

## PATENT SPECIFICATION



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441,564

Application Date (in United Kingdom) : Aug. 9, 1934.

No. 23066/34.

Complete Specification Accepted : Jan. 22, 1936.

## COMPLETE SPECIFICATION

### Improvements in Metal Elements or Devices for Use in Erecting Toy Building Structures or the like

I, JULES LOUIS BADEL, a Citizen of the Swiss Republic of 78 Rue de Lausanne, Geneva, Switzerland, 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:—

The invention relates to improvements in metal elements for use in erecting toy building structures or the like.

Various kinds of adjustable devices have been proposed for dismantlable metal scaffolds, buildings, struts or props and the like.

My invention consists in a metal element for use in erecting toy building structures consisting of an inner and an outer member each of substantially rectangular channel section and slidably fitting one within the other to allow of longitudinal sliding movement of said members in extension of one another so that the element can be adjusted in length, the so adjusted length being maintained by a bolt extending through a slot of the one member and a hole of the other member, said members having such respective dimensions that the inner member fits exactly in the outer member so that the wings of the inner member do not extend beyond those of the outer member.

The invention also consists in the combination with said slidable elements of other members having a plurality of holes spaced apart at predetermined distances to allow erection of a number of different constructions.

The accompanying drawings illustrate a comparatively limited number of shapes and sizes of elements enabling a large number of quite different toy constructions both as regards type and dimensions, to be obtained.

Figs. 1 to 9 illustrate examples of the principal elements of the toy.

Figs. 10 to 12 illustrate partial views of a doorway constructed with elements of this kind.

Figs. 13 to 15 illustrate the construction of a bridge with the elements of the present invention.

Figs. 16 to 18 illustrate the construction of an arch, the curved elements of which can likewise be employed to form the roof of a toy aircraft hangar or a cylindrical construction with vertical axis imitating the form of a gasometer.

Holes such as *a* are provided in the various elements, said holes being spaced apart at predetermined distances enabling these elements to be connected in numerous ways with each other with the aid of small bolts and nuts such as *b*.

Another important feature is the arrangement of inner *c* and outer sliding bars *d* Fig. 8 of channel section, respectively provided with a hole *a* and slot *f* and being united as shown in Fig. 9, so that together they compose an element the length of which can be regulated and then fixed by simply screwing up a small nut such as *b*. The members *c* and *d* have such respective dimensions that the inner member *c* fits exactly in the outer member *d* so that the wings of the member *c* do not extend beyond those of the member *d*. The different figures of the drawing show how these extensible elements can be used by being united at their ends to other members of a building, diagonally for example, or crossed as shown in Fig. 17, or terminating at a central plate *g* as indicated in Fig. 14 etc.

In Figs. 10 and 11 each vertical strut is formed of two inner and outer slidable and adjustable elements which enable the height of the strut to be regulated and fixed. The elements indicated in the drawing suffice for erecting a number of very different constructions, but it is understood that the channel plate Fig. 1, the bracket Fig. 2, the crossbar Fig. 3, the plates Figs. 4 and 5, the angle plate Fig. 6, and the support and link swivel Fig. 7, are only given by way of examples.

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 metal element for use in erecting toy building structures consisting of an inner and an outer member each of sub-

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- stantially rectangular channel section and slidably fitting one within the other to allow of longitudinal sliding movement of said members in extension of one
- 5 another so that the element can be adjusted in length, the so adjusted length being maintained by a bolt extending through a slot of the one member and a hole of the other member, said members
- 10 having such respective dimensions that the inner member fits exactly in the outer member so that the wings of the inner member do not extend beyond those of the outer member.
- 15 2. The combination of metal elements claimed in claim 1, with other elements,

for use in erecting toy building structures, having a plurality of holes spaced apart at predetermined distances substantially as described.

3. Metal elements or devices for use in erecting toy building structures substantially as herein described and as illustrated in the annexed drawings.

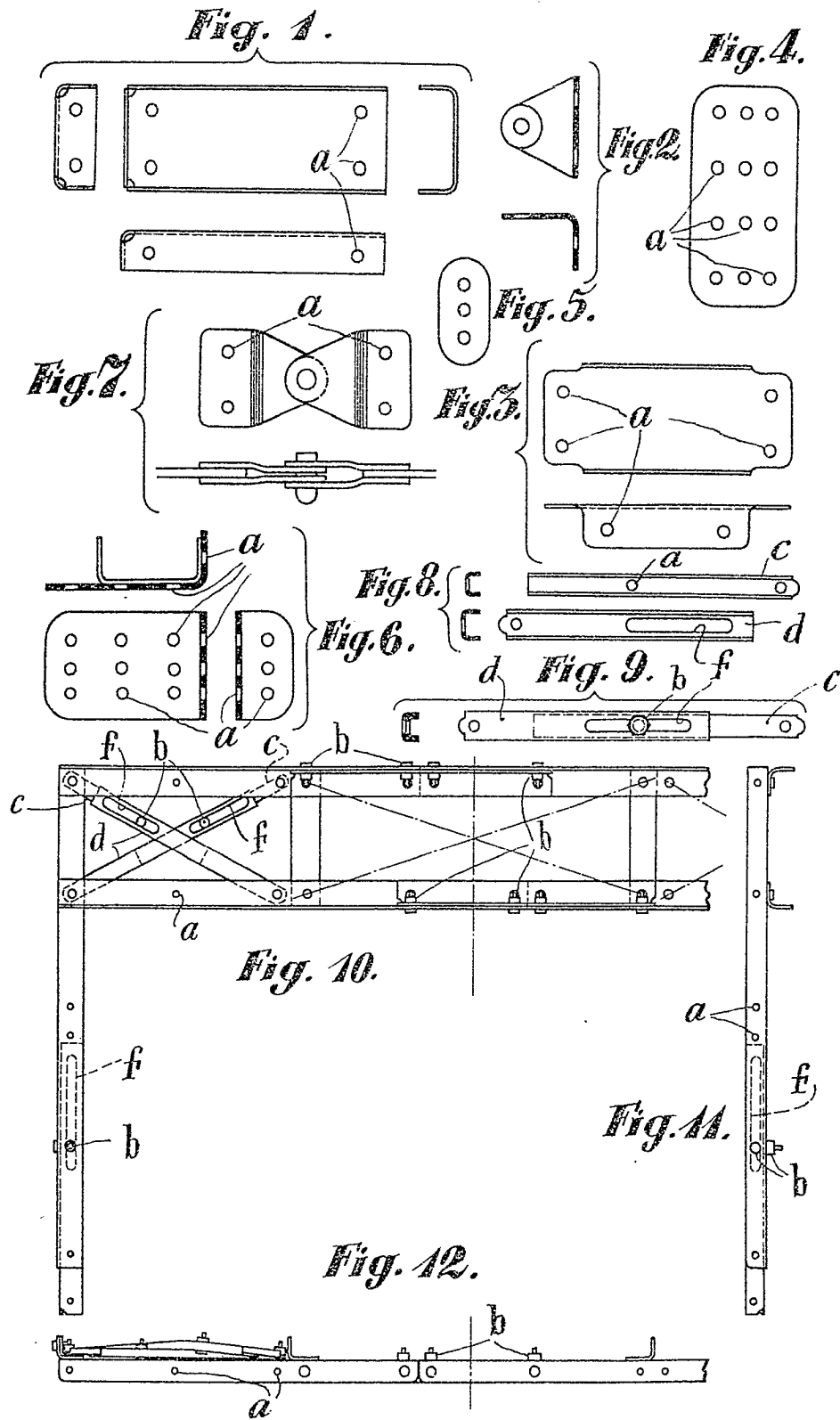
Dated this 9th day of August, 1934.

For the Applicant,  
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31 and 32, Bedford Street, Strand,  
London, W.C.2.

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g.4.

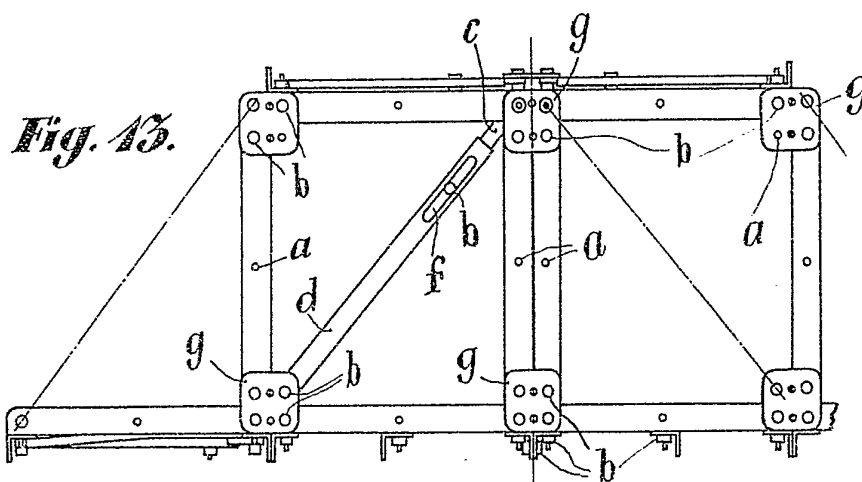
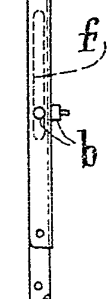
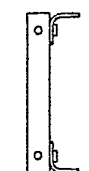
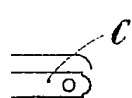
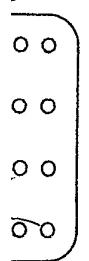


Fig. 13.

Fig. 14.

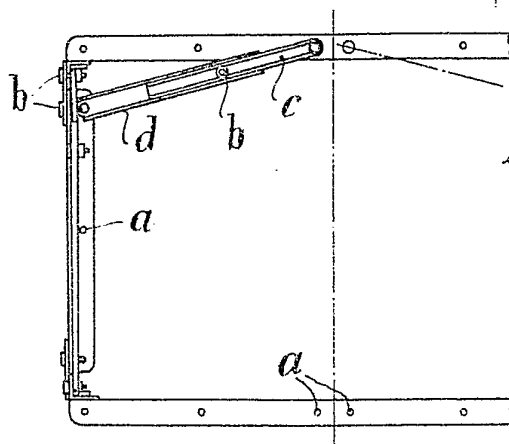
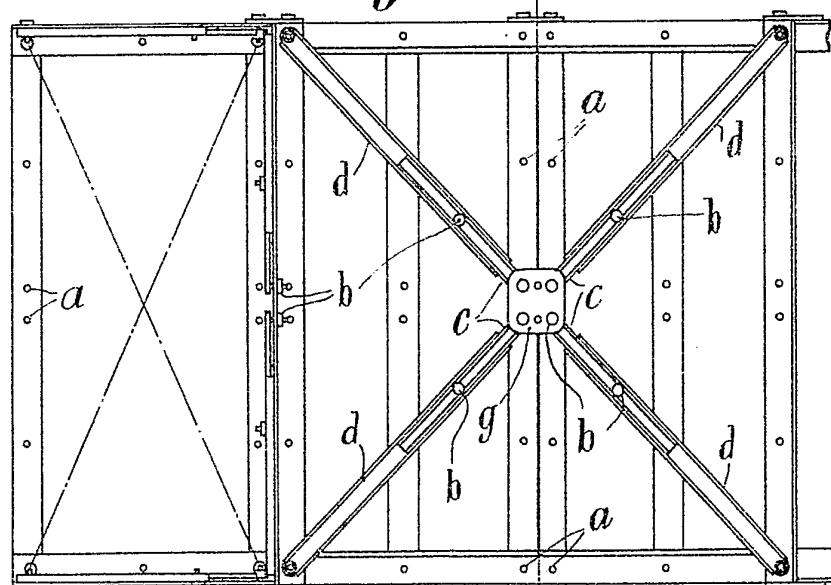
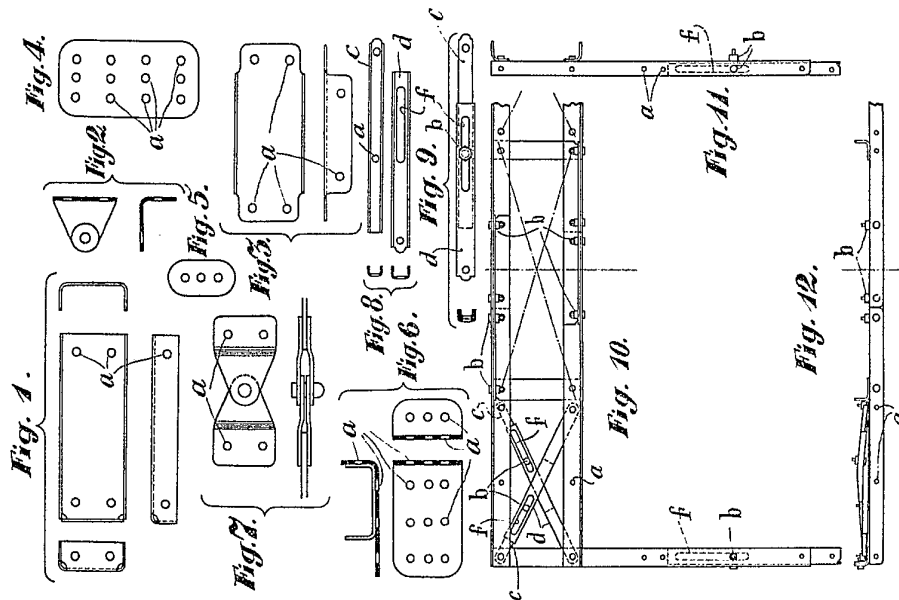
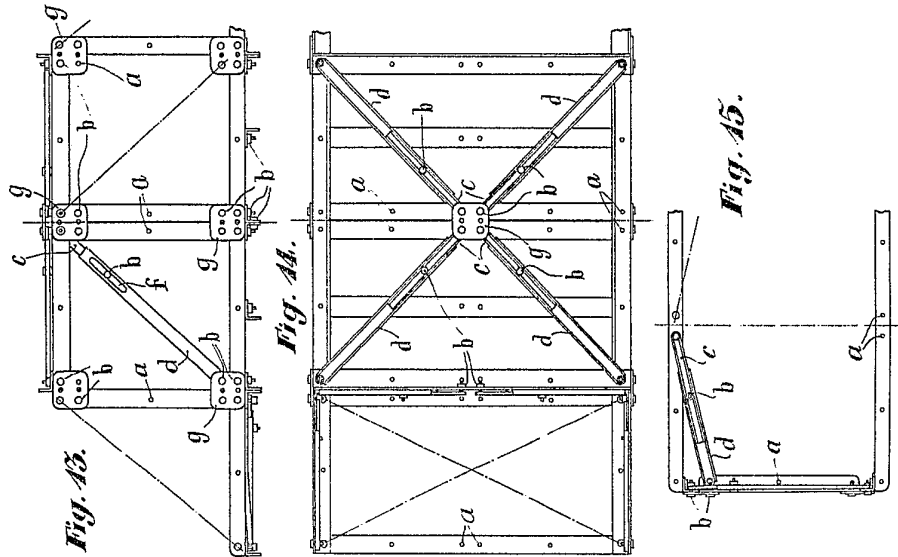


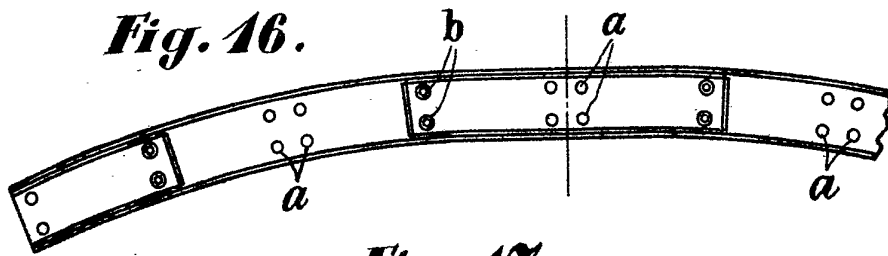
Fig. 15.



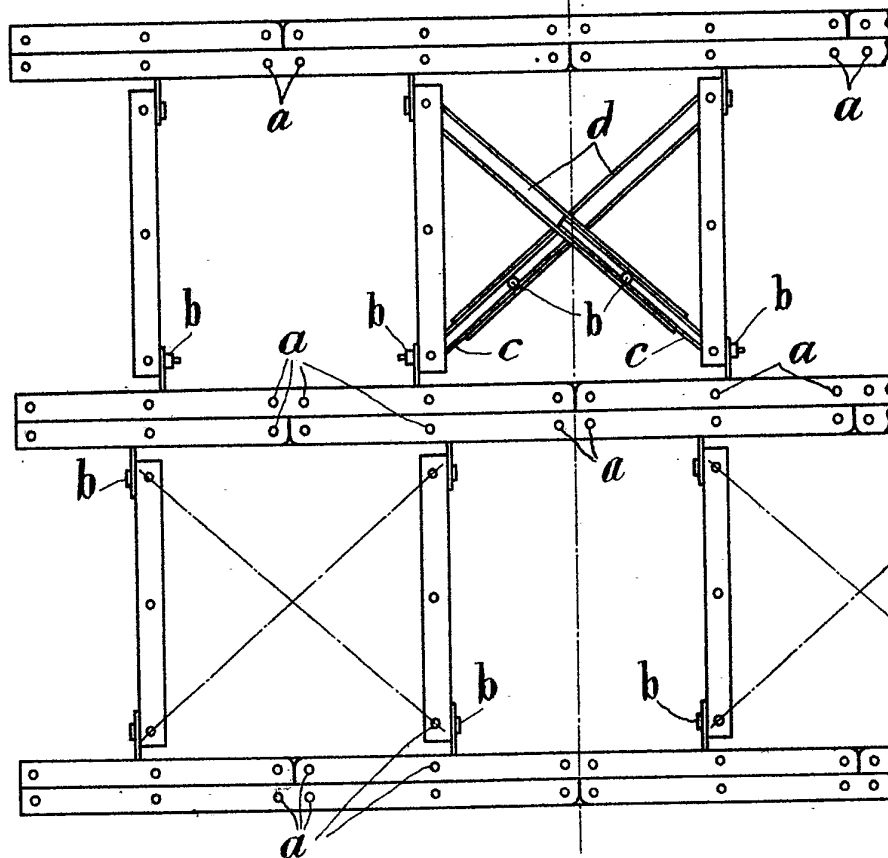
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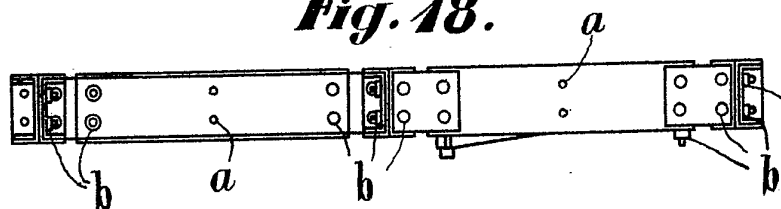
**Fig. 16.**



**Fig. 17.**



**Fig. 18.**



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