4.3 Mock leno weaves

1. **Concept**

These fabrics form an open structure with small holes or gaps similar to leno weave fabrics. These fabrics produce an imitation of leno effects and, due to this, the weaves of these fabrics are called the mock leno weaves. See the following figure.
The formation of mock leno weave
2. The principle of the construction of the mock leno

- In Fig. 4.12 we can see two types of thread pairs.

Fig. 4.12  Plan and sections of mock leno weave
First, the weft threads 2 and 3, 6 and 7, and the warp threads of the same numbers. They have the same order of interlacing. They can approach each other easily.

Second, weft threads 4 and 5, 8 and 1 of the next repeat, and the warp threads of the same numbers. They interlace in an opposite manner. These interlacing prevent the warp or weft threads from coming together, so an open space is formed. This is the principle of the construction of mock leno.
In order to form a proper space, proper denting is necessary. We can draw the warp threats 1,2,3,4 in the same dent to help them to approach each other. Sometimes, we leave one dent empty between 1,2,3,4 and 5,6,7,8 to help forming a bigger space.
3. A variety of mock leno

- Mock leno weave, R=4

Fig. 4.13
Weaving plan of mock leno weave, R=4
Mock leno, $R=6$

**Fig. 4.14** Construction of weaving plan of mock leno weave
Mock leno, $R=10$

Fig. 4.16  Weaving plan of mock leno, $R = 10$
4.4 Huckaback weaves

1. Concept

This weave contains, on one hand, a number of warp and weft threads with long floats which make the fabric soft and moisture absorbent, and on the other hand, the plain weave threads ensuring the firmness of the structure.

See Fig. 4.17.
Huckaback weaves are used for bathroom towels, glass cloths, and for counterpanes.

**Fig. 4.17**  Huckaback weave, $R = 10$

Fabric sample
2. A variety of huckaback weaves

- See Fig 4-18. Compared with the former, the second one has more floats, so it will be softer and more moisture absorbent.
4.5 Honeycomb weaves

I. Concept

The most clear character of the honeycomb weave is the cell-like appearance. The rough and loose structure of these fabrics makes them good absorbents of moisture. Due to this, these fabrics are widely used for bathroom towels and also for bedcovers, quilts, winter garments.

Figure of honeycomb weave

Sample
II. The principle of the construction of honeycomb

Some opinions:

- **中国教科书**: (在一个组织循环内，有紧组织和松组织，逐渐过渡相间配置，在平纹组织处，织物较薄，在长浮线处较厚，薄的面积大，拱起在织物正面或反面。)
- **U.K. book**: they are formed by some ends and some picks interlacing tighter than other and therefore developing a higher tension. This controls the fabric dimensions causing the slacker ends and picks to buckle and stand out on the surface.
- **Our book (based on Soviet Union)**: The ridges of honeycomb weave are formed by the longer floats of warp and weft.
III. Construction of honeycomb

1. Construct a diamond by single diagonal lines
2. Fill in inside of the diamond leaving one row of squares
   - Example: Base weave 1/5↑ K₀=Kᵧ=6.

A: calculate the repeats with the formula
   \[ R = 2k - 2 = 2 \times 6 - 2 = 10 \]

B: construct the diamond weave 1/5↑

C: fill the blank squares in the opposite position
IV. Variations of honeycomb
Fig. 4.20 Brighton honeycomb weave

Fig. 4.21 Honeycomb are stitched with double diagonal lines
Fig. 4.24  Honeycomb weave variation
Home works:

1. Drawing a weaving plan of mock leno, $R_O=R_y=8$, and use the mark “O” to indicate the holes.

2. Drawing the following honeycomb weaves:
   1) Base weave $1/5 \uparrow K_O=K_y=6$.
   2) Base weave $1/7 \uparrow K_O=K_y=8$. 