

No. 690,646.

Patented Jan. 7, 1902.

J. FRECKMANN.
CEILING.

(Application filed Aug. 21, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

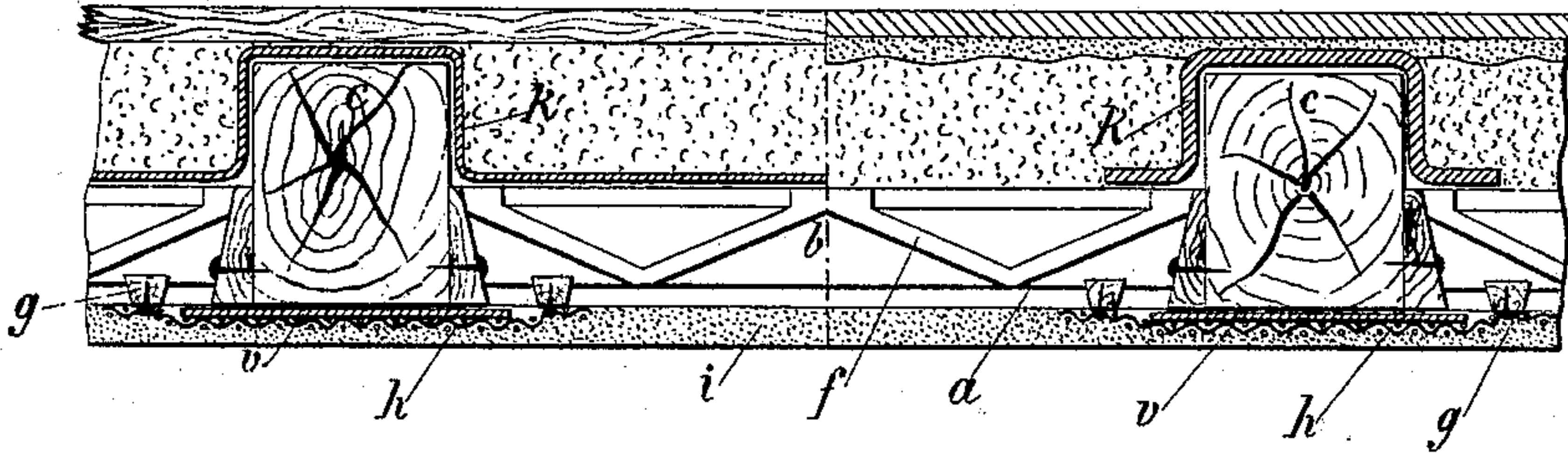


Fig. 2

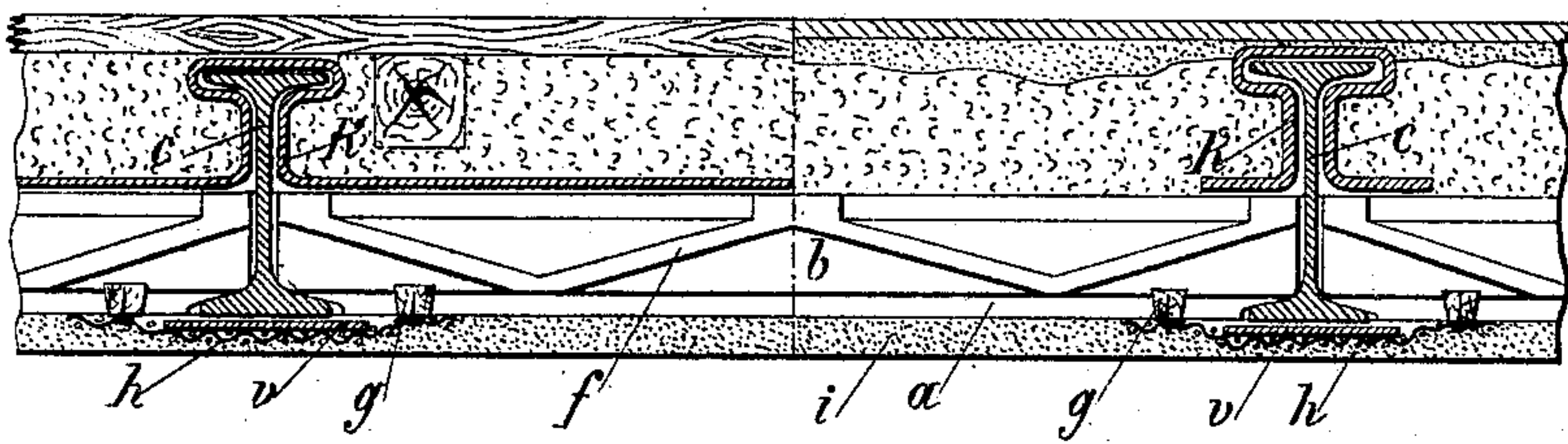


Fig. 3

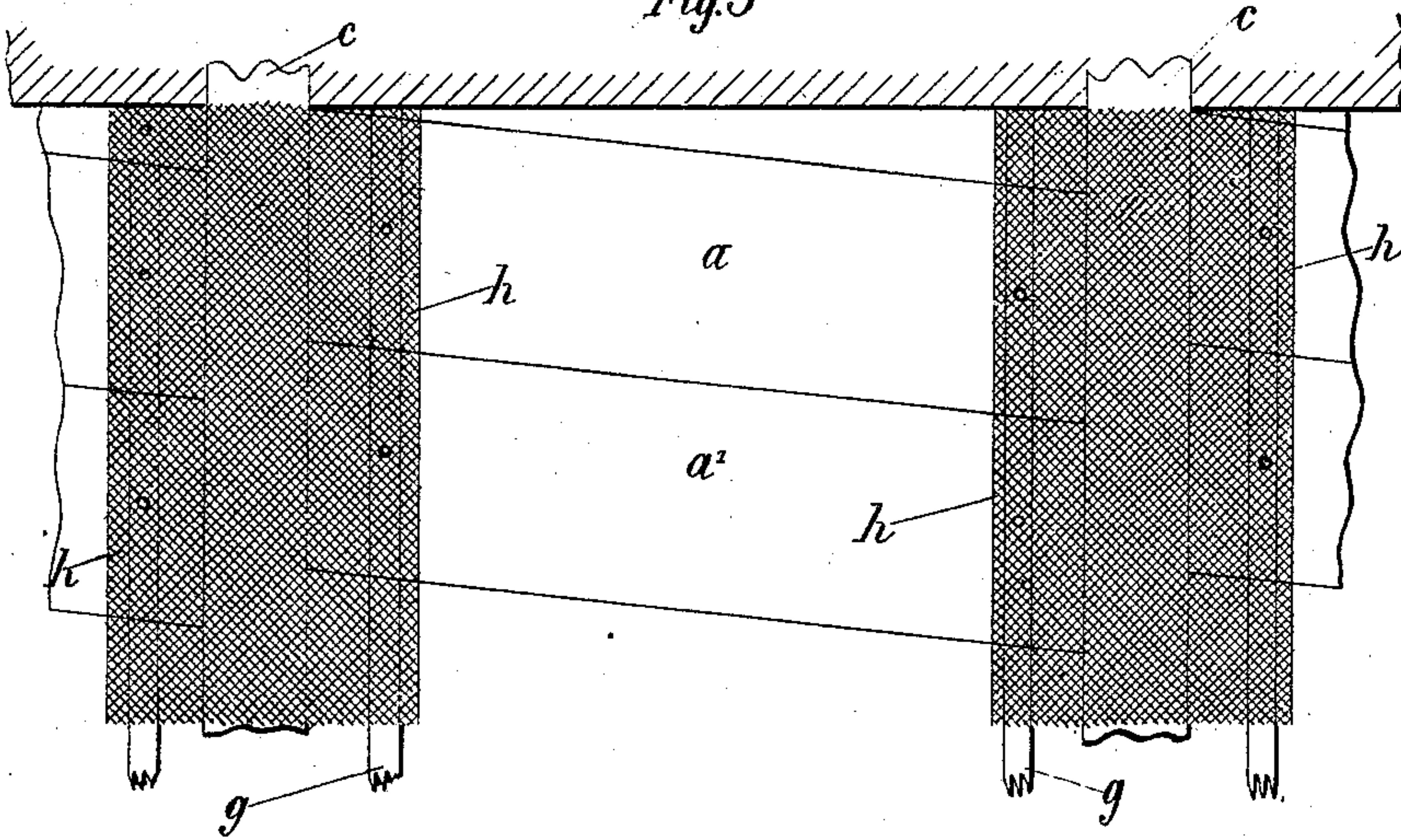
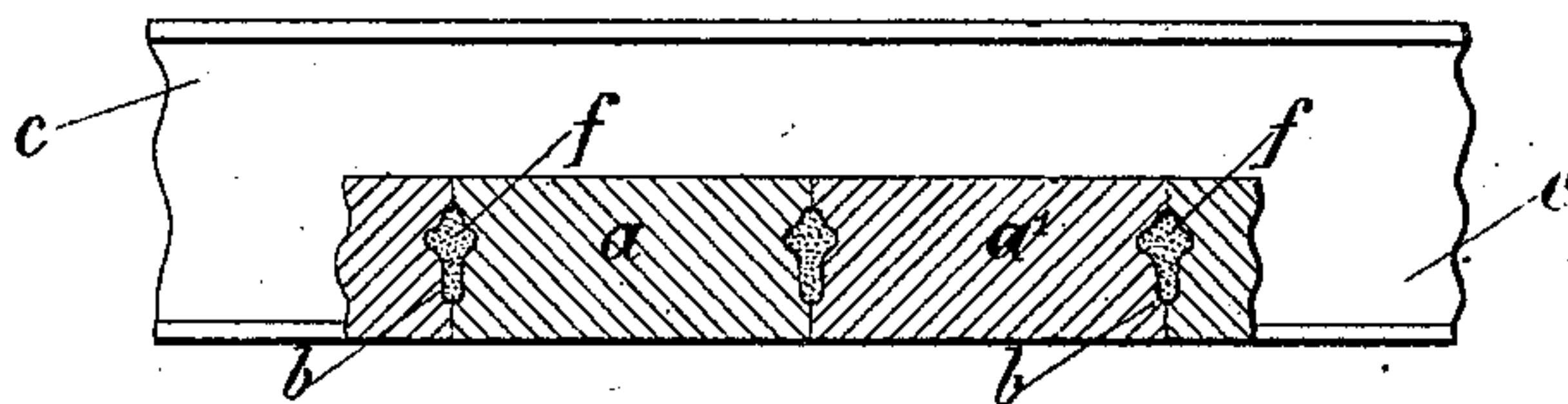


Fig. 4



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2 Sheets—Sheet 2.

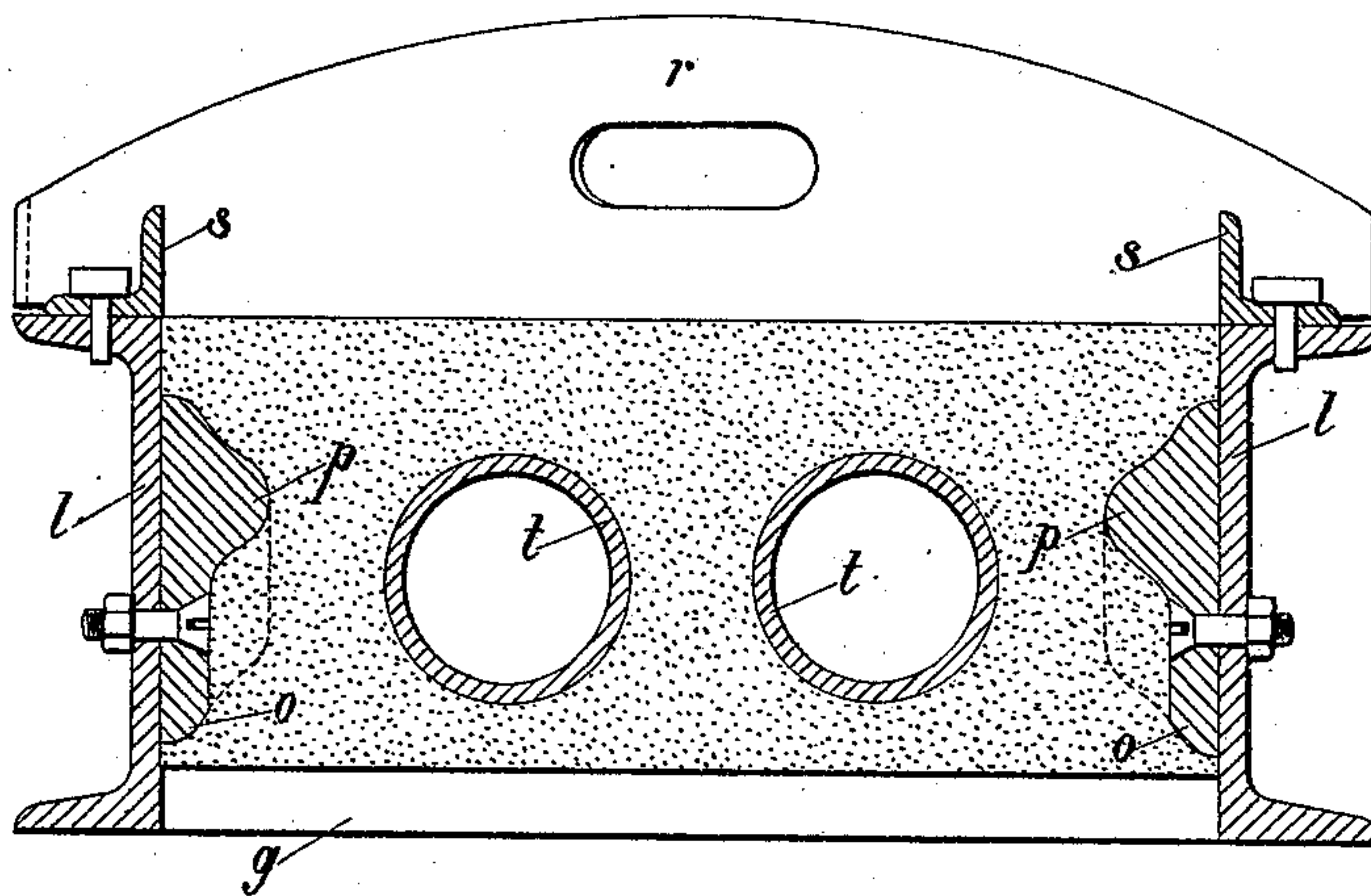


Fig. 9

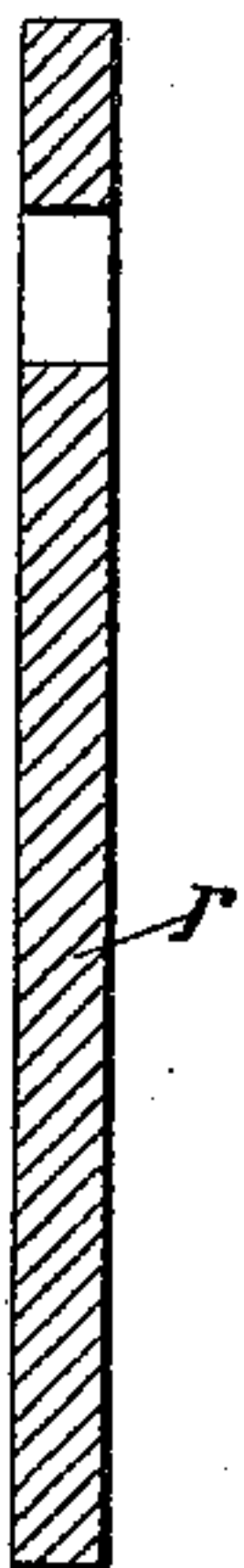


Fig. 8

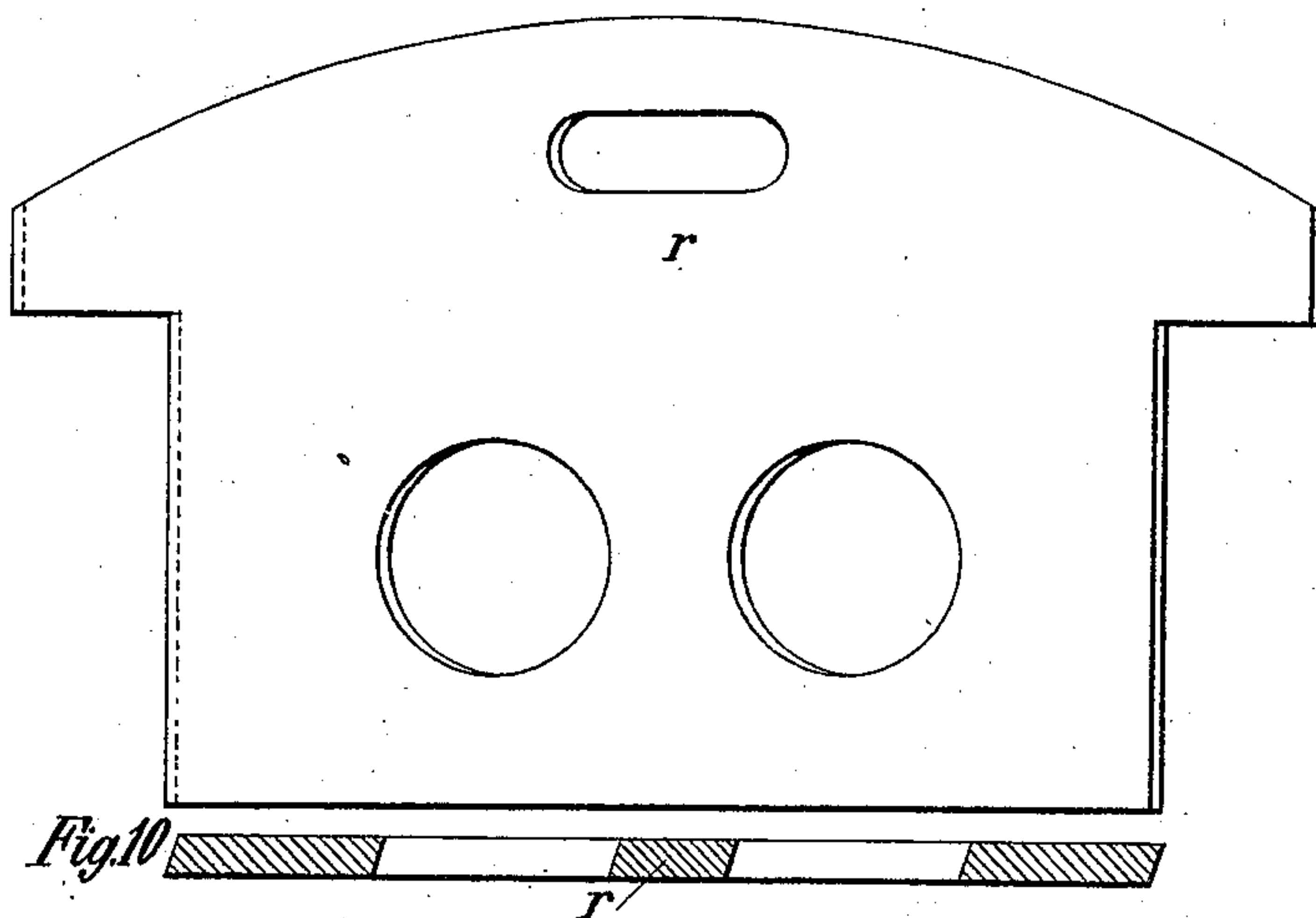
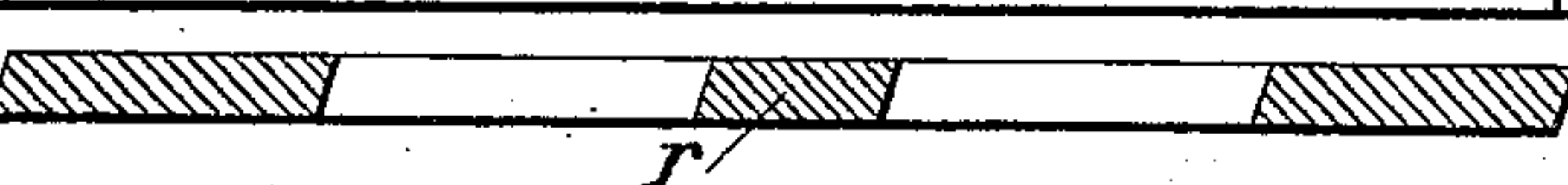


Fig. 10



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UNITED STATES PATENT OFFICE.

JOSEPH FRECKMANN, OF HILDESHEIM, GERMANY.

CEILING.

SPECIFICATION forming part of Letters Patent No. 690,646, dated January 7, 1902.

Application filed August 21, 1901. Serial No. 72,810. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH FRECKMANN, a citizen of Germany, and a resident of Hildesheim, Germany, have invented certain new and useful Improvements in Ceilings, of which the following is a specification.

This invention relates to a ceiling formed of cement blocks of peculiar construction which are supported by the beams and joined to form one integral block.

In the accompanying drawings, Figure 1 is a cross-section of my improved ceiling having wooden beams; Fig. 2, a similar view showing iron beams; Fig. 3, a bottom view of Fig. 2; Fig. 4, a cross-section through a pair of adjoining cement blocks. Fig. 5 is a plan of a mold for making the blocks; Fig. 6, a vertical longitudinal section thereof; Fig. 7, an enlarged cross-section thereof; Fig. 8, a side view of slide *r*; Fig. 9, a vertical section, and Fig. 10 a horizontal section, of the same.

The letters *c* represent the main beams of the ceiling, between which auxiliary beams or supports may be arranged.

a a' are the cement blocks or plates, which are supported upon said beams and which are molded in the manner hereinafter described.

The blocks *a a'* are provided on their contiguous ends with grooves *b*, Fig. 4, having zigzag channels *f*, Figs. 1 and 2. These grooves and channels are filled with mortar, and then the blocks are placed closely against each other. Owing to the large uniting mortar surfaces and the penetration of the mortar into the zigzag channels an exceedingly intimate and durable union of the several blocks into a continuous block or plate will be effected. The blocks may be set between the beams either in an inclined or straight direction. At their lower face the blocks *a a'* are provided with countersunk wooden joists *g*,

to which is secured a support *h* for the plaster that covers the lower side of the beams.

Between supports *h* and beams *c* a strip *v* of any suitable material for excluding heat or moisture may be interposed. A strip *k* serving a similar purpose may be placed upon the beams *c*. At the left in Figs. 1 and 2 is shown a construction to exclude moisture and at the right is shown a fireproof construction.

The mold to make my improved blocks is illustrated in Figs. 5 to 10. *l* represents the two sides of the mold, which are removably connected at their ends by bolts *m*, nuts *n*, or in similar manner. On the inner faces of sides *l* are secured rails *o*, having zigzag projections *p*, which correspond in cross-section to that of the channels to be formed upon the blocks. Between the sides *l* are interposed slides *r*, either inclined, as shown, or straight, and then the intervening spaces are packed with cement.

In order to decrease the weight of the blocks, cores *t* may be inserted, while angle-plates *s* serve to facilitate the stamping operation. The joists *g* are previously placed into the mold. To remove the blocks, the cores *t* are withdrawn, the slides *r* removed, and the sides *l* separated by unscrewing the nuts *n*.

What I claim is—

1. A cement block having grooved ends, the grooves being provided with zigzag channels, substantially as specified.

2. A cement block for ceilings having grooved ends and zigzag channels, and with joists embedded within the blocks, substantially as specified.

Signed by me at the United States consulate, Hanover, this 31st day of July, 1901.

JOSEPH FRECKMANN.

Witnesses:

RUDOLPH BARTELS,
C. C. STEVENSON.