To all whom it may concern:

Be it known that I, Gustave Lavanchy, a citizen of the Swiss Republic, residing at Neuchâtel, Switzerland, have made certain new and useful Improvements in Toy Building Elements, of which the following is a specification.

My invention relates to improvements in toy building elements and particularly to elements capable of being combined or connected to form curved or angular parts or units which may be employed in constructing toy bridges and the like.

In toy building sets now used, all of the elements have previously prepared or fixed shapes, so that the elements, when connected will form only a limited number of constructions or designs, and the principal object or purpose of my invention is to provide a set of toy building elements, which includes flexible elements, the shape of which may be changed, whereby constructions of various shapes and designs may be formed.

A further object of my invention is to provide elements of fixed shape having a series of notches on opposite sides or edges, in which the flexible or shape changing elements are held. By providing each of the elements, of fixed shape, with several notches in which a plurality of the flexible members are held, the flexible members will be securely held in their fixed shape and will not slip on the rigid members and assume their original shape.

With the foregoing object outlined and with other objects in view, which will appear as the nature of the invention is better understood, my invention consists in the novel features hereinafter described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims.

Referring to the drawing:

Figure 1 is a perspective view of one of the flexible elements, means being shown for temporarily holding the same in curved position.

Figure 2 is a similar view showing one of the flexible elements connected to several of the notched rigid members.

Figure 3 is a perspective view of four of the flexible pieces held in curved position by a series of the fixed members.

Figure 4 is a view of a complete curved member or unit formed from six flexible elements and a series of the rigid notched members.

Figure 5 is a view of one of the flexible elements bent into S-shape and showing the means used for temporarily holding the element in curved position.

Figure 6 is a similar view showing notched rigid members connected to the flexible element.

Figure 7 is a top plan view of an S-shaped section of track formed of two flexible members and several notched pieces.

Figure 8 is a perspective view of a toy bridge formed from my improved toy building elements.

In Figs. 1 and 2 of the drawing, I have shown a series of stakes or nails a, which are driven into a board (not shown) on each side of a curved line that has previously been drawn on the board. A flexible element b, formed of any suitable material, is shown held in curved position, over the drawn line, by means of the nails a. e designates the rigid notched members, which, in this instance, are provided with three parallel notches d cut into their front and back edges. In Fig. 2, several of these rigid members c are shown having the upper notches on their back edges embracing the flexible member b, the stakes a in this figure being omitted for the purpose of clearness.

In Fig. 3, I have shown three of the flexible elements e, f and g arranged in the notches d on the front edges of the rigid members c, and when the elements b, e, f and g are in the notches d, as shown in this figure, there will be a sufficient number of points of contact between the flexible elements and the rigid members to prevent slipping of the parts on one another, and when the structure, shown in Fig. 3, is removed from the nails a, said structure will retain its curved shape without further connection.

After the structure, shown in Fig. 3 is removed from the nails, it may be reversed or turned over, and flexible elements k and l are then placed in the remaining notches, to form a curved unit, such as shown in Fig. 4.

To make up an S-curved section of track, such as shown in Figs. 5, 6 and 7, I first draw a curved line and then place nails c' along both sides thereof, as shown in Fig. 5. I then place a flexible element or rod b' be...
between the nails and over the drawn line and
force said element down to within a short
distance of the board upon which the line
is drawn. Then ties or rigid elements \( b^2 \),
having two notches in one edge, are placed
beneath the member \( b' \), and the member \( b' \)
is forced down into the notches near one
end of the rigid ties \( b^2 \). Another flexible
rail or element \( b^4 \) is then inserted in the re-
main ing notches and when the track section,
such as shown in Fig. 7, is removed from
the nails \( a' \), it will retain the shape shown
in said figure.

The bridge shown in Fig. 8, is an illus-
tration of a construction that may be built
with my improved elements. The arches or
girders of the bridge are formed of units
made in accordance with that illustrated in
Fig. 4. The struts and posts of the bridge
are formed of the flexible rods or elements
and are connected together and to the arches
by means of rigid blocks \( k \) having a single
notch only of sufficient width to accommo-
date two thicknesses of the flexible elements.

From the foregoing, it is obvious that va-
rious changes may be made in the elements
without departing from the spirit of the
invention or sacrificing any of its advan-
tages.

What I claim and desire to secure by Let-
ters Patent is:

1. A toy building construction compris-
ing a plurality of rigid members each pro-
vided with a plurality of notches, and a plu-
rality of flexible elements resting in said
notches and being retained in various curved
shapes by the engagement of the flexible ele-
ments with the walls of said notches.

2. A toy building construction compris-
ing a plurality of rigid members each pro-
vided on its opposite edges with a plurality
of parallel notches, and a plurality of flexi-
able elements resting in said notches and be-
ing retained in various shapes by the en-
gagement of the flexible elements with the
walls of said notches.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

GUSTAVE LAVANCHY.

Witnesses:

CH. C. KLINCK,
H. J. STEHLIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D.C."