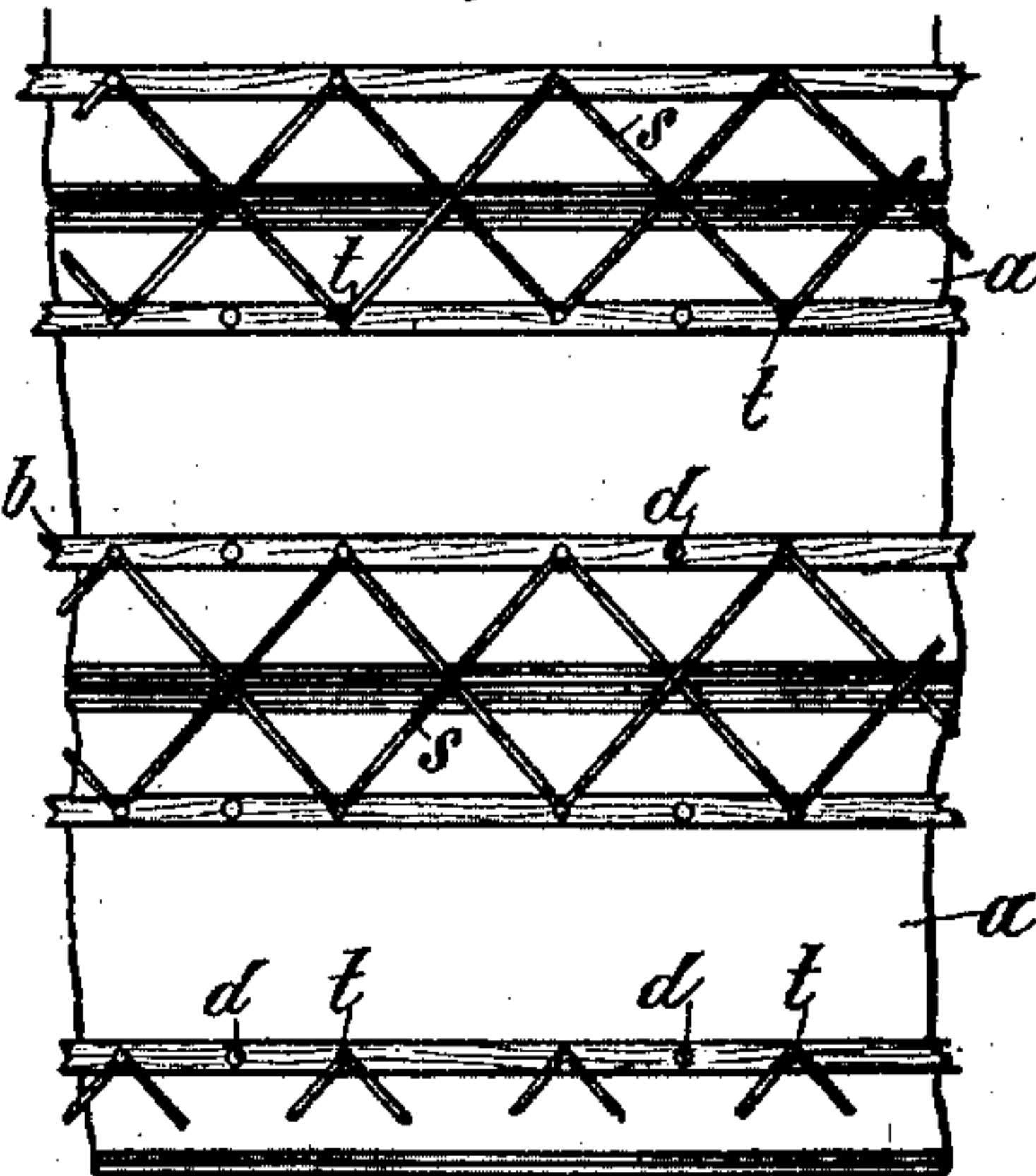


Fig. 13.

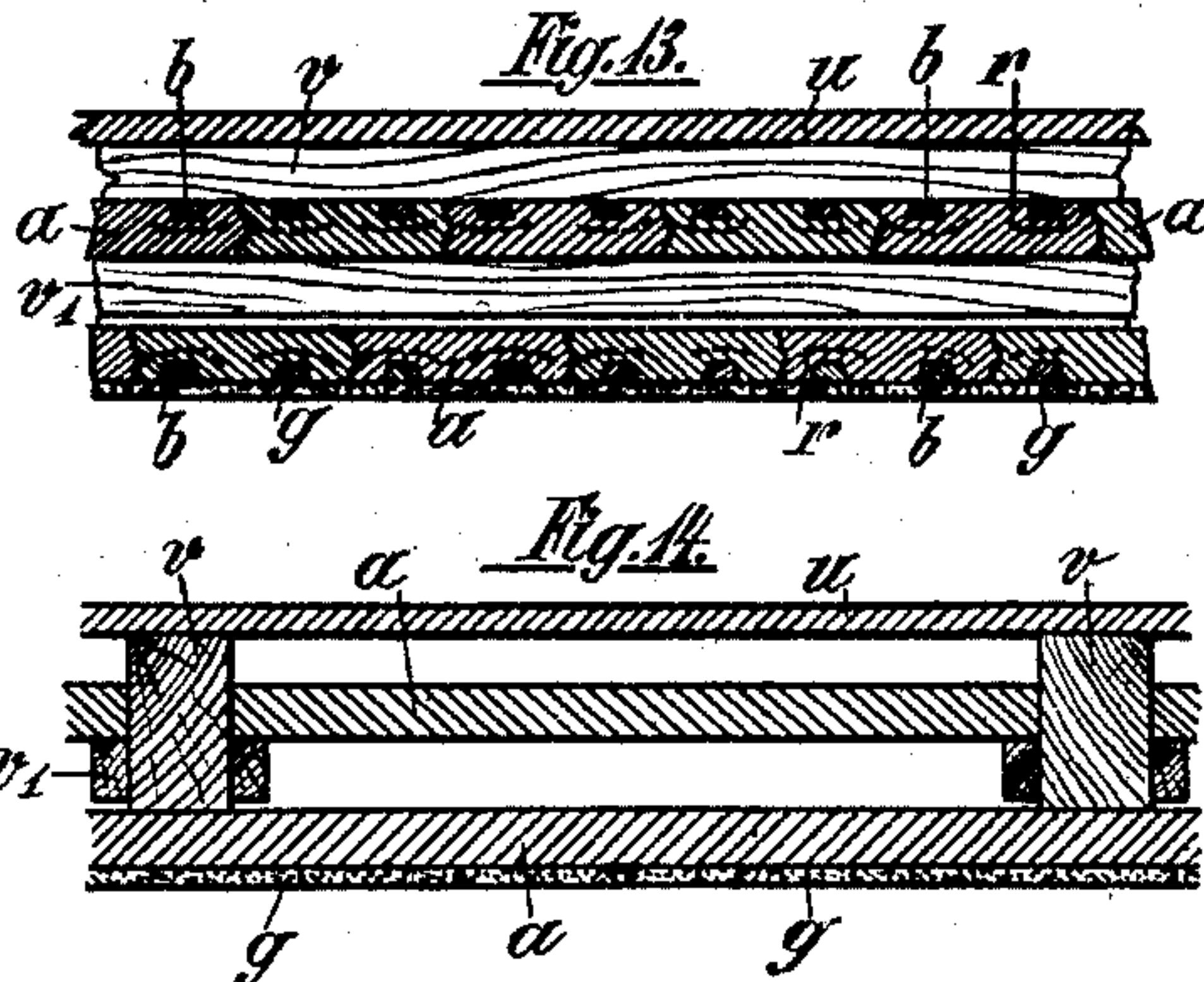


Fig. 14.

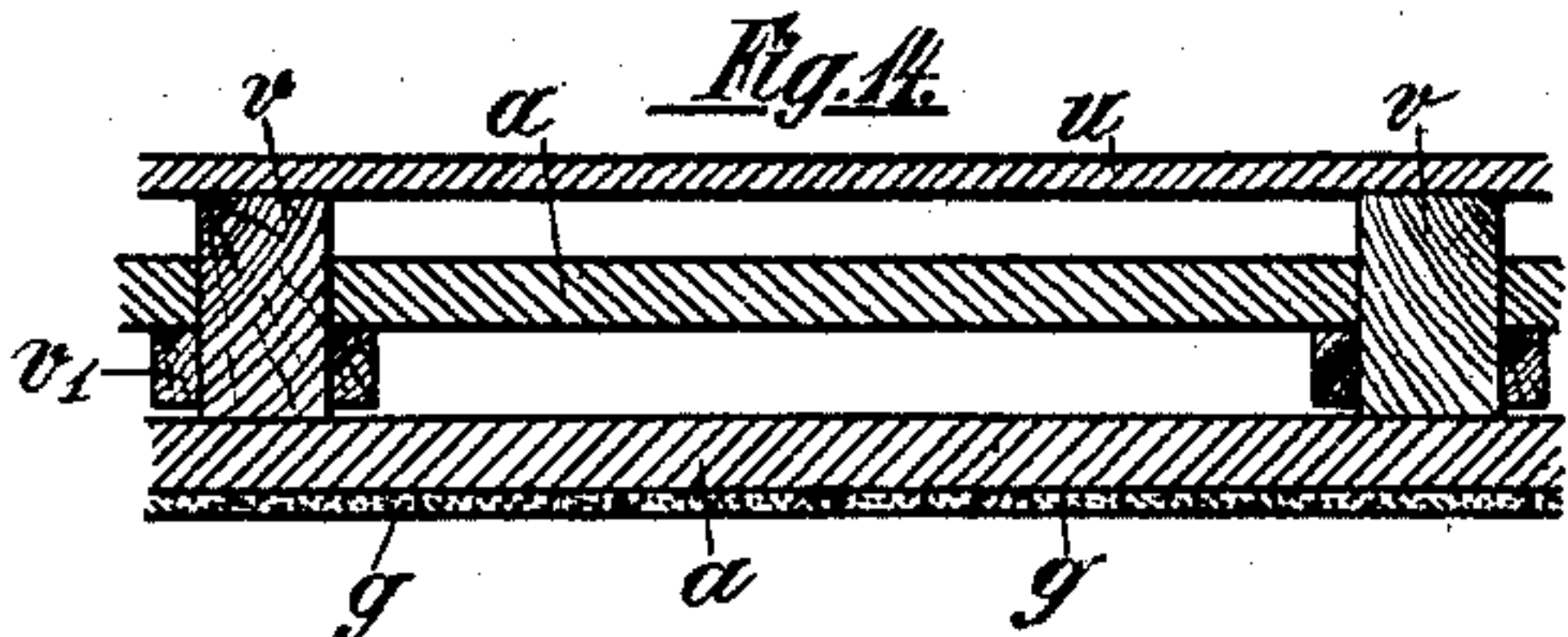
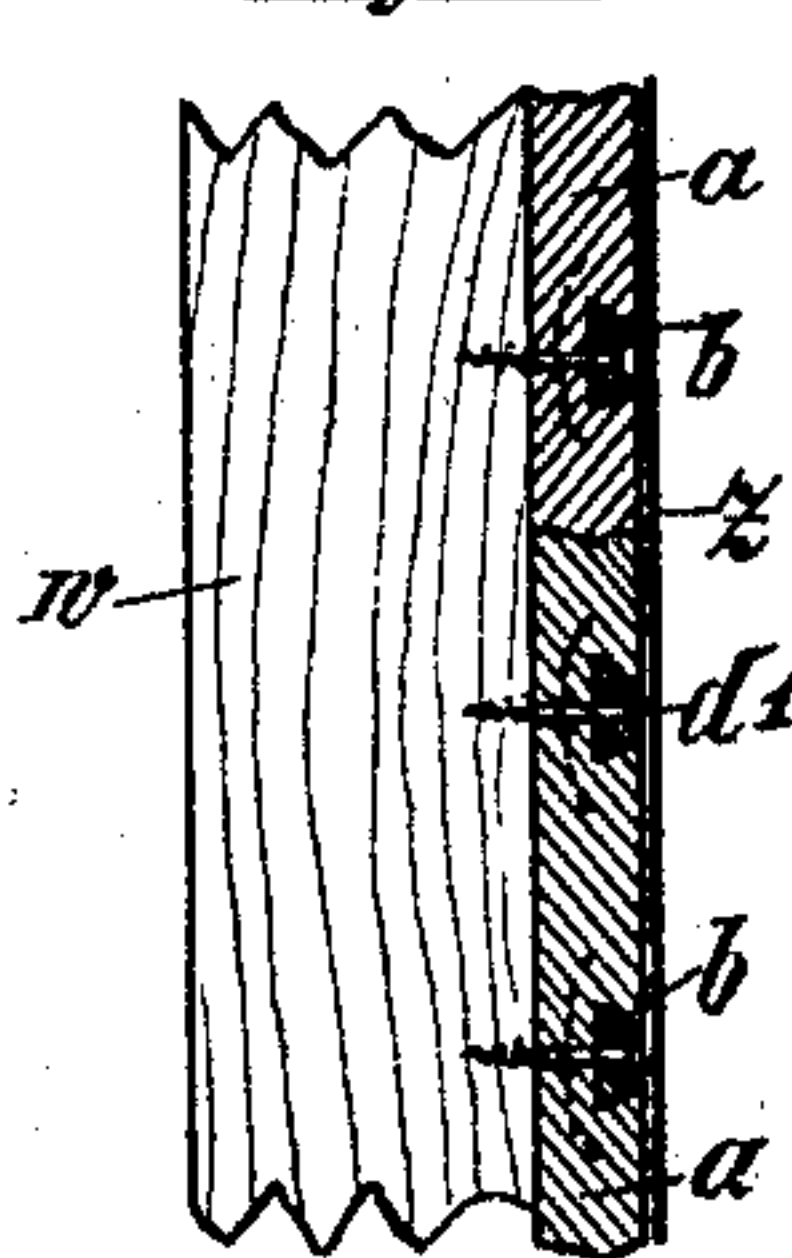


Fig. 15.



Witnesses:
Anton A. Glotner
m. c. mabie.

Inventor:
Adolf Mack,
by *Max H. H. H.*
Attorney

UNITED STATES PATENT OFFICE.

ADOLF MACK, OF CANNSTATT, GERMANY.

SLAB OR BLOCK FOR BUILDING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 719,123, dated January 27, 1903.

Application filed March 18, 1901. Serial No. 51,727. (No specimens.)

To all whom it may concern:

Be it known that I, ADOLF MACK, a citizen of the German Empire, residing at Ludwigsstrasse 6, Cannstatt, Württemberg, Germany, have invented certain new and useful Composition Building Blocks or Slabs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it

appertains to make and use the same.

Although plates or slabs of cement or gypsum have hitherto been employed to a considerable extent, their use was frequently impossible, more particularly because of the drawback that they could only be nailed with difficulty and articles could not be firmly attached thereto by nailing or screwing on. The nails employed for fastening the slabs could not get a proper hold in the mass of the gypsum or cement, and this was the case both when the slabs themselves were nailed to the wooden parts of ceilings, walls, or the like, and especially in cases where objects—such as shingles, wood tiles, wood linings, supports for ornaments, and the like—had to be nailed or screwed to such slabs. Attempts have, indeed, been made to remove this drawback by inserting strips of fabric, (jute;) but these afforded no firm hold for the nails, although they prevented the cracking or breaking of the slabs when being nailed. The insertion of thin wooden lattice-work embedded in the gypsum slabs for the purpose of stiffening them has not the desired result for nailing purposes, as such lattice-work is not visible on the outside, and the driven-in nail therefore usually misses its mark—that is to say, the wood lattice-work. Further, the gypsum or plaster slabs are greatly weakened by this embedding of wood lattice-work, and such insertions frequently decay or become affected with dry-rot.

This invention has its for object to make slabs or plates of gypsum, cement, or other rapidly-binding material, in which slabs wood bars are suitably embedded at equal distances apart from one another and from the wood strips lying in the next adjoining slab of a wall, ceiling, or the like in such a way as to be directly visible on one side. Preferably for the purpose of the embedding the wood bars are given a dovetail shape—that is to

say, an inwardly-widening form—and thus the wider part of the bar lies embedded in the gypsum slab and prevents the bar falling out. The bars may also be provided with nails, screws, or the like already partially driven in, the heads of which are embedded with the bar into the gypsum mass and which hold the bar firmly in the slabs even when the bar is not of tapering shape—that is to say, when the part which is embedded is not broader than the outer part.

In the accompanying two sheets of drawings, Figures 5, 6, and 7 show a method of making such gypsum or cement slabs or blocks provided with outwardly-visible wooden-bar insertions, while Figs. 1 to 4 and 8 to 15 show a special selecting among the large number of such gypsum or cement slabs.

The slabs are made in the following manner, reference being had particularly to Figs. 5, 6, and 7: If, for instance, four wood bars *b*, with or without inserted nails, screws, or the like, are to be firmly embedded in a gypsum slab *a*, they are placed at equal distances apart parallel to one another on the bottom *m* of a mold *n* and then are held in position longitudinally by means of a suitable number of weights *o*, provided with handles, which weights rest on the bars and have notches in which the wood bars lie, and are thus held firmly in position, as shown in Figs. 5 and 6. Between each two weights *o* a strip or bar *p*, somewhat thicker than the wood bars, is placed over them. After securing this the weights *o* are removed and the bars *b* are held firmly in position and at the proper distances apart by means of this strip *p*, after which the mold is filled up with the gypsum or cement. Jute strips may also, if desired, be placed beneath the wood bars *b* when making the slabs and again removed from the wood bars or allowed to remain on the same after the slabs are removed from the mold. The tapering wood bars *b* cast into the cement or gypsum mass in this manner adhere very firmly to the slabs, and the position of the two outermost bars in the slab is such that when a number of the gypsum slabs are put together on a wall, ceiling, floor, or the like the two outermost wood bars of adjacent slabs stand at the same distance apart as the bars of a single slab.

As in attaching the gypsum or cement slabs to the walls, ceiling, or the like it is desirable that the wood bars themselves should not be visible, (see Fig. 10,) grooves or slots are formed on the outer side of the slab directly opposite the center of the wood bars, so that nails driven through these slots or grooves in a vertical direction into the slab must absolutely encounter the wood bars. Such slabs provided with wooden bars at the back may be employed in very many ways. For instance, Fig. 1 shows, in vertical section, and Fig. 2 in elevation, a fire-resisting wall coated externally with wood shingles *c*, the latter being directly nailed to the wood bars *b* of the slabs *a*. Between the slabs *a* and the inner part of the wall, which is formed of hollow bricks *f*, coated with plaster *g*, there is a space, so that such walls are extremely resistant to heat or cold and largely prevent sound passing through them. The lower part of the wall (shown in section in Fig. 1) exhibits the attachment of the same to a foundation *k* and *e*, respectively, and the lower skirting *h*. Figs. 3 and 4 show in similar manner a fire-resisting wall made by means of such slabs, in which in place of shingles horizontal overlapping covering-boards *i* are employed, attached, like the shingles, by means of nails *d* to the wood bars *b* of the slabs *a*.

Figs. 8 and 9 show in section and elevation the use, for instance, of gypsum or plaster slabs for ceilings, a cane mat *q* being attached to the wooden strips by means of its wires, and these are held by hooked nails or staples *q'*, the wires *q²* or stands of the cane mat lying at equal distances apart, so as to register with the wood bars. The plaster adheres extremely firmly to this cane mat and thereby to the gypsum slabs.

Figs. 10 to 12 show the nailing of wires *s* to the slabs, the former serving as plaster-supports and particularly preventing the plaster from showing cracks at the points where the slabs join and in this manner allowing of a perfectly-smooth ceiling—*i. e.*, free from cracks—to be obtained. The slabs employed for this purpose are preferably made with a coarse running surface on the side on which the plaster is to be applied. The slabs provided with wooden-bar insertions may also be very well employed between two floorings, Figs. 13 and 14. The slabs *a*, serving as an intermediate layer between two floorings, are laid on laths *v'*, attached to the joists *v*, preferably in such a way that they lie in the middle between the floor-covering *u* and the gypsum slabs, which are nailed beneath to the support beams or joists and which carry the plaster *g*. By this means a perfectly-noiseless floor is obtained. In buildings which are intended to serve for merely temporary purposes, such as exhibitions and the like, the gypsum slabs, with wood-bar insertions, are screwed on and provided externally with a

suitable covering *z*, Fig. 15. The gypsum slabs may be screwed off after the outer covering has been removed and applied elsewhere, and yet a wall protected against fire is obtained by their use.

The slabs may also be made in the stronger form of building-bricks or in the shape of squared stones or blocks as binders and runners, and in the same way these squared stones may be employed as building-stones, in which case the wooden bars are so arranged that they form continuous lines in the solid wall. In place of the hollow wall (shown in Figs. 1 to 4) a solid wall is obtained by building up the wall with masonry, with these squared stones or slabs, and such a wall may equally well be shingled with shingles or the like. In order that when these slabs are nailed, more particularly in the case of gypsum slabs, they may not split when thick nails are used, it is preferable in the manufacture of the same to insert over each wood bar a fabric—such as, for instance, a strip *r* of jute or the like. (See Figs. 1, 3, 6, 8, &c.)

It is evident that in addition to the method of using these slabs provided with wood-bar insertions hereinbefore described, and shown in the accompanying drawings, they may be utilized also in many other ways.

The wood-bar insertions instead of being conical or tapering may be made of any other suitable shape, so long as they fulfil the condition that they shall adhere firmly in the slabs and be prevented from falling out, which may be effected by giving them a suitable form with or without the assistance of nails or the like pressed into the wooden bars.

It will be noted that the building-blocks made under my invention consist of unattached separate or independent blocks or slabs of artificial stone, such as cement or gypsum, whose surfaces are exposed and free at all sides and which have strips of nail-receiving material, such as wood, embedded in the factitious material, preferably flush with the surfaces of such material.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A slab or block of artificial stone for building purposes having all of its surfaces exposed and having pieces or strips of nail-receiving material such as wood embedded therein at intervals.

2. A slab, or block of artificial stone for building purposes, having all of its surfaces exposed and having pieces or strips of nail-receiving material, such as wood, embedded therein at intervals and flush with one of its surfaces.

3. A slab or block for building purposes having pieces or strips of nail-receiving material such as wood or the like embedded therein at intervals in combination with pieces or strips of fibrous material such as

jute arranged in line with such strips, as described, whereby any splitting tendency following from driving nails or screws into the wood will be counteracted.

- 5 4. A slab or block for building purposes having pieces or strips of wood or the like embedded therein in combination with grooves or other marks on the surface of such slab or block in line with the said pieces or strips,

for the purpose of indicating where the nails or screws are to be driven into the said strips.

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

ADOLF MACK.

Witnesses:

A. DRAUTZ,
HR. REICHARDS.