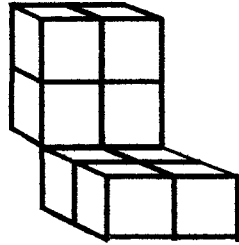# FLEX-A-CUBE

PHILIP NOBLE

This little wonder of a toy is designed by Philip Noble, Scottland.

Soon it will be 20 years ago since I saw the instructions by Paul Jackson in the booklet FLEXAGONS, which is No. 11 in the series of BOS booklets. An Italian description can be found in the book: CONTRO MOSSA by Luisa Canovi, and in Dec.92 Ernst Blauenstein made a description in "DER FALTER" No. 10 in German, and now it is here translated into English from The "Danish Origami Center" No. 4.

Get a roll of TELEX STRIP, (I got my supply from the Post & Telegraf Customer Service: Rolls of 100 meter, 18 mm wide - you call it ticker tape). Practice to fold a single cube from a strip about 50 cm long. When you can do this without any diffuculties, then you can prepare a strip 2.50 to 3 meter long by folding it into exact squares by the socalled mouse-ladder tecknique. For those few unhappy persons who do not know the mouse-ladder I give a short explanation: The strip is folded sharply in half. Hold it vertically. Left edge is twisted and laid precisely into the the sharp fold. pres flat. If you have done this right you have a precise diagonal in a square 18x18 mm, turn the thing so that this diagonal is away from you. Now alternatively fold the horizontal and the vertical in over each other, be precise in aligning the squarrs on top of each other until the strip is nearly used up. Cut the ends to form a long point.

It takes 16 squares per cube. 8 cubes is 16x8= 128 squares plus a few more for the lock. The strip is 1.8 cm wide, so you need 128x1.8=234 cm, but it is good to have a little extra lenght, ca. 3oo cm. When you have made the precise mouse-ladder you anravel it again. You are now ready to start. The diagonal in the middle of the strip is considered as no. 5, go on counting 6-7-8 & 9-10-11.

In square No. 11 fold a diagonal parallel with the one in no. 5, but opposite action, ie. if 5 is a valley, then 11 must be a mountain fold.
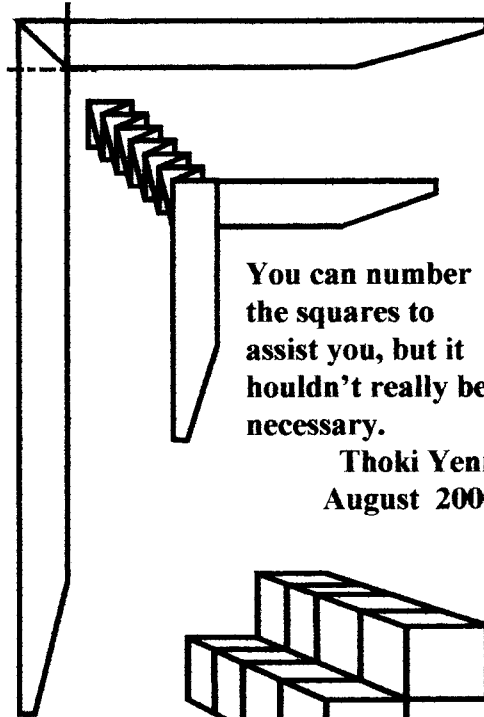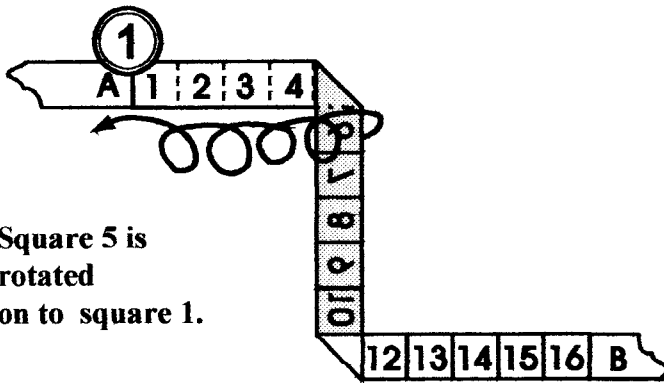

You can number the squares to assist you, but it houldn't really be necessary.
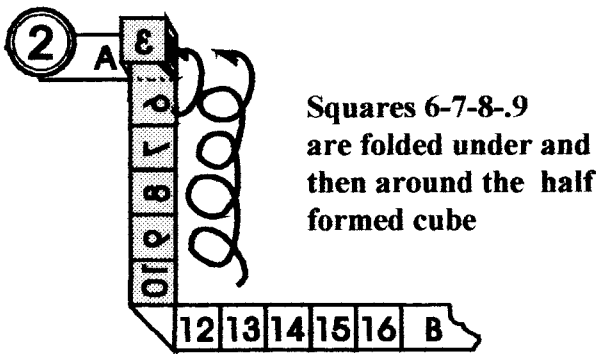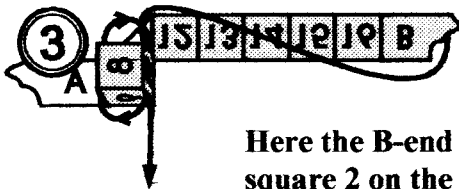
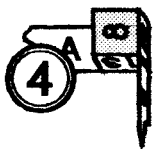Thoki Yenn
August 2000
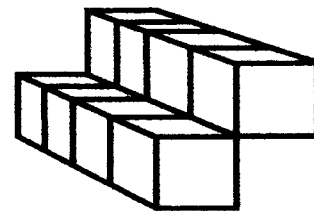
First learn how to fold a single cube.

①

A 1 2 3 4

Square 5 is
rotated
on to square 1.

12 13 14 15 16 B

② A

Squares 6-7-8-.9
are folded under and
then around the half
formed cube

12 13 14 15 16 B

③ A

Here the B-end is put under
square 2 on the right side of
the cube, then
over 9 at the lower side ,
under 4 on the left and over
7/11 and under 2 again

④

First cube complete.

When serious folding
starts, fold the first cube
in the middle of
the 3 meter long strip

The diagonals are always
placed in squares no. 5
and 11 of the 16 squares
that are used for each cube.

The diagonals are always
parallel but folded as
valley and mountain,
depending on where
the hinge to the next set
has to be placed.

Numbers on both sides of
the rehearsel strip makes
it easier to follow the
diagrams.

On the drawings on the
following pages the
numbers are merely
decorations.

OBS: If your numbering
is oriented as on my
drawings then the
connection to the next set
comes out at the foot of
the figure 2.

The first two cubes: SET No. 1

Drawing no. 4 is repeated here as a memory help.
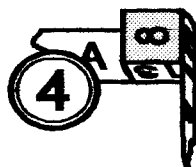
In Fig. 5 you see it here as the first cube n the B side of the strip .

The A side of the strip id sahown here with the diagonals folded in squares 5 and 11 put in square

OBS: The diagonal in square 5 is folded so that
the strip with the 6-7-8-9-10 squares
are pointing the same direction
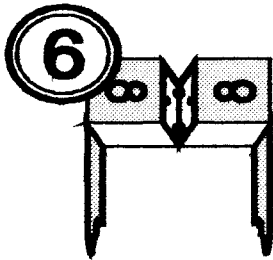## as the neighboring cube.
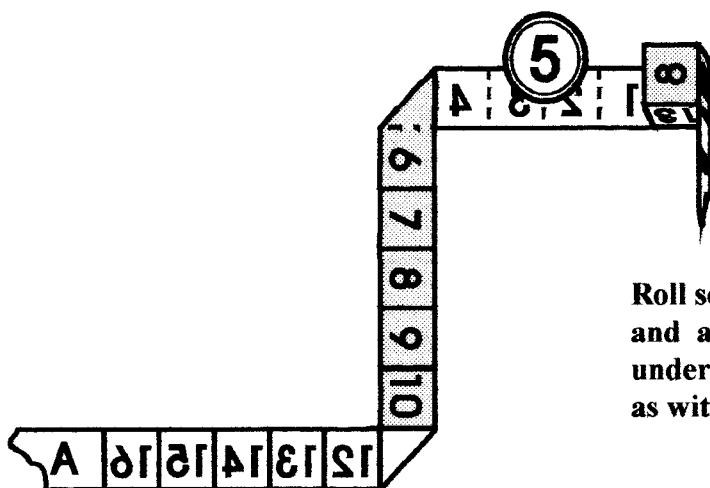
Roll square 5 on to square one
and and squares 5-6-7-8-9-10
under and around and go on
as with the first cube on the B-side.

In Fig 6 you see the strips comeing out of
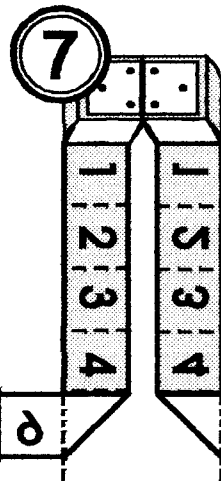the cubes in the same diredtion
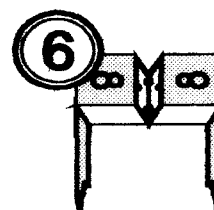
The next two cubes. SET No. 2

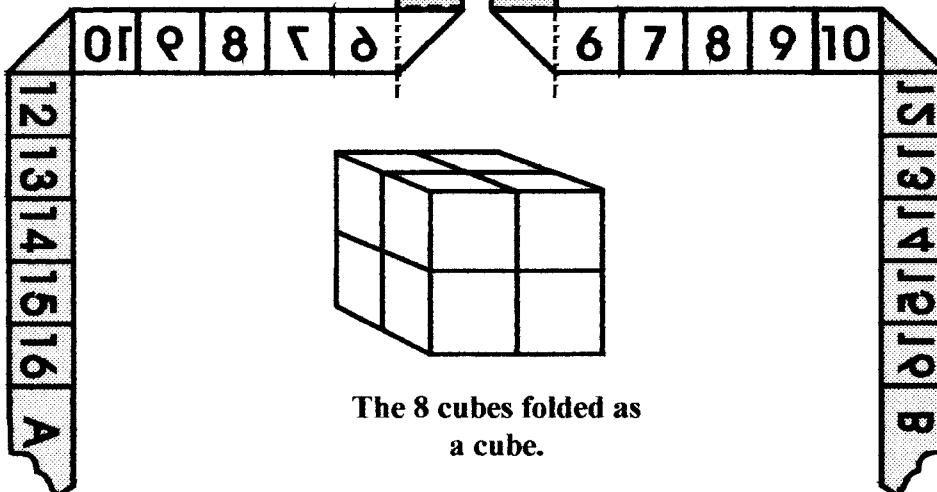Drawing 6 is repeated here supplied with drawn on hinges.

Open the hinges so that the strips
are placed flat on the tablen
and the hinges on top

Fold the diagonals in the squares 5 and 11 on both
the A side and the B-side
You already know where the strips will come out of these cubes.
namely at the sides

The sequence is:
Hingis on top in the first set
hinges at the sides by the second set
hinges at the bottom by the third set.

Fold both the
cubes
in SEt No. 2

The 8 cubes folded as
a cube.

The next two cubes. SET No. 3

Close the hinges on the first set.

**That will place the strips
at the upper edge of the cubes**

**As usual fold the diagonals in the
squares 5 and 11
as shown**

**Set 3 and 4 will be mirror images of the
first two sets.**

**The hinges will be at the sides of the
set,
that is why the digonals in 5 make the 6-7-
8-9-10
part of the strips point that way.**

**At the No. 4 and last Set there is a slight
change in n the procedure**

Go to Drawing Fig. 9

The fourth and last SET

So that the higes on the last set can arrive at the top
it is necessary this time
to fold the cubes the other way around
by rolling the squares
so that the diagonal in square 5
goes behind the first square on the strips
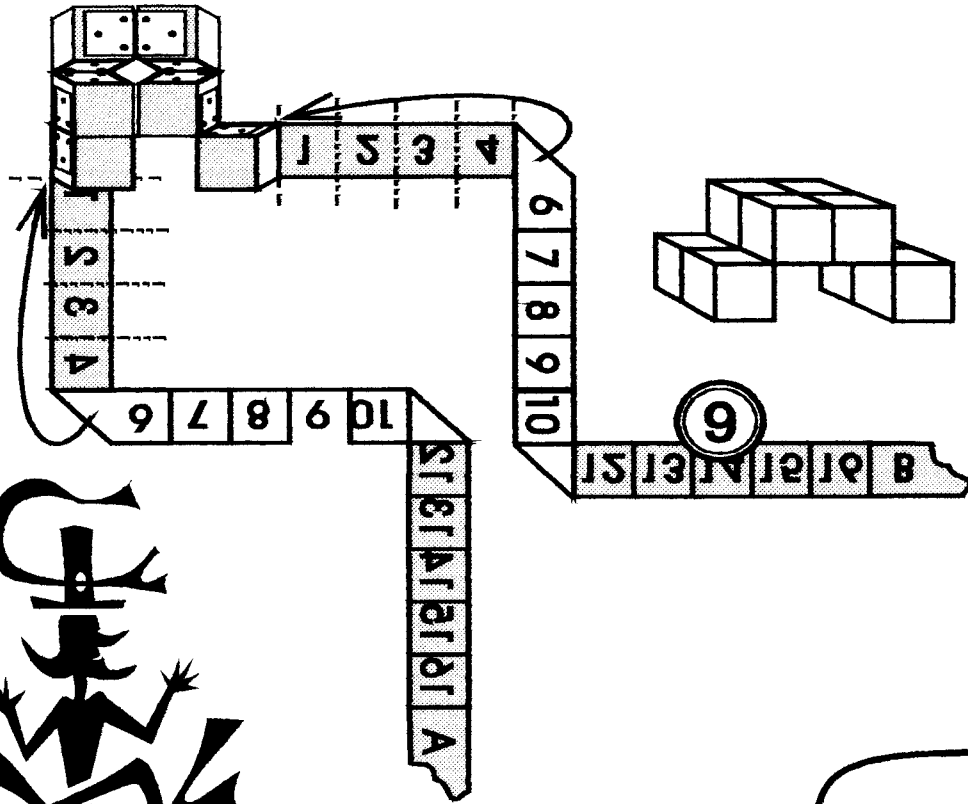
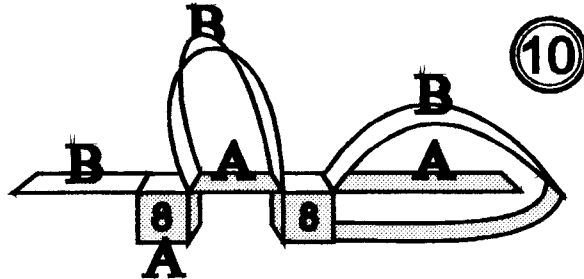He is just doing it to make it look difficult
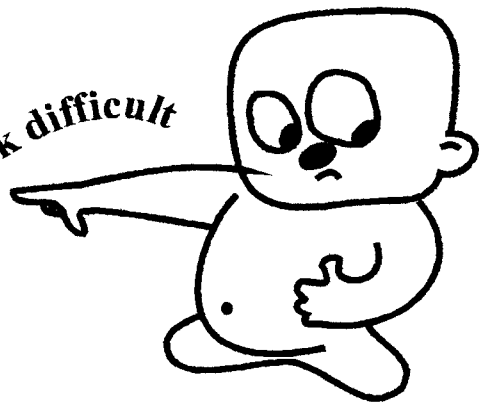
Go to next page for the lock

THE LOCK.

Only the last two cubes are shown

**The final loop on the B-Side is not pulled tight,
if you have done it, push it out into a rather large loop
as shown in Fig. 10.**

Pass the the end of the A. side strip under the
B strip so the the A-end is going into the B Loop
and pass the free end of the B strip under the top layer of the A Cube.
As I have attempted to Show in Drawing No. 10.
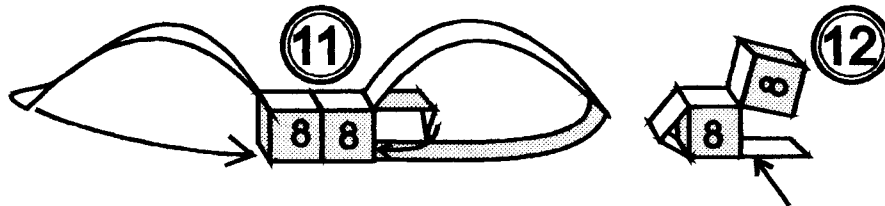
Hold the B loop open while you pull the strips
to make the cubes go together
as in Fig. 11.

Cut the end off at the A strip leaving 2 squares
and cut the end to form a point
that you can push back in under the cube,
then tighten the loop.

The last loose end is passed under the lower edge of the A Cube,
as in Fig 12..
Tighten and cut off close.

CONGRATULATION
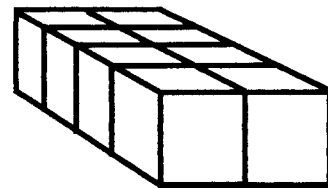
**MAKE MANY OF THEM AND MAKE MANY PEOPLE HAPPY,
or even better, teach them how to do it.**