(No Model.)

L. J. CADWELL.

PAVEMENT

No. 398,939. Patented Mar. 5, 1889.

Fig 1.

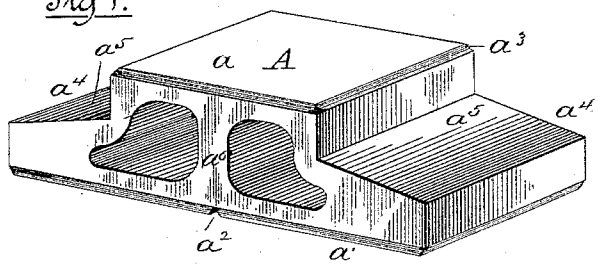
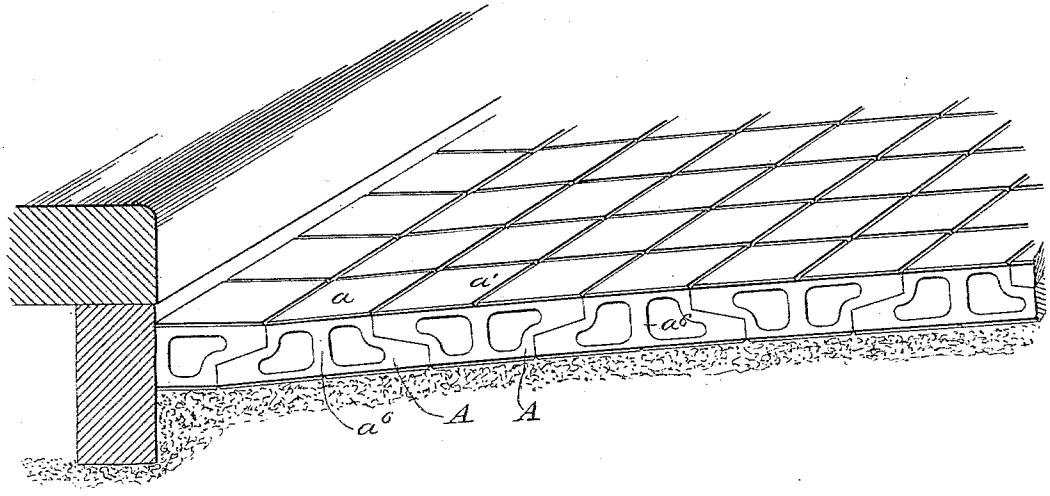


Fig 2.



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UNITED STATES PATENT OFFICE.

LYDIA J. CADWELL, OF CHICAGO, ILLINOIS.

PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 398,939, dated March 5, 1889.

Application filed January 13, 1888. Serial No. 260,607. (No specimens.)

To all whom it may concern:

Be it known that I, LYDIA J. CADWELL, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pavements; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The invention consists, primarily, in a pavement composed of T-shaped blocks of iron, burned clay, or other suitable material laid in alternately-reversed positions, so that they overlap each other, whereby each block has a bottom support from the underlying bed greatly in excess of its upper area or surface, and whereby, as a consequence, the bed or foundation is in the greatest degree attainable uninjured by the use of the pavement.

It consists, secondarily, in forming the block hollow, and, thirdly, in a hollow block filled with suitable material to deaden the sound.

In the accompanying drawings, Figure 1 shows in perspective one of the blocks of which my improved pavement is composed. Fig. 2 is a perspective of a pavement in transverse section of a street between rows of the paving-blocks.

The individual blocks A are T-shaped in side view, and preferably twice as long as they are broad, and, say, four or five inches in depth. Each block has two bearing-surfaces, a and a', which may be provided with grooves a^2 of any suitable form or depth, and with or without beveled edges a^3 at the margins of the bearing-surfaces a and a', for the purpose of giving foothold to horses traveling on the pavement. The arms a^4 of the T are preferably tapered toward their ends by an inclination of the surfaces a^5, such inclination, however, if present, being so slight, as shown, that it gives practically no effect of a wedge. The blocks are laid end to end in alternately-reversed order, with these arms overlapping each other, as shown in Fig. 2. Thus laid it is manifest that the upper surface of any member of the pavement to which pressure is applied is very greatly less than the surface of the foundation, which finally receives such pressure. For example, if pressure is applied to the upper surface, a, of a block, A, the same area of the foundation which takes such pressure is equal to the greatly larger opposite surface, a', of the same block, and in the case of these blocks having the larger surface, a', uppermost the pressure received by the block is distributed over an area of the foundation equal to the lower surface, a, of the block plus the greater part of the lower surfaces, a', of the two contiguous blocks which it overlaps. This distribution of pressure over relatively large areas of the bed or foundation is the primary object of my invention, and the great advantage of such distribution is to obviate injury to the bed.

By the preservation of the bed the pavement retains its original contour or level, and by the maintenance of such contour more equal wear is suffered by the various members of the pavement, and as a result the pavement is far more durable both as a whole and as to its individual members, while at the same time the advantage of a regular surface for the passage of loads and of light vehicles is secured.

As shown in the drawings, the blocks A are made hollow, with upper and lower walls embracing recesses therein, which is a construction proposed when the blocks are of cast-iron, burned clay, or of other formable material, for the purposes of lightness and cheapness. In making the block of this hollow construction I propose one or more vertical posts or partitions, a^6, which in the block shown are arranged transversely to the block and divide the interior space into two recesses or passages. While this is a favorable arrangement of a strut partition or support other arrangements thereof may be made within my invention, and more than one such interior support may be provided, if desired, in any suitable arrangement thereof. I also propose, as a separate improvement, to make the block hollow, with lateral openings or embraced between upper and lower walls, and to fill the space or spaces within it with tar and sand, asphalt, or other material or compound of materials suitable to deaden the sound of the pavement. As shown in the block at the

right hand of Fig. 2, by this construction the desired lightness is obtained without the disadvantage of resonance, while the filling also contributes a degree of strength by its position between the upper and lower walls of the block.

I claim as my invention—

1. A hollow T-shaped paving-block recessed between upper and lower bearing-walls and provided with one or more vertical studs through the hollow interior, substantially as described.

2. A T-shaped paving-block of metal or other hard material made hollow, having recesses between upper and lower bearing-walls of the block, and provided with a filling of other material suitable to deaden sound, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

LYDIA J. CADWELL.

Witnesses;
M. E. DAYTON,
P. H. T. MASON.