L. P. ROGERS.

Fire-Proof Floor.

No. 166,148. Patented July 27, 1875.

Fig. 1.

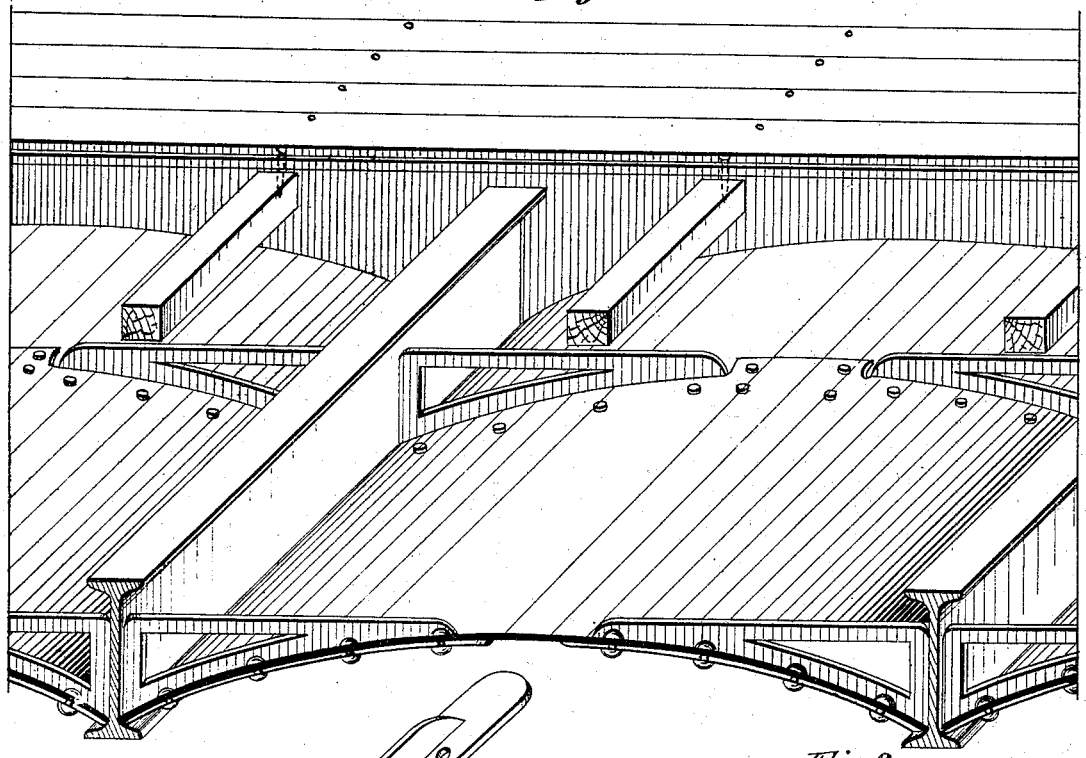


Fig. 2.

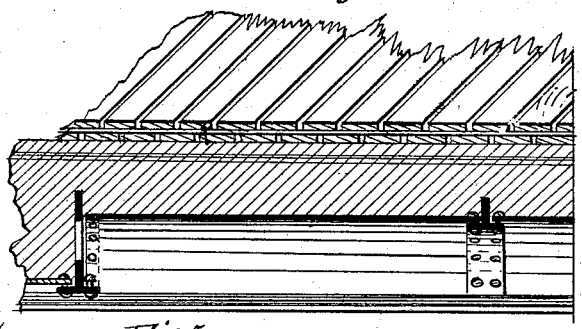


Fig. 3.

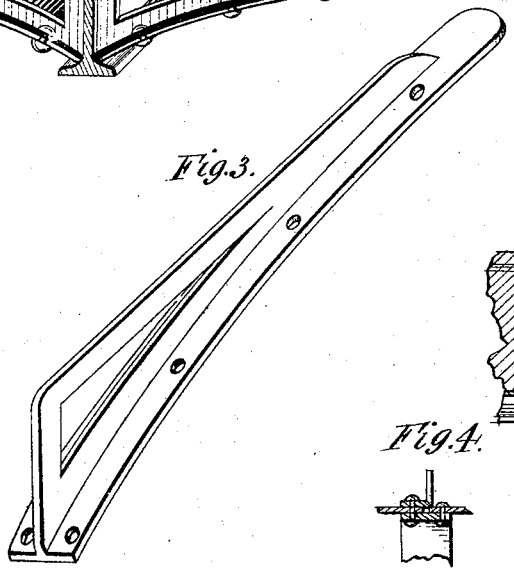
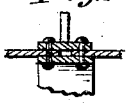


Fig. 4.

Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

LOUIS P. ROGERS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN FIRE-PROOF FLOORS.

Specification forming part of Letters Patent No. **166,148**, dated July 27, 1875; application filed July 1, 1875.

To all whom it may concern:

Be it known that I, LOUIS P. ROGERS, of Boston, county of Suffolk and State of Massachusetts, have invented a new and useful Improved Support for Roofs, Floors, &c., of which the following is a specification:

This improved support for roofs, floors, &c., is constructed of I-shaped rolled-iron girders or beams, arched metal plates, and T-arched metal brackets disposed and arranged together, all as hereinafter described.

In the accompanying plate of drawings, Figures 1 and 2 are views in section and also in perspective of a support for roofs, &c., constructed according to this invention; Fig. 3, a perspective view of a T-arched metal bracket detached; Figs. 4 and 5, sectional views in detail to be hereinafter referred to.

In the drawings, A A represent the rolled-iron girders or beams, made in the present instance of an I shape—that is, flanged at each edge. These girders A A are arranged in parallel lines, and, as ordinarily used in buildings, are, of course, to be supported by abutments, posts, columns, &c., as may be found most desirable or expedient. B B are thin arched metal plates, which are arranged to span the space between the parallel beams A A, and rest at each end upon the lower flanges of such beams. C C are brackets arched similarly to the arched plates B B. These brackets C C are disposed, in pairs, at the lines of separation between the edges *b b* of the series of arched plates B, which are arranged along and between the parallel beams A, and they rest at one end on the lower flanges *a* of the parallel beams, and in their length between the parallel beams support by their flange *d* each side of their bracket-arm *f* the arched plates B in their span of the space between the parallel beams. The arched plates B are riveted to the flange *d* of the brackets, as shown at *g g*, &c., and between the inner ends of the bracket C the arched plates B overlap and are riveted to each other—as, for instance, as shown in Figs. 1 and 4—or are overlapped by a separate strip of metal riveted to both plates, as shown in Fig. 5.

The described construction and arrangement of beams, plates, and brackets constitute in substance my improved support for floors, roofs, &c., and when used for either of the purposes stated, it is filled in above the arched plates B and between the parallel beams A, and to an even level with any suitable concrete—as, for instance, asphaltum, gravel, &c., and then this even surface prepared in any suitable manner as a roof, floor, sidewalk, &c., as the case may be.

In the drawings the improved support is illustrated as floored over by a disposition of wooden beams, F, which are run across and rest on the brackets C C, and are embedded in the cement filled in over the arched plates B B, and of flooring-boards G G, which are run across and nailed to the said wooden beams F.

The brackets C C stiffen and strengthen the arched plates B B in their span of the space between the parallel beams A A, and obviously brackets of a given length can be used as described, with beams A A, which are arranged at greater or lesser distances apart, and secure a proper support of the arched plates B B spanning the space between the beams.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the I-shaped girders A, arched plates B, and arched brackets C, arranged and applied together substantially as described, for the purpose specified.

The above specification of my invention signed by me this 2d day of June, A. D. 1875.

LOUIS P. ROGERS.

Witnesses:

ALBERT W. BROWN,

GEO. H. EARL.