C. H. PAJEAU.

TOY CONSTRUCTION BLOCK.

APPLICATION FILED OCT. 23, 1915.

1,198,263.

Patented Sept. 12, 1916.

3 SHEETS—SHEET 1.

Fig. 1.

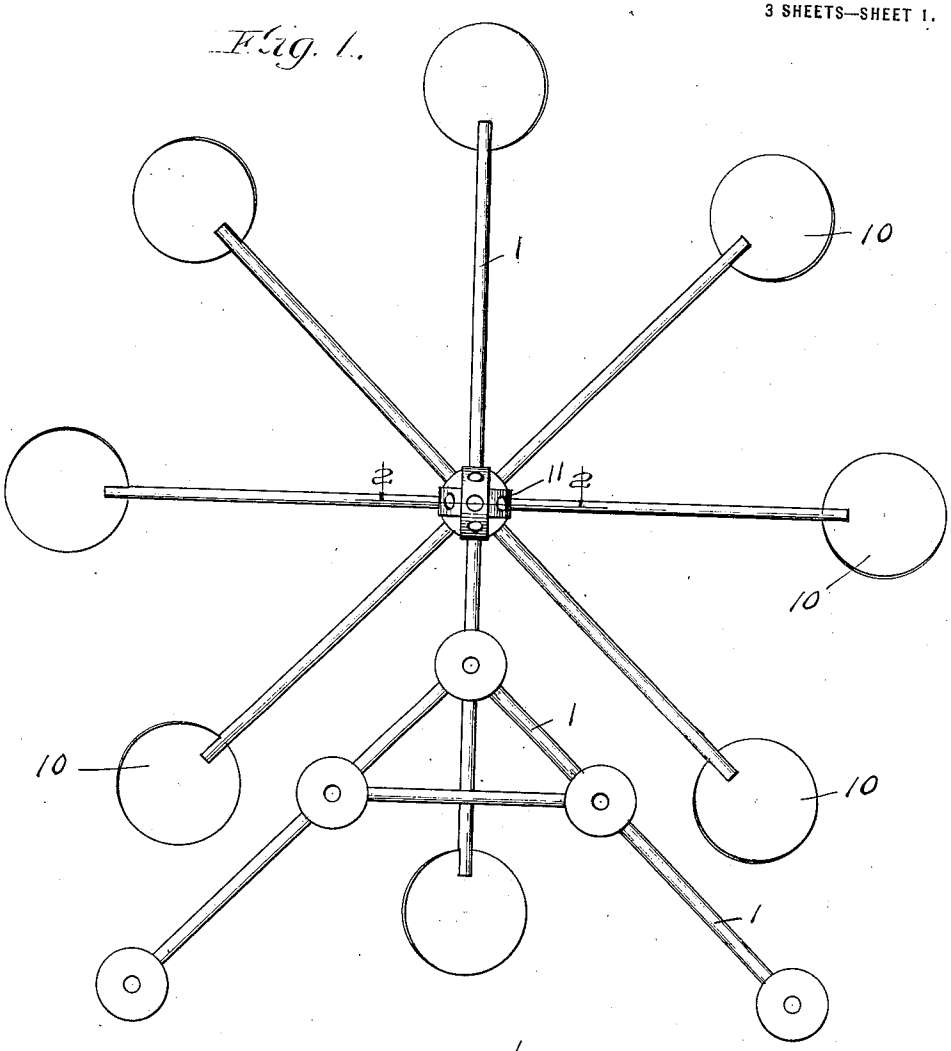
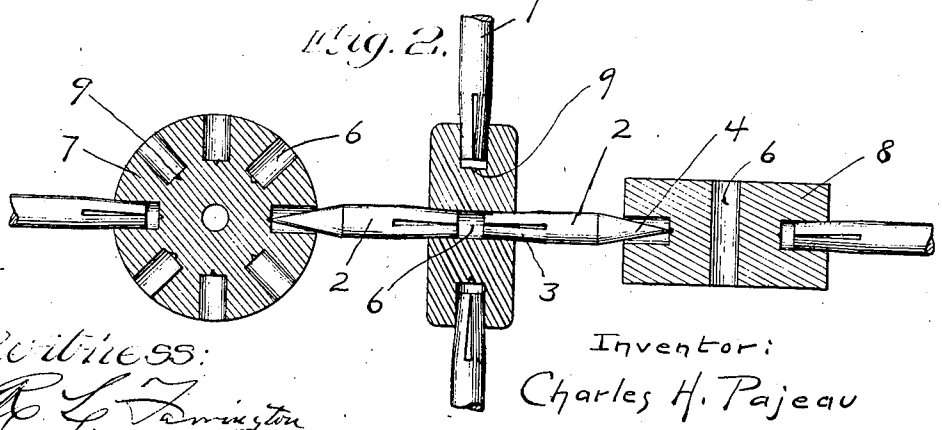


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

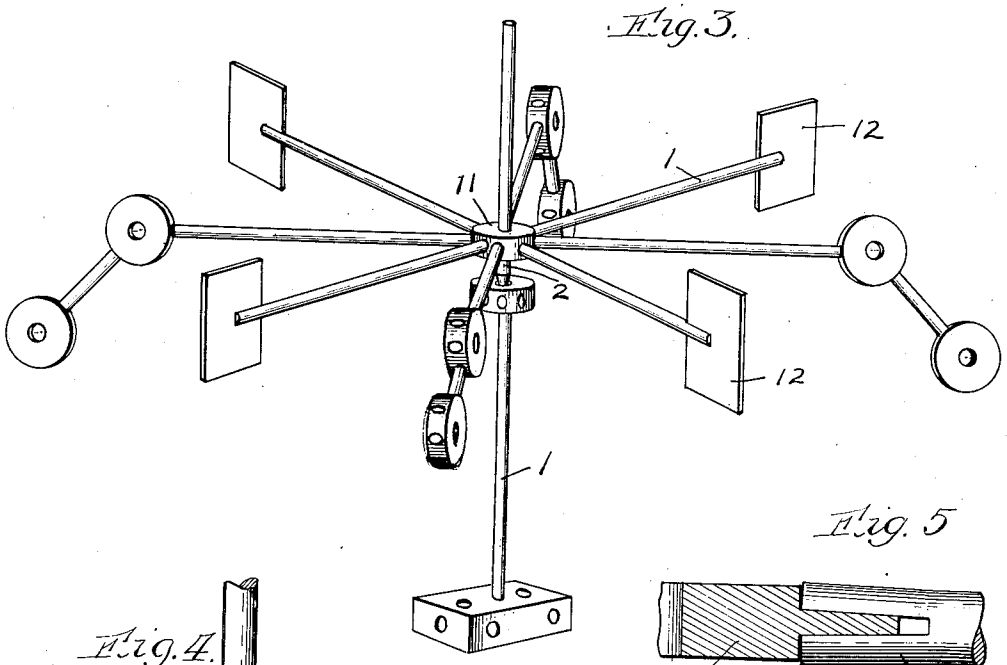


Fig. 5

Fig. 4.

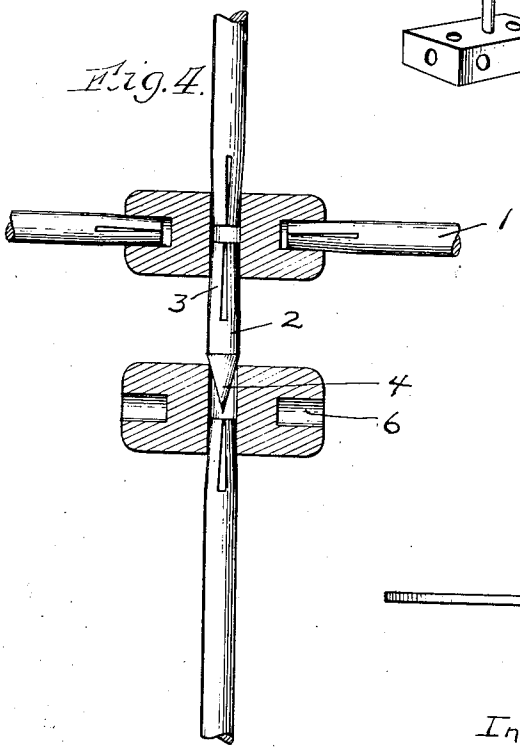


Fig. 6.

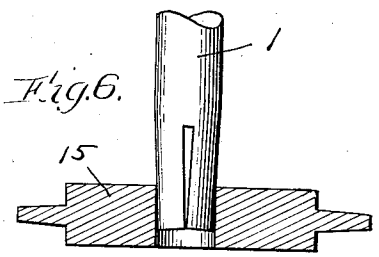
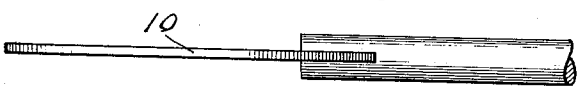


Fig. 7.



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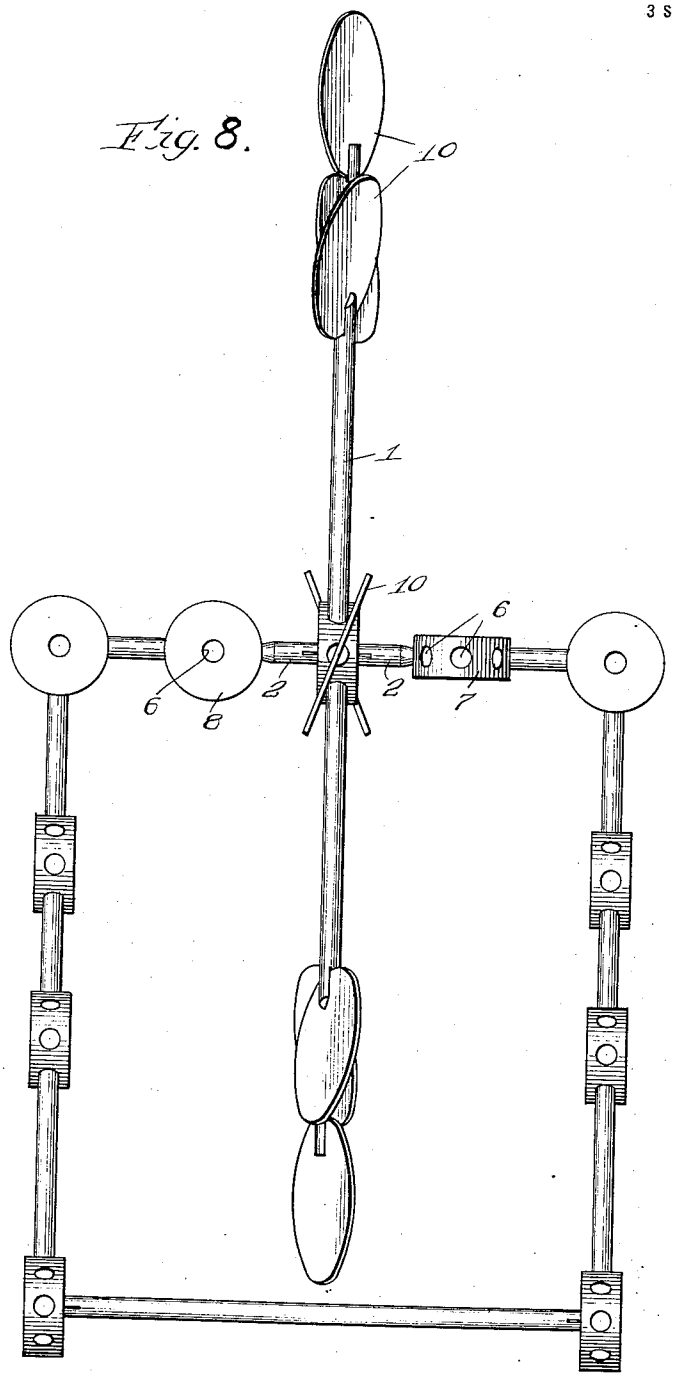
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3 SHEETS—SHEET 3.

Fig. 8.



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UNITED STATES PATENT OFFICE.

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TOY CONSTRUCTION-BLOCKS.

1,198,263. Specification of Letters Patent. Patented Sept. 12, 1916.

Application filed October 23, 1915. Serial No. 57,523.

To all whom it may concern:

Be it known that I, CHARLES H. PAJEAU, citizen of the United States, residing at Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Toy Construction-Blocks; and I do hereby 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 appertains to make and use the same.

My invention relates to toy construction blocks, its general aims being to provide simple and cheap elements which may be easily and firmly assembled into novel structures, and which are particularly adapted for combination in structures having movable elements rotated by air currents.

More particularly, my invention aims to provide construction blocks adapted to be adjoined in a variety of pivotally interconnected forms, and also adapted to be firmly and non-rotatably interlocked: also to provide elements adapted to serve as vanes and adapted to be firmly connected to some of the aforesaid blocks. Still more particularly, my invention aims to provide elements adapted interchangeably to pivot either in bores of restricted depth or in bottomless bores, and also adapted to be firmly seated in either type of bore: also, to provide connecting elements equipped with common means for firmly interlocking the same either with elements having bores or with elements having edge portions thinner than the diameter of the said bores.

Further objects will appear from the following specification and from the accompanying drawings, in which—

Figure 1 is an elevation of a toy windmill constructed with elements embodying my invention. Fig. 2 is an enlarged, fragmentary horizontal section through the axis of the windmill of Fig. 1. Fig. 3 is a perspective view of another type of windmill constructed with elements embodying my invention. Fig. 4 is an enlarged fragmentary vertical section through the axis of the windmill of Fig. 3. Fig. 5 is a fragmentary view of a rod element and a thinned-edge block gripped by the same. Fig. 6 shows the same rod element non-rotatably seated in the bore of the same thinned-edge block. Fig. 7 shows a similar rod element gripping one of the vanes of Fig. 1. Fig. 8 is a side elevation of the toy windmill structure of Fig. 1.

In some of its aspects, my present invention involves an extension of the novel features disclosed in Patent No. 1113371, granted to me on October 13, 1914, on toy construction blocks, in which patent I described blocks having angularly separated bores of uniform diameter, and connecting rods having slotted ends which permit of their being combined with such blocks in structures not otherwise capable of erection. While the elements thus shown in my previous patent permit of an endless variety of combinations, the resulting structures are generally rigid, owing to the firm interlocking of the slotted ends of the rods with the blocks having the said bores.

In carrying out my present invention, a considerable portion of the rod elements 1 may be exact duplicates of those illustrated in my previous patent, namely cylindrical rods having both ends slotted. Then I also provide pivot rods, 2 each having one end 3 slotted and of approximately the same diameter as the last mentioned rods, but having their other ends 4 pointed as shown in Fig. 2. Both sets of rods preferably have diameters greater than those of the bore 6 in the main blocks, which latter may vary greatly in shape as indicated by the cylinder 7 and the prism 8 of Fig. 2. Wherever the bores (which are preferably uniform in diameter) do not extend entirely through the blocks, I preferably provide each bore at its bottom with a conical extension 9 affording a socket for the tip of the tapering end 3 of any one of the pivot rods, thereby providing a pivotal bearing which will produce very little friction. Such a bearing is particularly desirable where the structure involves a horizontal axis, as shown in Figs. 1 and 2. However, the same rods 2 may also be pivoted in bores extending entirely through the blocks, as in Fig. 4, in which case the bearing is at the extreme end of one of the bores and is independent of the depth of the bore.

While the slots in the ends of both the plain rods 1 and the pivot rods 2 thus afford a means of securely interlocking such rods with blocks having bores smaller in diameter than the slotted rod ends (into which bores these ends are forced by contracting

them), the same slots also permit portions at opposite sides of each slot to be sprung apart to permit the insertion into the slot of an element thicker than the normal width of the slot, which element will then be clamped in the said slot. Hence I readily use the free ends of the radially extending rods 1 in Fig. 1 for supporting cardboard disks 10, and by turning these rods about their own axes to bring the said disks at an angle with the common axial plane of the rods, I provide vanes which will be actuated by air movements to rotate the central block 11 and the elements carried thereby. Or, instead of using disks, I may use square pieces 12 of cardboard or veneer, as shown in Fig. 3. However, I do not wish to be limited to the use of vanes (or other clamped elements) made of a uniform thickness, as this clamping function of the slotted rod ends might likewise be used with blocks of any desired thickness provided that the latter have edge portions approximate in thickness to the width of the slots, as in the case of the block 15 of Fig. 5. Neither do I wish to be limited to other details of the construction and arrangement here described, it being obvious that the same might be varied in many ways without departing from the spirit of my invention. For example, the clampingly held elements need not be used as vanes, but might be purely decorative elements or might serve other purposes.

I claim as new:

1. Toy construction blocks including a member having bores of substantially uniform diameter and depth, and a connecting rod: there being means associated with said bores and one end of said rod for tightly interfitting the same, and means associated with the bottom of said bores and the other end of said rod for affording a pivotal connection therebetween.

2. In a toy construction set, blocks each having a plurality of equi-diametered bores extending part way through said blocks, and rods each equipped at one end for substantially non-rotatable and at the other end for pivotal engagement with any of said bores.

3. The combination with a toy construction block having a bore equipped at its bottom with a smaller-diametered extension, of a rod larger in diameter than said bore and having one end pointed and adapted to pivot in the said extension of the bore, the other end of the rod being contractible to permit its insertion into said bore.

4. The combination with a toy construction block having a bore equipped at its bottom with a conical extension, of a rod larger in diameter than said bore and having one end pointed and adapted to pivot in the said conical extension, the other end of the rod being contractible to permit its insertion into the said bore.

5. In toy construction blocks, the combination with blocks having bores of two different depths, of rods each having at one end relatively spaced formations affording a pivotal connection respectively with walls of the bores of the two different bores.

6. Toy wind-vane construction blocks including a block equipped with a central bore and a plurality of lateral bores disposed radially of the central bore, a pointed rod pivotally associated with said block, rods mounted in said radial bores and each having a part at its opposite end containing a slot and vanes clampingly held in said slots.

7. In toy construction blocks, the combination with blocks having substantially equi-diametered bores of two different depths, of rods each having a tapering end adapted to engage the outer edge of one of the deeper bores, there being means associated with the bottom of each of the shallower bores and the tip of the said tapering end of each rod for affording a pivotal connection therebetween.

8. In toy construction sets, blocks having equi-diametered bores, members having edge portions of equal thickness, and rods equipped at each end with common means for interlocking said end either with the wall of one of said bores or with one of said edge portions.

9. In toy construction sets, rods each having its ends respectively obtuse and pointed; and disks each having a plurality of radially disposed common means for either firmly interlocking with the obtuse end, or pivotally engaging the pointed end, of one of the said rods.

10. In a toy construction set, a block having a central bore and a plurality of radial bores, and a rod having its ends respectively pointed and obtuse adapted for pivotal and interlocking connection with the bores.

CHARLES H. PAJEAU.