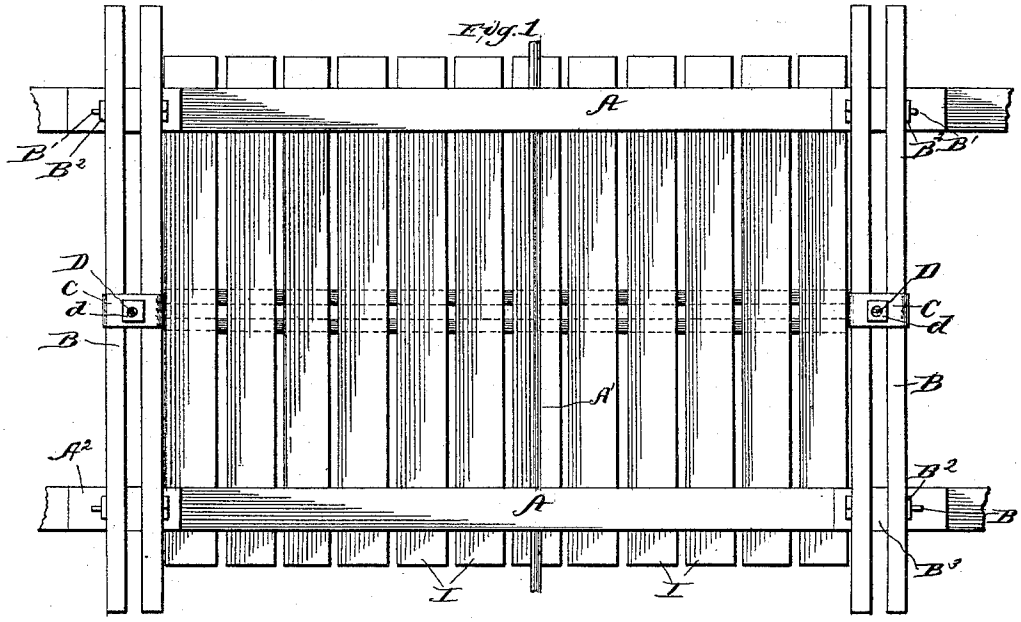
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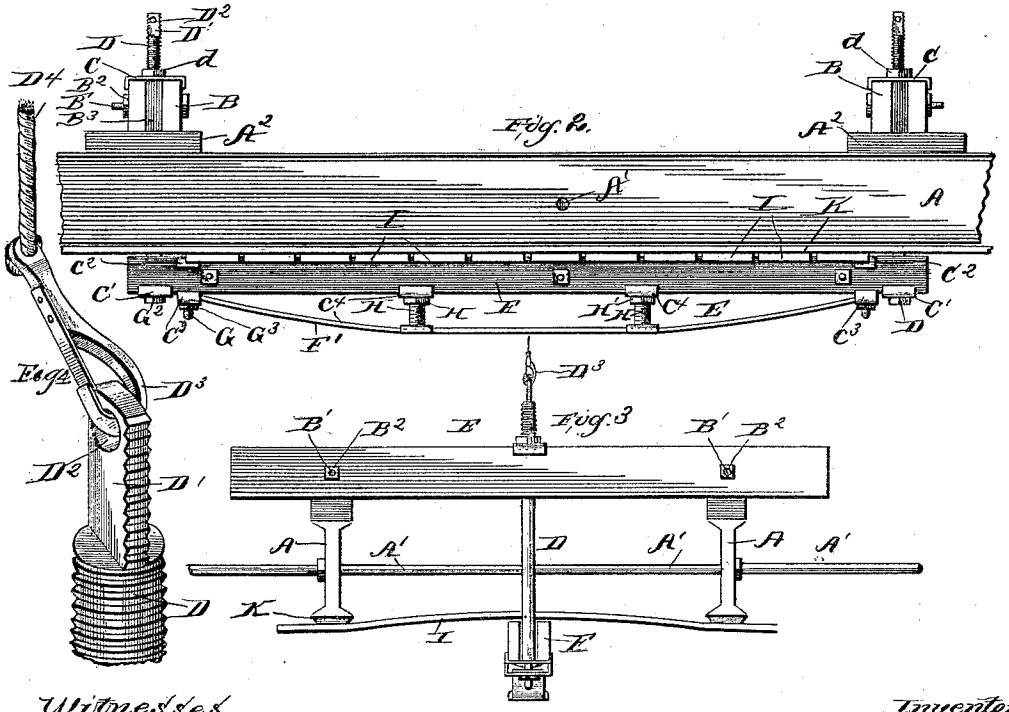
J. PAJEAU.

APPARATUS FOR LAYING TILE ARCHES FOR FLOORING.

No. 411,468. Patented Sept. 24, 1889.

Fig. 1.





Witnesses.

Wm. N. Orth.

Wm. S. Rheem

Inventor.

Joseph Pajeau

by Charles J. Brown

Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH PAJEAU, OF CHICAGO, ILLINOIS.

APPARATUS FOR LAYING TILE ARCHES FOR FLOORING.

SPECIFICATION forming part of Letters Patent No. 411,468, dated September 24, 1889.

Application filed May 31, 1889. Serial No. 312,760. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH PAJEAU, a subject of the Queen of Great Britain and Ireland, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Apparatus for Laying Tile Arches for Flooring and other Purposes, of which the following is a specification.

My invention relates to the art of constructing tile flooring, consisting of arches composed of hollow tile extending between iron beams, the iron beams being placed ordinarily from five to seven feet apart, and extending from wall to wall of a building, or supported upon columns of metal or masonry or upon girders, such beams being tied together at suitable distances by rods to prevent the spreading apart of the beams by the strain imposed thereon by the arch supported thereby.

The object of my invention is to obtain an apparatus by which such arches may be more easily and satisfactorily laid and a better arch secured than by the methods or apparatus heretofore employed in and about the laying of such arches.

I have illustrated my invention by the drawings accompanying and forming a part of this specification, in which—

Figure 1 is a plan view of my apparatus placed in position for use upon suitable beams. Fig. 2 is a side elevation of my apparatus and of the beams upon which it is placed. Fig. 3 is an end elevation of the same. Fig. 4 is a perspective view showing in detail a portion of the device.

Like letters refer to like parts throughout the several views.

A A are the beams, ordinarily constructed of cast or wrought iron or steel, between which the arch composed of hollow tile is to be built. I have illustrated but two beams and connecting tie-rod, as all additional beams and tie-rods may be duplicates of these shown.

A′ is the tie-rod extending from one beam to the other. The purpose of this tie-rod is to hold the beams in position and prevent their spreading or twisting out of shape, and is ordinarily employed in the construction of hollow tile flooring, and, together with the beams, forms no part of my invention.

A^2 are blocks placed upon the top of beam A.

B B are cross-pieces or stringers extending from one beam A to the next adjacent beam. These stringers B rest upon the blocks A^2, so as to raise the stringers above the top of the beams and above the top of the arch to be erected between the beams, so that such arch may be laid underneath the stringers without difficulty.

The stringers B B are illustrated as composed of two pieces secured together by bolts B′ and nut B^2 thereon, and having placed between them the block B^3; but this form of construction, while found to be very convenient in practical use, is not absolutely essential.

C is a saddle placed upon stringer B, and D is a rod having a screw-thread cut thereon at the upper end thereof, which passes through a hole in the saddle C and extends downward between the pieces forming the stringer B, or through a hole in said stringer when it is composed of a single piece. This rod D extends downward below the beams and through the main beam of a truss, which is supported at each end by the said rod D. Upon the screw-thread at the upper end of the rod D there is placed the nut *d*, by which the rod and the truss supported thereby may be adjusted vertically. This truss is lettered E, and consists of the following principal parts: stringer or beam F, suspension-rod F′, and adjustable posts H. Upon bolt D, at the lower end thereof, is placed saddle C′, coming underneath stringer or beam F.

C^2 and C^3 are saddles placed, respectively, above and below stringer or beam F, to which they may be firmly clamped by bolt G, having thereon nut G^3. The end of suspension-rod F′ is also secured to bolt G. Upright rod H is preferably constructed of wrought-iron, having a thread cut thereon, and H′ is a nut fitting on said thread.

C^4 is a saddle placed underneath beam F, against the under surface of which this nut H′ may be firmly pressed by turning it upon rod H.

I I are common boards, which are placed

upon stringer or beam F and underneath beams A. Where, as is usually done, beam-tiles K are employed, such tiles are placed beneath beam A and on boards I.

In laying arches of the character described it is preferable at times to give a certain amount of convexity to the under surface of the arch, this convexity depending upon the hardness of the tile employed, and hence varying for different kinds of material used. To secure this convexity in the arch is one of the prominent features of my invention, and that is obtained by the adjustability of rod D through nut *d* thereon, and the rigidity of stringer or beam F is obtained by the adjustability of rod H by nut H′ thereon. Owing to the great weight of the material forming the arch, it has been customary to place stringers B at very short distances apart on beams A, and when my device is employed in places where the stringers B B are placed closely together suspension-rod F′ and adjustable rods H H may be dispensed with, in which case beam F may be made slightly larger, if desired, in order to be made sufficiently strong and rigid to give the spring to the arch without deflection in the beam itself. When the suspension-rod F′ is employed, as described, wedges may be used in place of the rods H H and adjustable nut H′ on each of said rods, if desired or preferred, to maintain the horizontal surface of the upper face of stringer or beam F.

In laying arches of the character herein described it is very desirable to make such arches as compact and perfect as possible before removing the apparatus upon which the arch is laid from position, and to accomplish this purpose I have cut away a portion of the upper end of the rod D D in the manner illustrated in Fig. 4 in perspective, in which D′ is the portion of the rod D having the sides thereof cut away, hole D^2 therein, and the snap-hook D^3 inserted in said hole.

D^4 is a rope secured to the snap-hook. This snap-hook, it will be observed, is sufficiently small to pass through the hole in the nut *d*, and when it is desired to remove the apparatus, after the arch has been laid thereon and allowed to "set," as it is termed, the nut *d* may be turned off from the rod D, when it will lie loosely on or around the snap-hook D^3 or rope D^4, and by means of this rope the rod D may be lowered to the floor beneath, the nut *d* being taken from off the rope and the stringers B B being lifted from position and taken away.

One of the main purposes of this invention is to secure an apparatus which can be removed from position in the manner last above described, as by this mode of taking the apparatus away a very small opening in the arch as laid is necessarily left unfinished.

The beam F may be eighteen to twenty feet in length, if desired, and two or more such beams F may be placed with their adjacent ends in contact where longer floor-beams are used.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In an apparatus for constructing hollow tile arches, the combination of stringers extending from one to the other of the beams between which the arch is to be laid, a rod passing through such stringers, having a nut on the upper end thereof and a hole through such rod, and having the upper end of the rod cut away on the sides thereof, whereby a cord may be secured to said rod, and the nut on the threads cut on said rod may be unscrewed therefrom and slid upon said rope, and a bearer supported at each end by one of said rods and having boards laid thereon upon which the arch may be laid, all substantially as described.

2. In an apparatus for constructing hollow tile arches, the combination of stringers B B, rod D, having the upper end thereof cut away on the sides, hole D^2, nut *d*, beam F, suspension-rod F′, and adjustable supports extending from suspension-rod F′ to beam F, all substantially as described.

JOSEPH PAJEAU.

Witnesses:
FLORA L. BROWN,
CHARLES T. BROWN.