

N^o 6225

A.D. 1914

(Under International Convention.)

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in Germany), } 23rd Jan., 1914

Date of Application (in the United Kingdom), 11th Mar., 1914

(Patent of Addition to No. 28,926 of 15th Dec., 1913)

Complete Specification Accepted, 30th Apr., 1914

COMPLETE SPECIFICATION.

Improvements in or relating to Building Toys.

I, ADOLF HUCK, of Gostenhofer Hauptstrasse 63, Nürnberg, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention is an improvement in or modification of that described in Specification No. 28,926 of 1913 and relates to a further construction of the pin connection for building toys. Compared with the construction described in the prior specification, it consists in replacing the pins adapted to be secured to the connecting parts, by sockets or sleeves into which the ends of the building
10 struts are introduced.

This makes it possible to use the connection for building toys with solid struts as well as for those with hollow struts.

15 Unlike known connections in which the building struts are introduced directly into the holes of connecting parts, the present construction has the advantage that, owing to the fact that the connecting sockets can be secured to the connecting parts, the latter can be made comparatively small, whilst the sockets make it possible to obtain deeper holes, whereby the securing and connection of the building struts become stronger.

20 Three constructions of connecting sockets according to this invention are shown in the accompanying drawing.

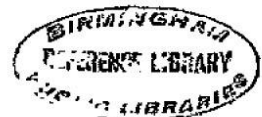
Figure 1 shows a cubical connecting body 1 having holes in all its sides, to which are connected in the manner shown in Figures 5, 6 and 7, the sockets shown in Figures 2—4. The connecting sockets or sleeves 3, 3a, 3b, are provided at their closed ends with screw pins 5, 5a, 5b, the diameter of which
25 is smaller than that of the sockets themselves.

The connecting socket in Figures 2 and 6 is intended for securing solid struts 7, each of which is held by a set screw 4 provided on the connecting parts.

30 The connecting socket shown in Figures 3 and 5, is used for connecting slotted tubular struts which spring into the sockets, whilst the connecting socket shown in Figures 6 and 7, is slotted and resilient, so that non-slotted tubular struts 8 can be introduced and secured.

It is obvious that instead of the cubical connecting part could also be used

[Price 8d.]



A. HUCK,
CONSTRUCTION TOY SET.
APPLICATION FILED JULY 18, 1914.

1,400,066.

Patented Dec. 13, 1921.

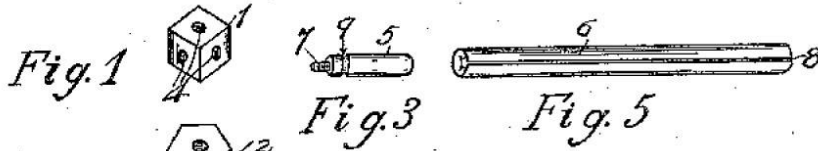


Fig. 4

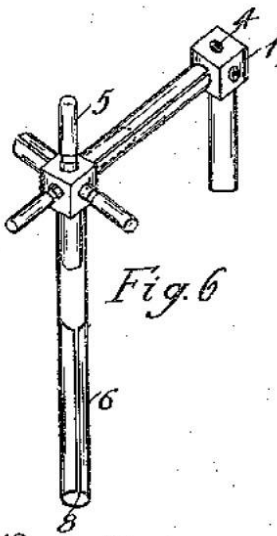


Fig. 6

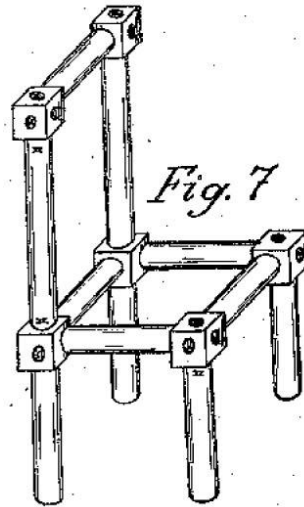


Fig. 7

Fig. 8

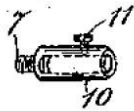


Fig. 9



Fig. 10

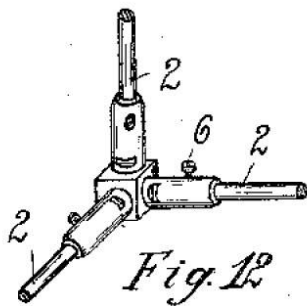
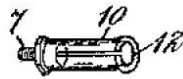


Fig. 12

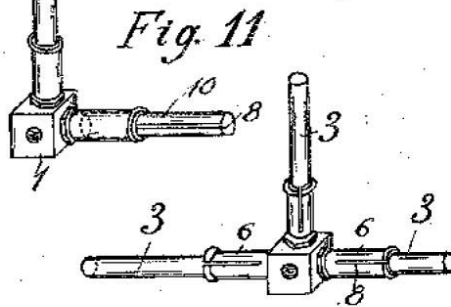


Fig. 13

WITNESSES:

M. A. Helling
H. P. Hubbard.

INVENTOR:

Adolf Huck
BY B. Singer

ATTORNEY

Huck's Improvements in or relating to Building Toys.

prismatic or spherical and annular connecting parts arranged so that the sockets can be secured to them.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A building toy as set forth in Specification No. 28,926/13 in which the pins to be secured to the connecting parts are replaced by sockets into which the ends of the building struts are introduced.

2. A building toy as set forth in Claim 1, in which the socket is slotted so as to render it resilient.

3. The building toy substantially as described or as illustrated in the accompanying drawings.

Dated this 11th day of March, 1914.

BOULT, WADE & TENNANT,
111 & 112, Hatton Garden, London, E.C.,
Chartered Patent Agents.

[This Drawing is a reproduction of the Original on a reduced scale.]

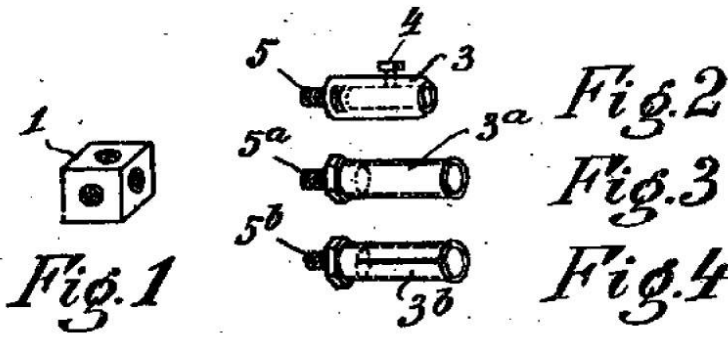
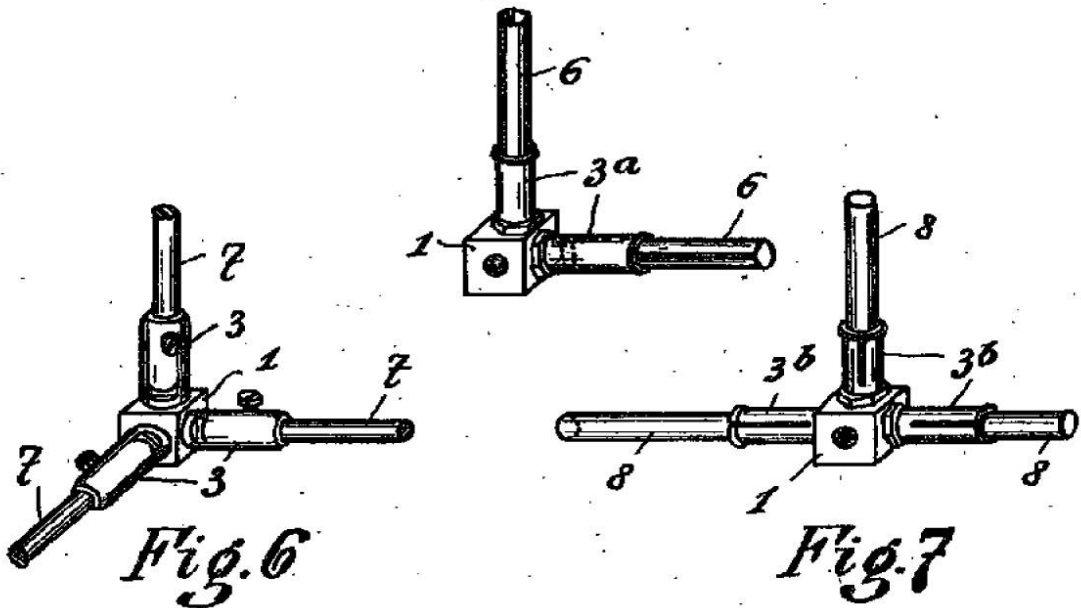


Fig. 5



N^o 28,926

A.D. 1913

Date of Application, 15th Dec., 1913—Accepted, 5th Feb., 1914

COMPLETE SPECIFICATION.

Improvements in or relating to Building Toys.

I, ANOLF HUCK, Manufacturer, of 63, Gostenhofer Hauptstrasse, Nürnberg, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention relates to a building toy which, in addition to a number of struts of different length, perforated bars and connecting parts in the shape of cubes, rings, balls, prism sections and the like, has also connection pins, clamping rings and connecting bolts provided with inner and outer screw-
 10 toys in which a number of the above mentioned constructional elements are used, by the fact that the struts are constituted by pieces of tube and are connected to the connecting parts by means of pins. The construction of the connecting parts, as well as the method of connection of the single elements, ensures unlimited building possibilities and always guarantees a connecting
 15 point at each end for other members.

A construction of the most essential single parts of the building toy according to the invention is illustrated in perspective in Figure 1,

Figure 2 shows the connection of the single parts, whilst

Figures 3—6 show various constructions.

20 As connecting parts are used cubes 1 or prism sections 2 perforated on all sides and preferably provided with tapped holes. Pins 3 are provided with corresponding screw threads 5 and grooves 4, the said pins being connected at will to the connecting parts 1, 2 or inserted into the same.

The struts 6 are constituted by rolled longitudinally slotted tubes provided
 25 at the ends with notches 7 pressed inwards. The diameter of the tubes or of the connection pins is such that the latter fit with a slight amount of friction. In putting the tubes on the pins, the tube notches or projections 7 snap into the pin groove 4 and hold the parts together.

For ensuring the connection, clamping rings marked 12, 13, 14 and 22 in
 30 the drawing could also be used. The ring 12 is made in one piece, whilst the ring 13 is slotted and springy. In the ring 14, for the purpose of ensuring greater resilience, the cylindrical part is slotted crosswise. The ring 22 is made of two halves held together by a spring hoop 23.

The erecting of struts is effected by means of a screwthreaded foot part 15
 35 which is preferably placed on a washer 16.

For connecting oblique branches of the building or for forming bearing girders, perforated bars or rails 8 are used which can be either secured directly by means of the pins 3 or secured to the connecting parts by means of separate
 screws 9.

40 The screws 9 are screw-threaded as at 10, and their heads have tapped holes 11 which enables another connecting or additional pin 3, to be inserted.

In addition to the angular connecting parts 1, 2, rings 19 are provided which have a central perforation, and insertion or tapped holes at the circumference. Non-slotted tubes 18 could also be used as struts, provided that pins 17 are

[Price 8d.]



Huck's Improvements in or relating to Building Toys.

used which are slotted cross-wise and are resilient. The tubes will be held on these resilient pins by the notches or projections provided in the ends of the tube and springing into the groove of the pin.

It is obvious that, in addition to the most essential constructional parts shown in Figure 1 further parts of subordinate importance could also be used, such as the plates 20, 21 shown in Figure 5 or rollers shown in Figure 6. 5

In the same way as the plates 20, 21, the said rollers are then suitably perforated and can be held for instance by means of pins or screws on the connecting parts.

Without departing from the spirit of this invention, it is of course also possible to provide the connecting parts 1, 2, 19 with screwthreaded projections, and the pins 3 with tapped holes, so that the pins could be put on the connecting parts. 10

For certain purposes the pins could also be permanently secured to the connecting parts. 15

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A building or mechanical toy of the kind consisting of struts, perforated bars and connecting parts, in which the struts comprise tubular pieces which are secured to the connecting parts by means of pins which, in their turn, can be or are connected to the latter, the ends of the tubular pieces being placed over the said pins. 20

2. A toy as set forth in Claim 1, in which the tubular struts such as 6 are provided with longitudinal slots and at the ends with inward notches or projections such as 7, whilst the pins such as 3 are provided with grooves engaging with the projections of the tubes. 25

3. A toy as set forth in Claims 1 and 2, in which the pins such as 3 or 17 are slotted to render them resilient and to enable non-slotted tubes such as 18 provided with notches, to be placed over them, the said tubes being held by their inward projections which engage with the grooves of the pins. 30

4. A toy as set forth in Claims 1—3, comprising resilient or rigid sleeves adapted to secure the tubular struts placed over the connection pins.

5. A toy as set forth in Claims 1—4, in which the sleeves such as 22 are made in two sections and held together by a spring ring such as 23. 35

6. A toy as set forth in Claims 1—5, comprising connecting screws such as 9 provided both with an outer screw thread such as 10 and with an inner screw-thread such as 11.

7. The amusement and instructional apparatus substantially as described or as illustrated in the accompanying drawings. 40

Dated this 15th day of December, 1913.

BOULT, WADE & TENNANT,
111 & 112, Hatton Garden, London, E.C.,
Chartered Patent Agents.

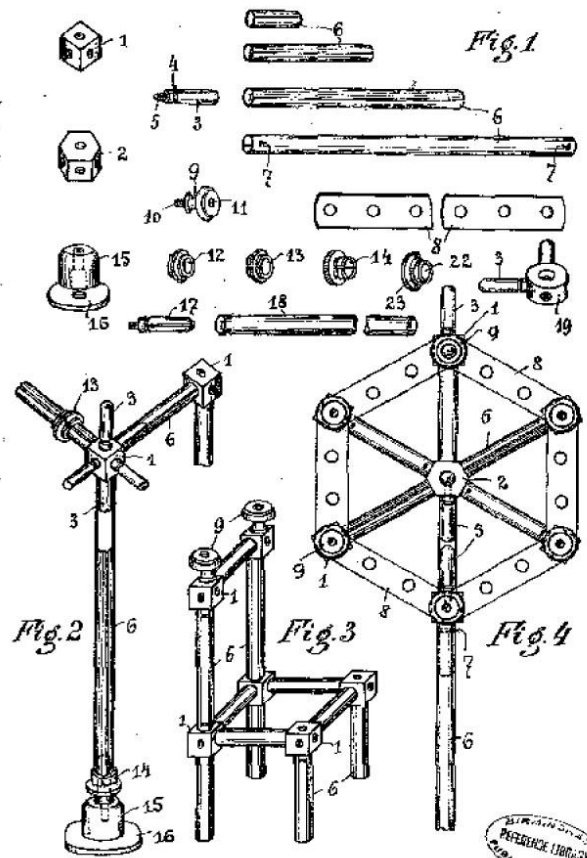
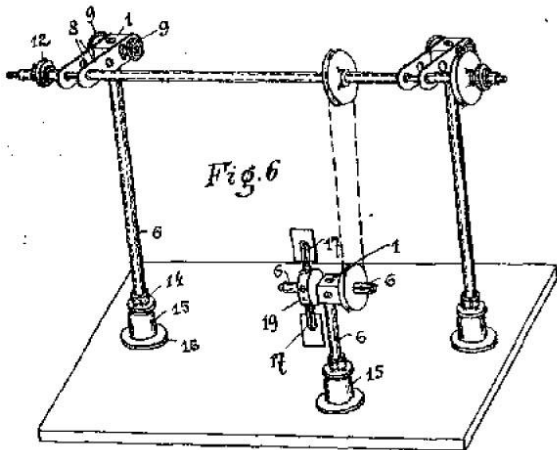
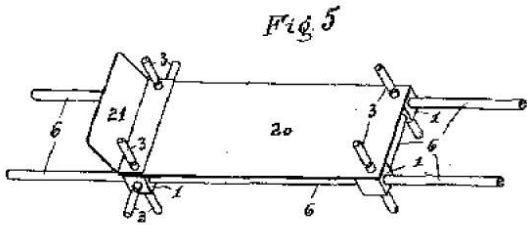
A.D. 1913, Dec. 15, No. 28,926.
HUCKS COMPLETE SPECIFICATION.

(2 SHEETS)

SHEET 1.

SHEET 2

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A.D. 1913. DEC. 15. N^o. 28,926.
HUCK'S COMPLETE SPECIFICATION.

SHEET 1A

Fig. 5

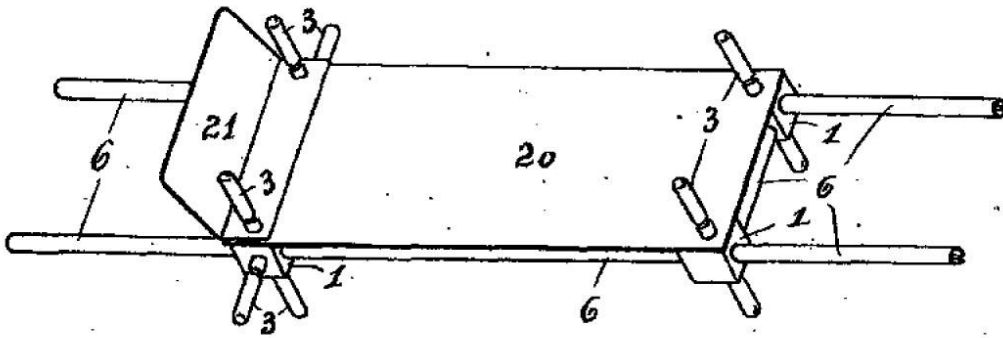
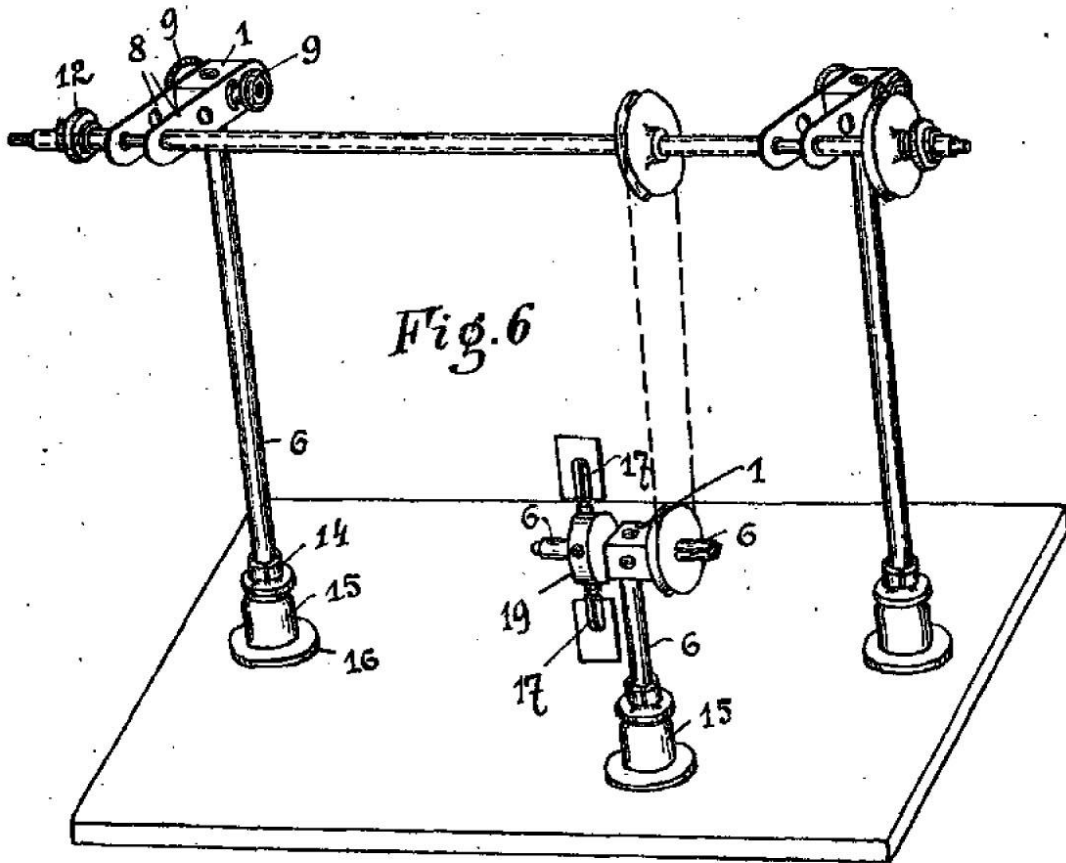


Fig. 6



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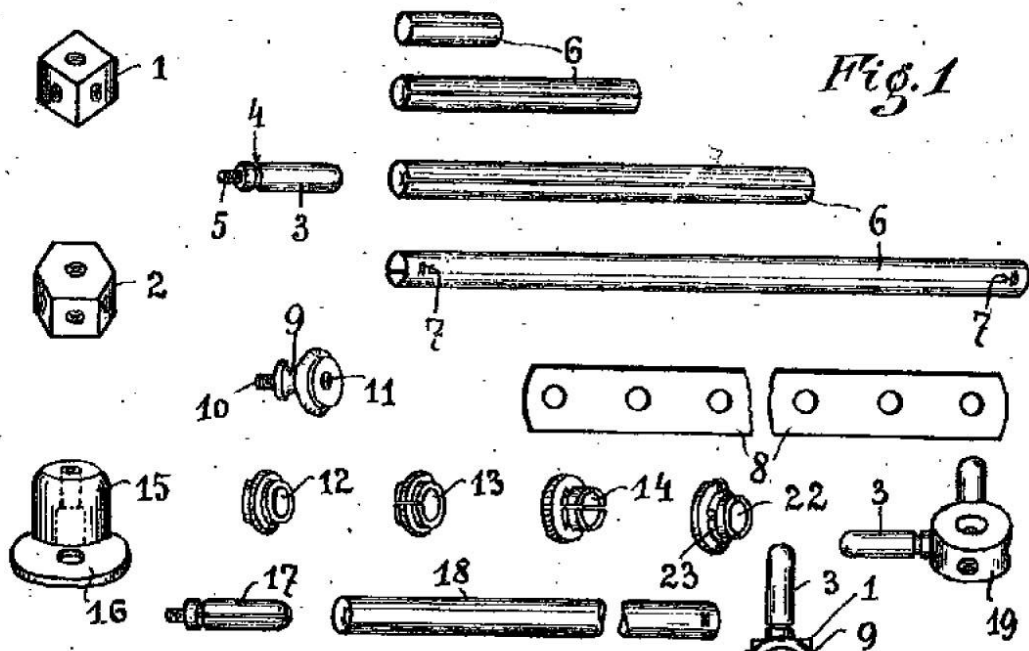


Fig. 1

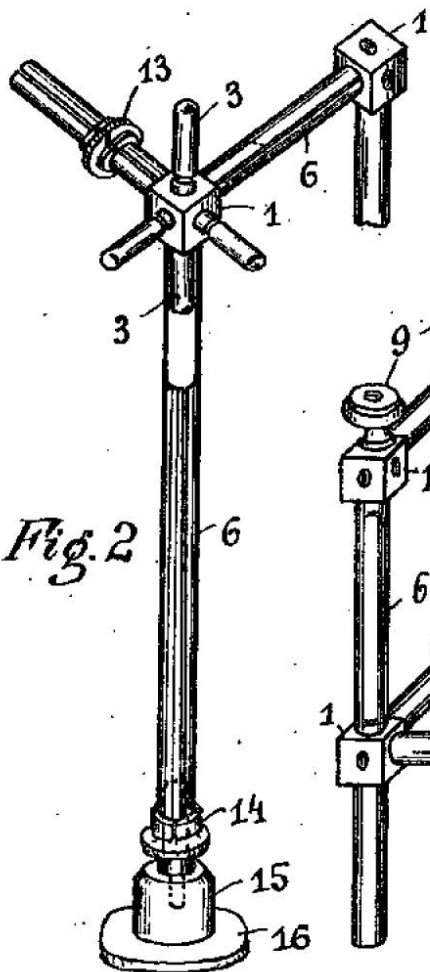


Fig. 2

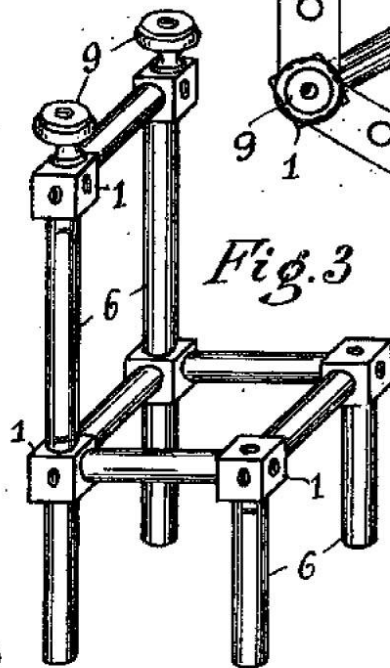


Fig. 3

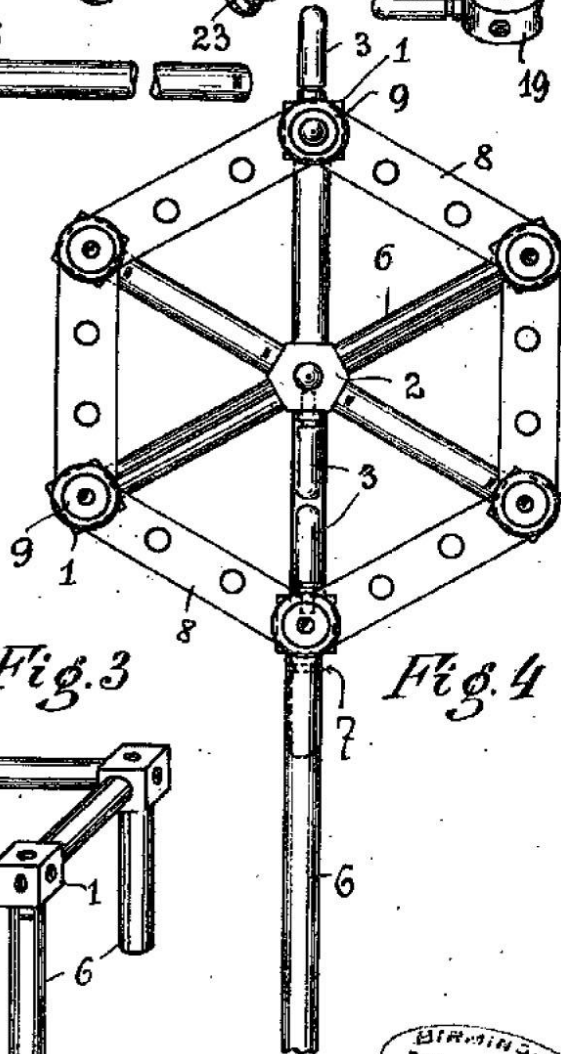


Fig. 4

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