

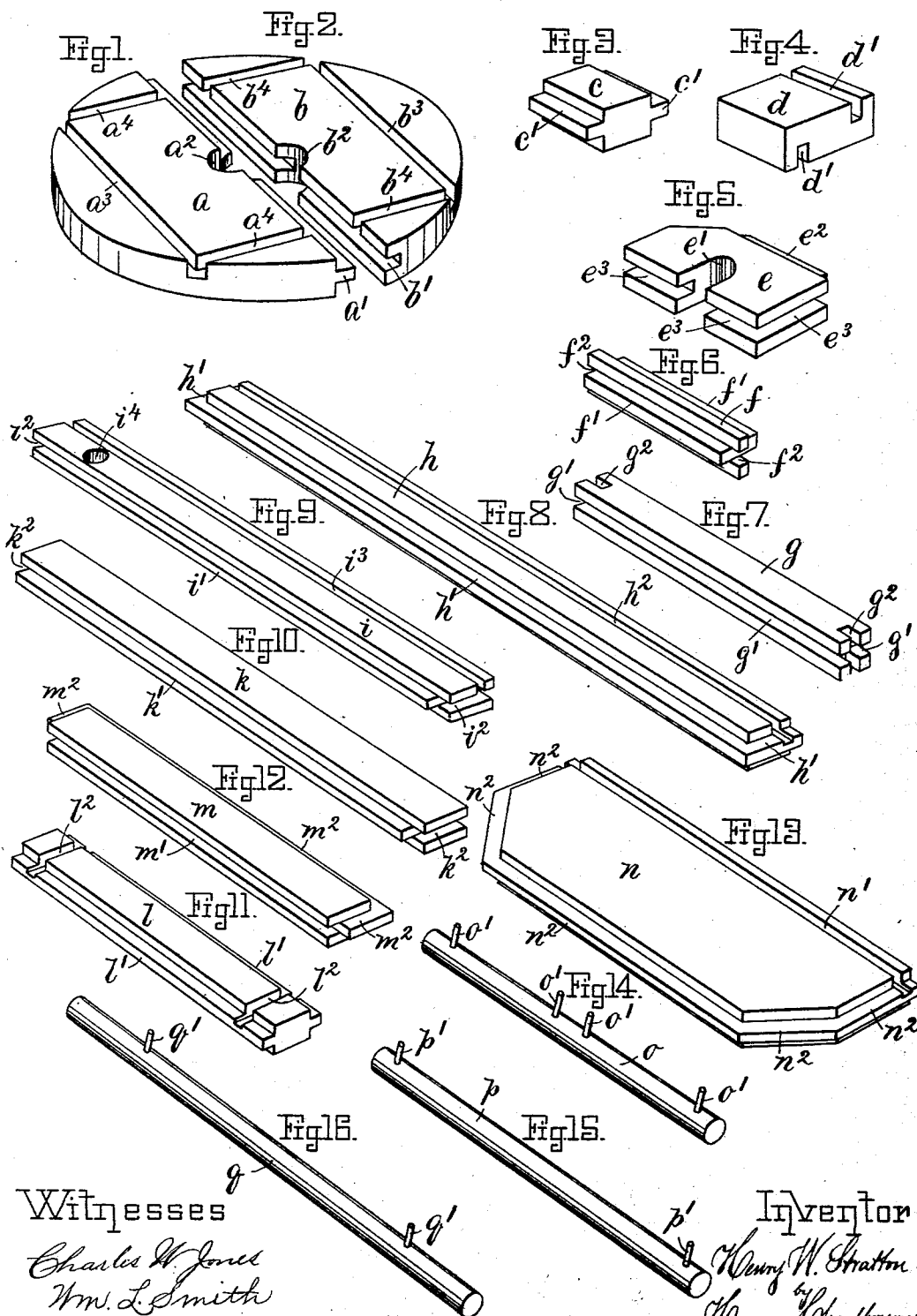
(No Model.)

2 Sheets—Sheet 1.

H. W. STRATTON.
TOY BUILDING BLOCK.

No. 570,688.

Patented Nov. 3, 1896.



Witnesses
Charles W. Jones
Wm. L. Smith

Inventor
Henry W. Stratton
Henry Khadburn
his Atty.

(No Model.)

2 Sheets—Sheet 2.

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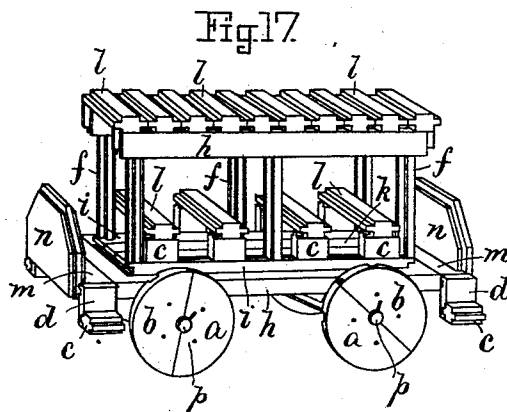


Fig 18.

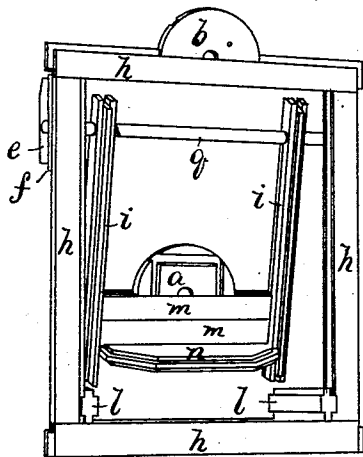
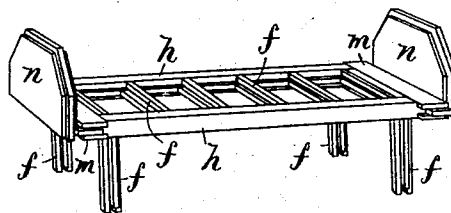


Fig 19.



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UNITED STATES PATENT OFFICE.

HENRY W. STRATTON, OF BOSTON, MASSACHUSETTS.

TOY BUILDING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 570,688, dated November 3, 1896.

Application filed October 31, 1895. Serial No. 567,521. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. STRATTON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Toy Building-Blocks and Puzzles, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in toy building-blocks and puzzles for the amusement as well as for the training of children; and it consists in the use of blocks of various shapes and sizes provided with tongues, grooves, pins, and perforations arranged in different positions on said blocks in such a manner that they are capable of being attached and held to each other in various ways and in various relative positions one to the other, so as to construct different objects; and it consists in details of construction, as will be described hereinafter and claimed.

The invention is carried out substantially as illustrated on the accompanying drawings, which form an essential part of this specification, and whereon—

Figures 1 to 16, both inclusive, represent perspective views of the different forms of blocks used in my invention. Figs. 17, 18, and 19 each represent one of the different objects which can be constructed from the blocks.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

The blocks are preferably made from stock of even thickness, and the various tongues and grooves are of uniform sizes, so that any tongue on any block will fit any groove on any block, by which construction the blocks are capable of many different combinations or arrangements, as will be readily understood.

The blocks *a* and *b*, Figs. 1 and 2, are each semicircular in outline and are capable of being attached together by means of the tongue *a'* or the block *a* and the groove *b'* on the block *b*, and when so attached they form a circular wheel to be used in the construction of a cart, car, or wheelbarrow, or in any other place. Semicircular cross-grooves *a*² and *b*² on the respective blocks *a* and *b* form a circular perforation and a bearing on which

said wheel turns when in place on a car, cart, or wheelbarrow. Each of these blocks is provided with grooves, as *a*³ *a*⁴ and *b*³ *b*⁴, upon their surface, so as to admit of their being attached in different relations to other blocks, if so desired.

The block *c*, Fig. 3, is provided with the tongues *c'* *c'*, one on either side of the block, substantially as shown.

The block *d*, Fig. 4, is provided with the longitudinal grooves *d'* *d'*, one on either surface of the block, substantially as shown.

The block *e*, Fig. 5, is provided with the semicircular groove *e'* across one side thereof, also with the longitudinal tongue *e*² on the opposite side and the longitudinal grooves *e*³ *e*³ on one side and end, substantially as shown.

The block *f*, Fig. 6, is provided with the longitudinal tongues *f'* *f'*, one on either side thereof, and also with the grooves *f*² *f*², one on either end of said block, the part of the block remaining after the above tongues and grooves have been made forming longitudinal tongues upon the surface of said block, substantially as shown.

The block *g*, Fig. 7, is provided with the longitudinal grooves *g'* *g'* on one side and both ends thereof, also with the cross-grooves *g*² *g*², one at each end, substantially as shown.

The block *h*, Fig. 8, is provided with the longitudinal tongues *h'* *h'* *h'*, one on each end and on one side of said block, also with the longitudinal groove *h*² on its surface, substantially as shown, or said groove *h*² may be made upon the opposite side to the tongue *h'*, if so desired.

The block *i*, Fig. 9, is provided with the longitudinal tongue *i'* on one side thereof and the longitudinal grooves *i*² *i*², one on each end of said block. It is also provided with the longitudinal groove *i*³ on its surface and the perforation *i*⁴ through said block, substantially as shown.

The block *k*, Fig. 10, is like the block *i*, with the exception of the longitudinal groove in its surface, which is made on the opposite side to the tongue corresponding to the tongue *i'* on the block *i*, and the perforation through said block is omitted, it being provided with the longitudinal tongue *k'* and longitudinal grooves *k*² *k*², corresponding with the respec-

tive tongue i' and grooves $i^2 i^2$ on the block i , substantially as shown.

The block l , Fig. 11, is provided with the longitudinal tongues $l' l'$, one on either side of said block, and also with the cross-grooves $l^2 l^2$ across its surface, substantially as shown.

The block m , Fig. 12, is provided with the longitudinal groove m' on one side of said block and the longitudinal tongues $m^2 m^2 m^2$, one on the opposite side to the groove m' and one on each end of the block, substantially as shown.

The block n , Fig. 13, has two of its corners cut substantially at an angle of forty-five degrees to the side and ends of said block, and it is provided with the longitudinal groove n' on its surface and the longitudinal tongues n^2, n^2 , and n^2 on one side, both ends, and the diagonal surfaces of the corners of the block, substantially as shown.

The blocks $c, d, e, f, g, h, i, k, l, m$, and n have each been formed with flat surfaces and right angles at their corners with the exception of the angles formed by the cutting off of the corners on block n . I do not wish to use such block alone, and have shown in Figs. 14, 15, and 16 the blocks o, p , and q , each of which is in the form of dowels, being circular in cross-sectional area, and are each provided with the respective pins o', p' , and q' , which project from the surface of the blocks, substantially as shown.

The pins o', p' , and q' are firmly attached to the respective blocks o, p, q , and are attached at various positions on said blocks, substantially as shown on the drawings. These pins act to determine the position of the various blocks which may be placed upon or connected to the blocks o, p , or q .

The semicircular grooves a^2, b^2 , and e' , open at one side thereof, as shown, allow the respective blocks a, b , or e to be placed upon either of the blocks o, p , or q and at the desired position on the blocks, the blocks o, p , and q being secured and held within the semicircular grooves by means of other blocks attached to the blocks a, b , or e by means of the tongue-and-groove connection, as set forth. Thus it will be seen that the blocks a, b , or e may be placed upon the block o , either on the end of said block o outside of the pins o' , or they may be placed upon said block so as to be between the center pins $o' o'$, or at any other desired position, according to the position required to produce the given object to be constructed—as, for instance, a swing, a wheeled vehicle, &c.—and the pins o', p' , or q' will act as a limit to the movement of the blocks longitudinally upon the blocks o, p , or q' .

The perforation i^4 in the block i is of such a size that it will receive either of the blocks o, p , or q , and the position which the block i can occupy on said blocks is determined by the position of the pins on the respective blocks o, p , or q .

The portion of the blocks remaining between the longitudinal groove d' and the side of the block d is preferably equal in dimensions to the tongues and grooves used on the blocks, so that it may be used as a tongue, if so desired, when attaching the blocks together in different relations to each other.

The number of each of the different-shaped blocks used may vary, and it is not essential that all of the various shapes shall be used. The sizes of the different blocks in relation to each other form no essential part of my invention; but I prefer to have all of the blocks which are shaped alike of the same dimensions or multiples of such dimensions.

It is not necessary to the spirit of my invention that each block should be tongued and grooved exactly as shown on the drawings, as any slight changing of the tongues and grooves might operate to equal advantage and would be included in this invention.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. In toy building-blocks or puzzles, blocks of various sizes and shapes, tongued and grooved as described, in part, on the ends sides and edges to allow them to be connected in many different relations to each other and having circular perforations and semicircular grooves in part for the purpose set forth, combined with blocks circular in cross-section throughout as the blocks o, p and q , having firmly-attached pins at different positions on the same, as the pins o', p' and q' , whereby the grooved blocks can be placed upon the circular blocks and their positions on the same can be determined by said pins, as and for the purpose set forth.

2. In toy building-blocks and puzzles the semicircular blocks a and b , having respectively the tongue a' and the groove b' , and both having semicircular grooves or openings at their centers, and grooves upon the flat surfaces thereof for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 28th day of October, A. D. 1895.

HENRY W. STRATTON.

Witnesses:

HENRY CHADBURN,
BESSIE E. NEWTON.