No. 786,762. PATENTED APR. 4, 1905.

C. J. W. HAYES.

BUILDING BLOCK.

APPLICATION FILED OCT. 17, 1904.

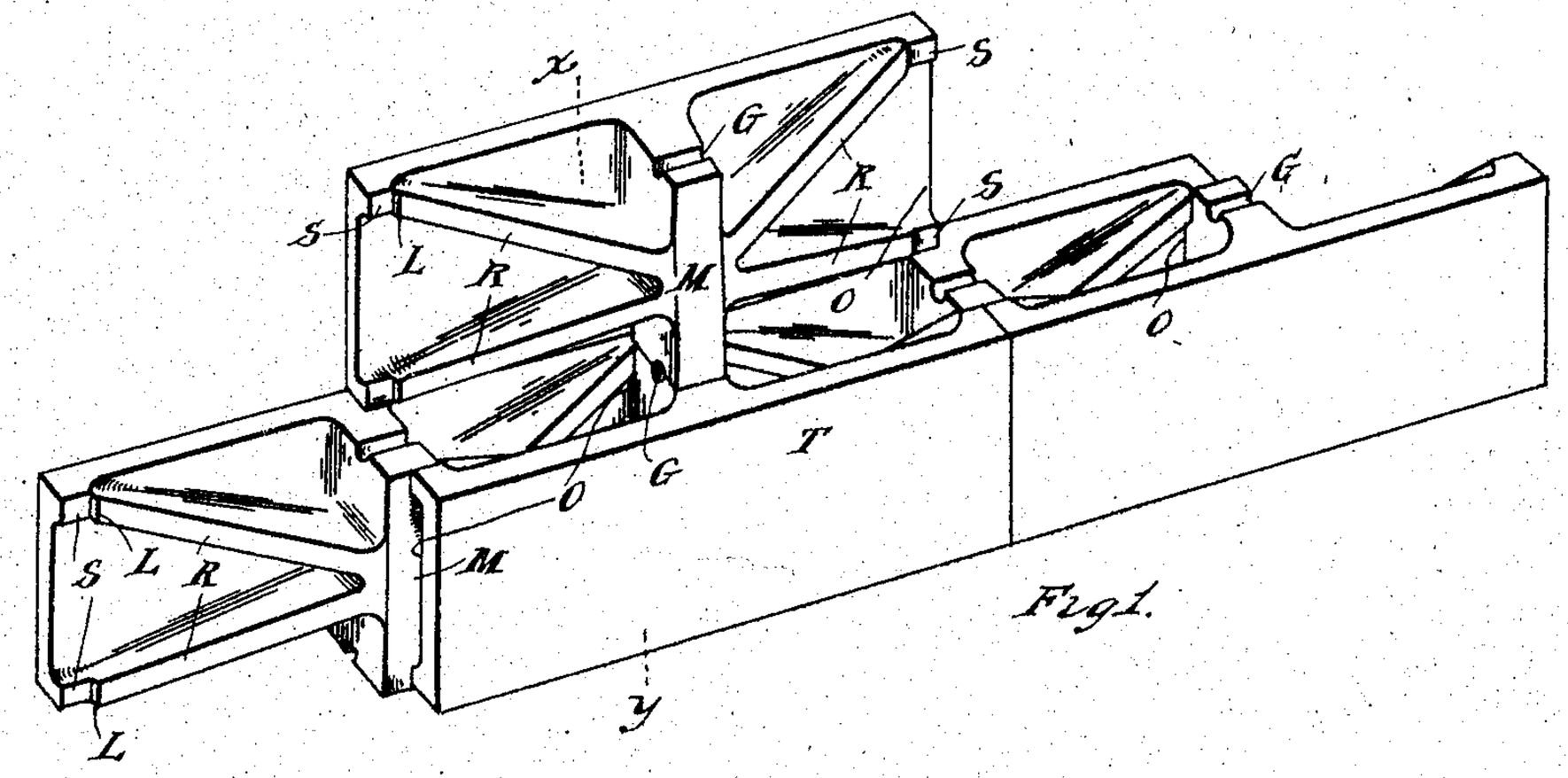

Fig 1.

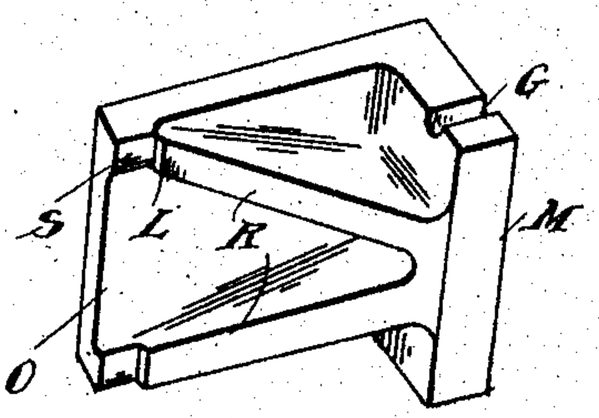

Fig 4.

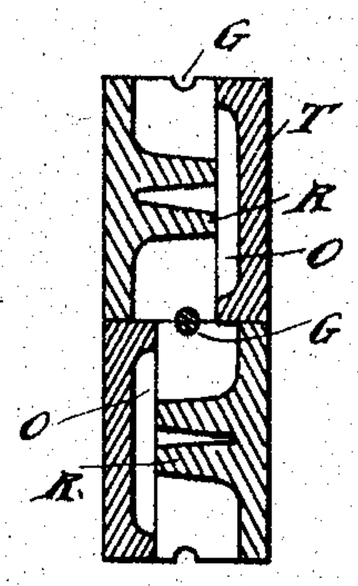

Fig 2.

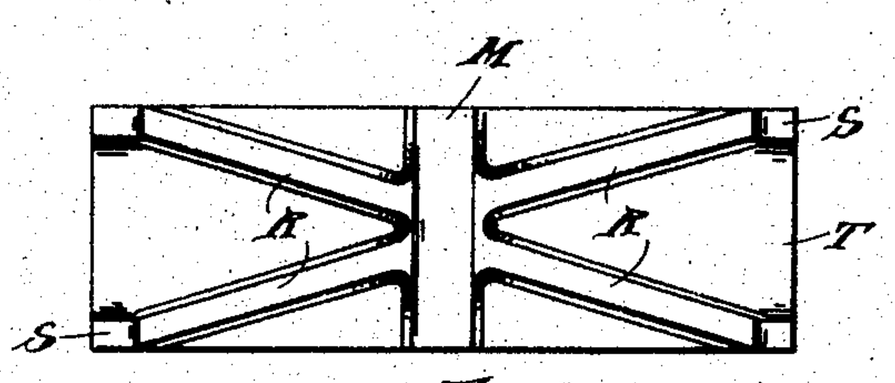

Fig 3.

WITNESSES

T. C. Massey

C. F. Day.

INVENTOR

Charles J. W. Hayes

By Parker & Burton Attorneys.

No. 786,762. Patented April 4, 1905.

UNITED STATES PATENT OFFICE.

CHARLES J. W. HAYES, OF DETROIT, MICHIGAN, ASSIGNOR TO CHARLES W. CADWELL, TRUSTEE, OF WINDSOR, ONTARIO, CANADA.

BUILDING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 786,762, dated April 4, 1905.

Application filed October 17, 1904. Serial No. 228,717.

To all whom it may concern:

Be it known that I, CHARLES J. W. HAYES, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Building-Blocks; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to masonry and artificial stone, and has for its object an improved form of building-block to be made from cement, clay, or any material suitable for the construction of walls.

The special object of the improvement is to produce a building-block which shall be strong and yet economical in quantity of material required, by reason of the truss features which its form effects, and which shall give to a wall desirable ventilating and damp-resisting qualities.

In the drawings, Figure 1 is a perspective showing a number of blocks in position to form a wall. Fig. 2 is a cross-section of the wall as at *x y* in Fig. 1. Fig. 3 is an elevation showing the ribbed or trussed side of a block. Fig. 4 is a perspective of a half-block.

The block which is the subject of this invention has a tabular or face part T, one side of which may be made with a smooth or any desired face. The opposite side is made with a thick rib M, extending across it midway of its length, and four thin ribs R, radiating, preferably, from about the middle of the thick rib to the extreme corners of the tabular part. The thick or mid rib M has flat ends even with the edges of the tabular part T and across these ends bonding-grooves G, so located as to register with those of contiguous blocks when in a wall. The width of mid-rib M (or its length from tabular part T outward) is uniform and is dependent upon the thickness it is desired to have the wall of which it is to form a part. The radiating ribs R are tapering in width from the same as that of the mid-rib, where they join it, down to a width making them somewhat above the inner surface of the tabular part T at the corners, where the edges of the ribs are flattened and made parallel with the tabular part T to form seats S and shoulders L. The length of these seats from the ends of the ribs to the shoulders should be approximately one-half the thickness of mid-rib M, so that when laid in a wall the seats and shoulders form a means for locating and holding the blocks in proper position.

Other proportions of this block may vary through a considerable range, dependent upon the strength required, architect's plans, &c.; but in this form of block the tabular or face part may for equal strength be much thinner than in other blocks, because of the strengthening truss effect which the radiating ribs give to it.

All the ribs should join the tabular part with large fillets to minimize the danger of cracking and to facilitate removal from the mold.

The wall constructed of these blocks should be laid double, the ribbed sides of the blocks turned inward and seated against each other in broken-joint order to form courses, and the courses arranged to break joints also in the usual way.

It will be seen that in a wall of these blocks so laid there is an open space O between the mid-rib of the blocks and the opposing blocks seated against it, which permits free circulation of air laterally in the wall. Air may circulate vertically past the radiating ribs, which cross each other in opposing blocks.

When it is desired to form flues, the spaces O occurring in conjunction with two vertical rows of mid-ribs are closed, shutting off the lateral communication of air at these points.

The surfaces of contact between the two sides of a wall made of these blocks are normally small, being only at seats S and horizontally where the ends of mid-ribs are in contact to form a bond. For this reason there is little opportunity for moisture to travel from one side to the other of the wall. The radiating ribs on the inside of this wall form a series of double overlapping arches or truss

members which serve to distribute strain, thus making this wall safer for heavy or unevenly-distributed loads than would otherwise be possible with the same amount of material.

For corners, window-openings, &c., half or part blocks (shown in Fig. 4) may be used, and this application is intended to cover such form, as well as other modifications which do not depart from the spirit of this invention.

What I claim is—

1. A building-block constructed with a transverse rib and with ribs radiating from the central portion thereof to the ends of the block, substantially as described.

2. As a new article of commerce, a building-block having a tabular part and a transverse middle rib, and ribs radiating to the ends of the block from the central portion of such transverse middle rib, substantially as described.

3. As a new article of commerce, a building-block having a tabular part and on one face of said tabular part ribs radiating from the center thereof, substantially as described.

4. In a new article of commerce, a building-block having a transverse rib with bonding-grooves therein, and ribs radiating from the middle of said transverse rib to the corners of the block, substantially as described.

5. As a new article of commerce, a building-block having a transverse rib with bonding-grooves therein, and ribs radiating from the middle of said transverse rib to the corners of the block said ribs diminishing in width from their junction with the mid-rib toward their ends, substantially as described.

6. A wall construction, having in combination blocks, each of which is provided with a tabular part and with ribs on the back thereof radiating from the central part thereof toward the corners, substantially as described.

7. As a new article of commerce, a building-block having a tabular part and diagonally-disposed truss members on one face thereof, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES J. W. HAYES.

Witnesses:

CHARLES F. BURTON,

MAY E. KOTT.