Feb. 23, 1943. E. ORLÍK 2,311,907

CONSTRUCTIONAL TOY

Filed Dec. 28, 1939

Fig.1. Fig.2. Fig.3. Fig.4.

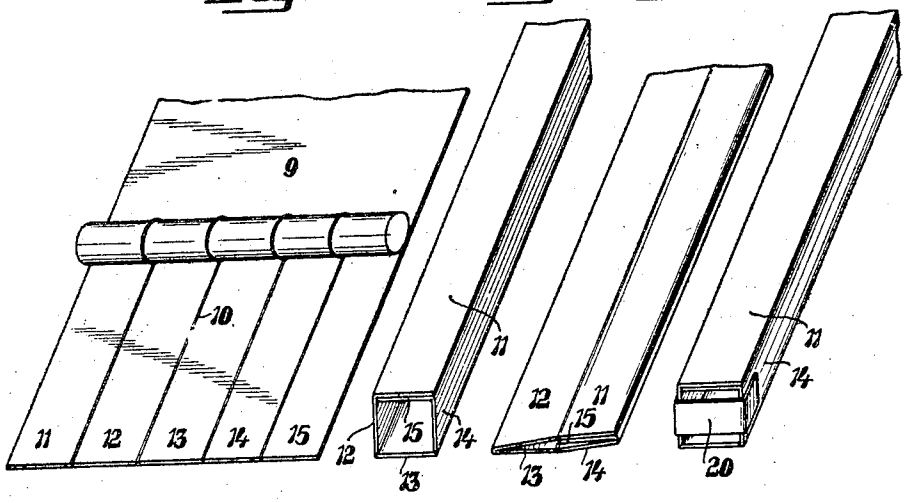


Fig.5. Fig.6. Fig.8.

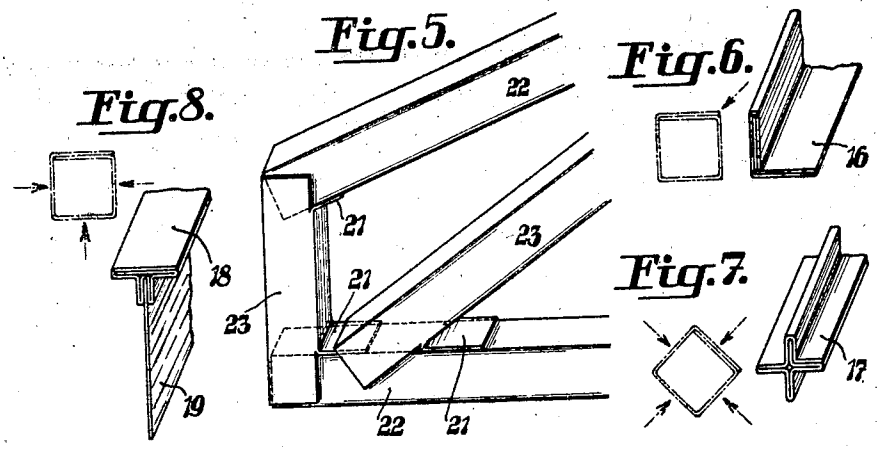


Fig.7.

Inventor,
E. Orlik

by: Glascock Downing & Seebold
Attys.

Patented Feb. 23, 1943

2,311,907

UNITED STATES PATENT OFFICE

2,311,907

CONSTRUCTIONAL TOY

Emil Orlík, Prague-Smichow, Czechoslovakia; vested in the Alien Property Custodian

Application June 28, 1939, Serial No. 281,713
In Czechoslovakia May 17, 1939

1 Claim. (Cl. 46—27)

This invention relates to units for constructional toys. According to the invention each unit consists of a hollow profile bar of paper or cardboard, which can be collapsed into a flat condition along its edges.

Various embodiments of the invention are illustrated by way of example in the accompanying drawing, in which

Figure 1 is a perspective view of one form of a paper or cardboard blank from which the unit according to the invention is made;

Figure 2 shows in perspective the unit in the form of a hollow profile bar;

Figure 3 is a perspective view of the same unit collapsed along its longitudinal edges in a flat condition;

Figure 4 is a perspective view of the same unit in the form of a hollow bar as in Figure 2, but with the addition of means to prevent it from collapsing;

Figure 5 is a perspective view of a structure formed from hollow profile bars of the kind illustrated in the previous figures;

Figures 6, 7 and 8 each comprise a perspective view of a unit imitating a rolled iron section formed from the original hollow profile bar in a manner diagrammatically indicated in each figure, the bar in Figure 6 being in the form of an angle iron, that in Figure 7 having a section in the form of a cross, and that in Figure 8 being a T-bar, shown in conjunction with another element.

The material employed for making the unit will preferably be gummed paper or pasteboard. In the original strip material 9, folding grooves or creases 10 are formed by means of a roller in the manner indicated in Figure 1, the distance between the creases corresponding to the breadth of the walls of the individual unit to be produced. By dividing the strip 9 lengthwise by weakening lines 10 into narrower strips 11, 12, 13, 14 and 15, which remain attached to one another, the blank may be folded into the form of the hollow profile bar shown in Figure 2. By sticking the strip element 11 on to the outside of the strip element 15, as shown in Figure 2, this element is made ready for use, but can still be collapsed along its edges 10 into the flat form illustrated in Figure 3.

Out of this unit a bar of any one of the forms shown at 16, 17 and 18 in Figures 6, 7 and 8 may be formed in the manner diagrammatically indicated in dot-and-dash lines in these figures, by pressing the unit in at the point or points indicated by arrows, and securing it in this position with adhesive if desired. Thus the angle bar 16 of Figure 6 is made by pressing in one corner of the unit shown in Figure 2, until it meets the diagonally opposite corner. The bar 17, shown in Figure 7, is produced by pressing in the middle of each of the four sides of the element of Figure 2 until they all meet at the centre of the square cross section, and the T-bar 18 of Figure 8 is obtained by pressing in the middle of three of the sides of the original unit until they meet. A built-up joist may be formed by securing the two opposite edges of a web 19 to two of these T-bars 18 as indicated for one edge in Figure 8.

To prevent accidental collapse of the hollow bar shown in Figure 2 it may be stiffened by sticking a paper strip 20 round the end, as indicated in Figure 4. In assembling these units to form a structure, apertures may be cut in some units 23 to enable other units 22 to penetrate into or through them, and the lugs 21 produced in forming these apertures may be bent back and stuck to the adjoining elements, as indicated in Figure 5.

It will be obvious that the shape of these elements admits of considerable variation, as does also the method of securing them and uniting them to one another.

What I claim is:

A unit for constructional toys comprising, a sheet of relatively heavy paper having four grooves therein extending longitudinally of the sheet, said grooves being equally spaced with respect to each other to provide five strips of substantially equal widths, said strips being folded along said grooves with four of the strips providing a hollow bar of substantially square cross-section, the fifth strip covering a flat face of a first of the four strips and adhesively joined in surface engagement therewith, central portions of the second and fourth strips adjacent the fifth strip being folded longitudinally inward with inner faces of the second and fourth strip lying along an inner face of the first strip, and a central portion of the third strip being folded inwardly with inner faces thereof in flat engagement with inner faces of the second and fourth strips.

EMIL ORLÍK.