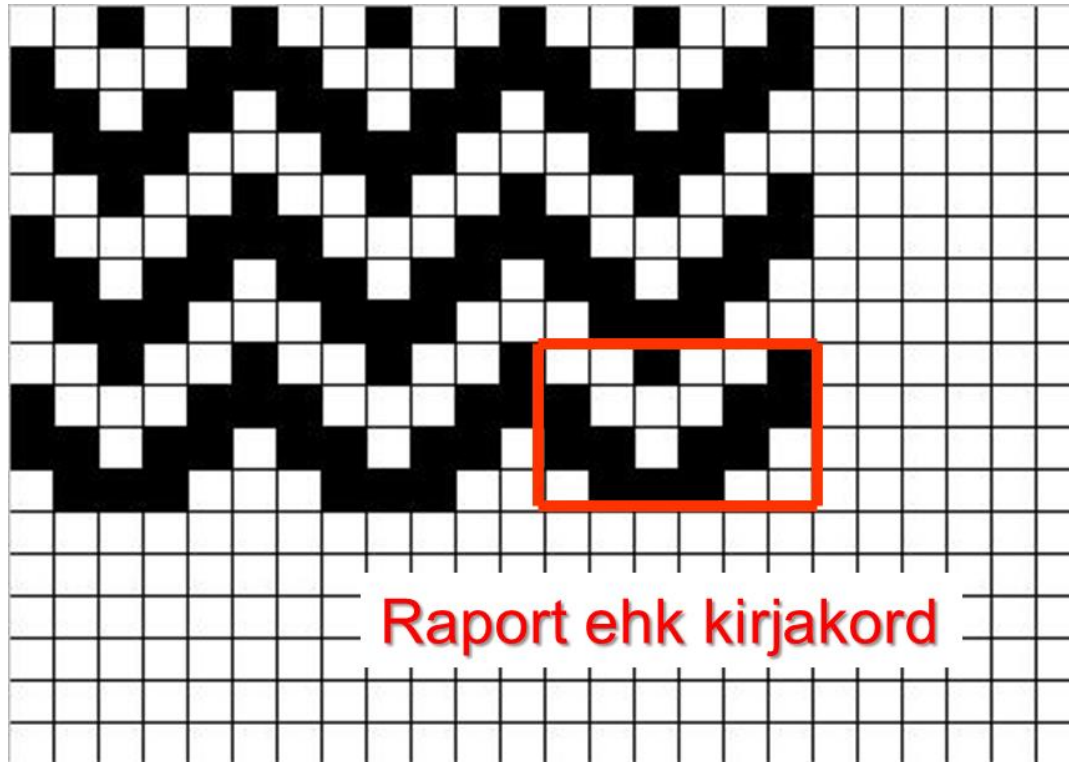




SIDUSEÕPETUS
KANGATEHNIKAD

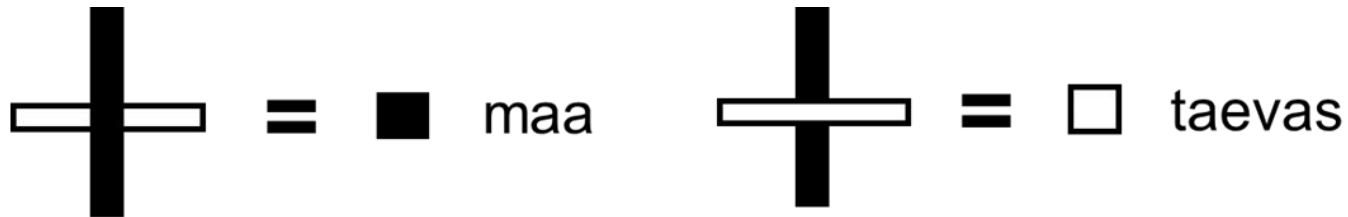
SIDUSEÕPETUS

- **KANGA KIRI** koosneb kirjakordadest e. raportitest.
- **RAPORT e. kirjakord** – väikseim võimalik osa kanga kirjast, kus on näha kõik erinevalt ristlevad lõime- ja koelõngad.

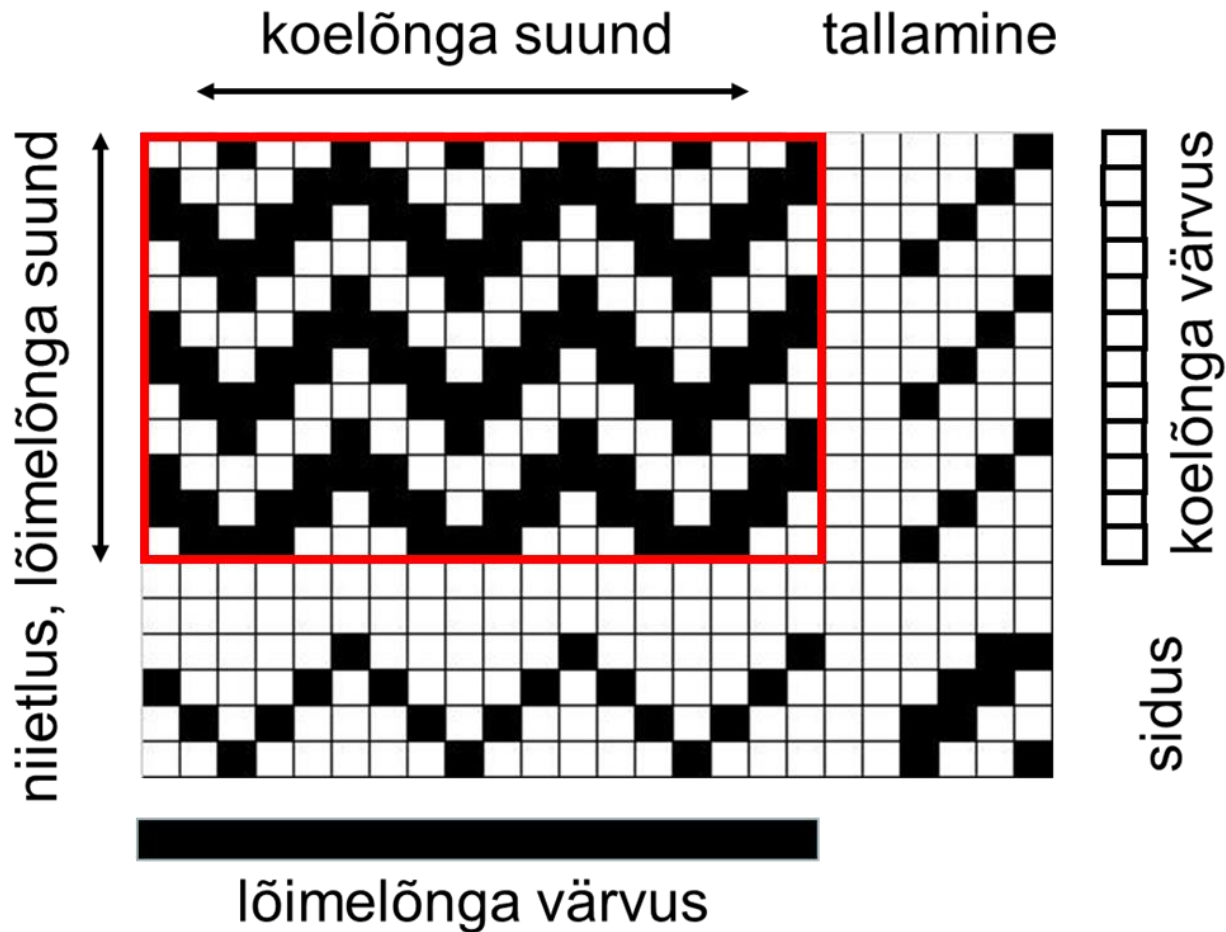


SIDUSEÕPETUS

- **SIDUS** – viis, kuidas lõime- ja koelõngad omavahel ristlevad.
- **SIDUSPISTE** – koht siduses, kus lõimelõng jookseb üle koelõnga või vastupidi.
- **NAAST e. lõngajooks kanga pinnal** – moodustub kahe siduspiste vahele, kui lõng jookseb sidumata vähemalt üle kahe lõnga.
- **KANGA elastsus**
- **KANGA topilisus**
- **KANGA tugevus**
- **SEADLUS** – niietus, sidus, tallamine.



KANGAKIRI

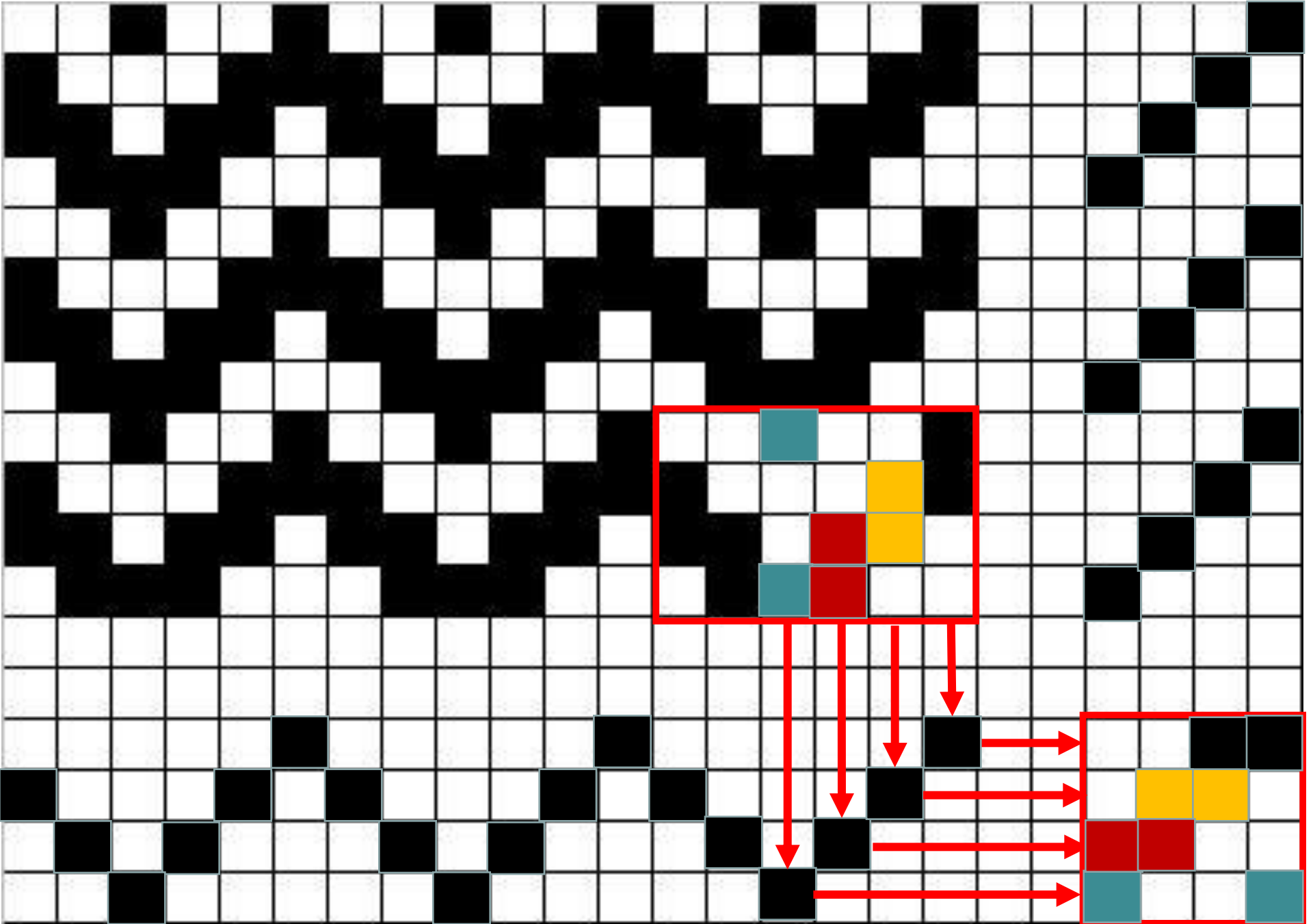


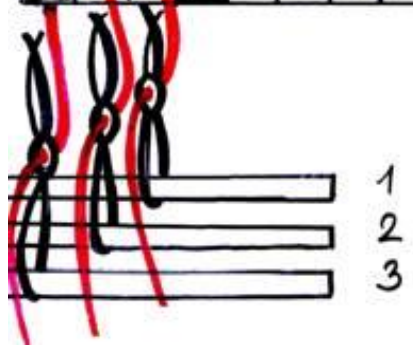
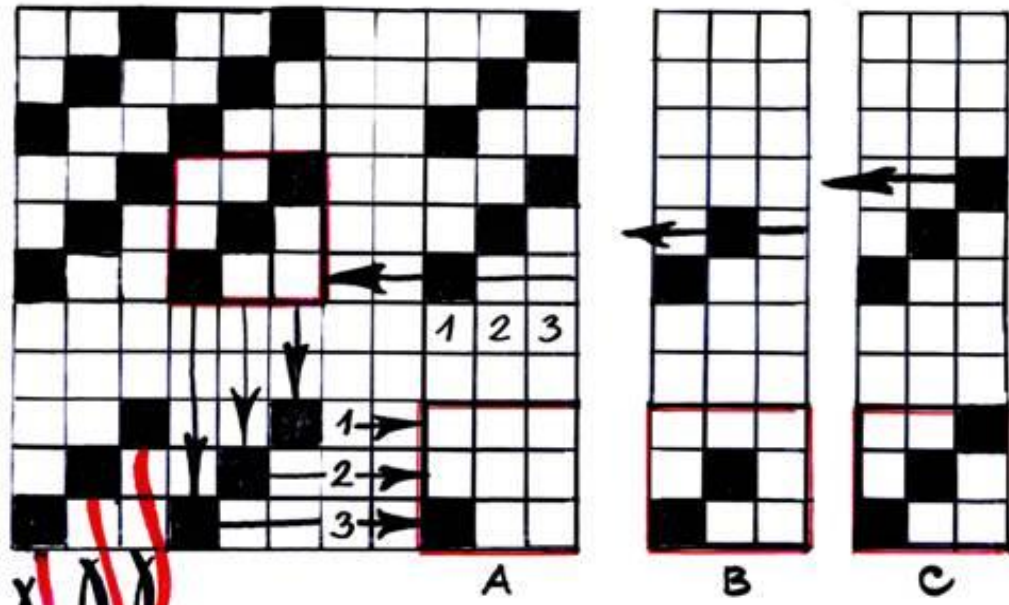
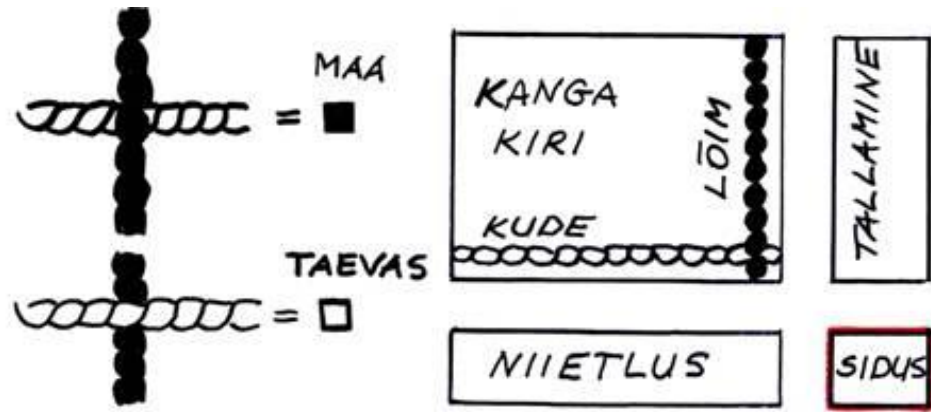
SEADLUSE MÄRKIMINE

- Märgitakse nn kangapaberile (ruudupaber).
- Vertikaalne ruudurida tähistab 1 lõimelõnga.
- Horisontaalne ruudurida tähistab 1 koelõnga.
- Mustaks värvitud ruut ■ tähistab lõimelõnga kulgu **üle** koelõnga.
- Mustade ruutude põhjal saab otsustada, millised lõimelõngad mingil kudumishetkel üles tõstetakse.
- Must ruut esindab valminud kangas neid kohti, kus lõim on kanga paremal poolel nähtav.

SEADLUSE MÄRKIMINE

- Valge ruut □ tähistab koelõnga kulgu üle lõimelõnga.
- Koelõnga jooksu kanga pinnal näitavad üksteise kõrval asetsevad valged (tühjad) ruudud.
- Lõime poolt moodustatav lõngajooks märgitakse siduses kahe või enama üksteise kohal asetsevate mustade ruutudega.
- **TASAPINDNE KANGAS**
- **KOEPINDNE KANGAS**
- **LÕIMEPINDNE KANGAS**

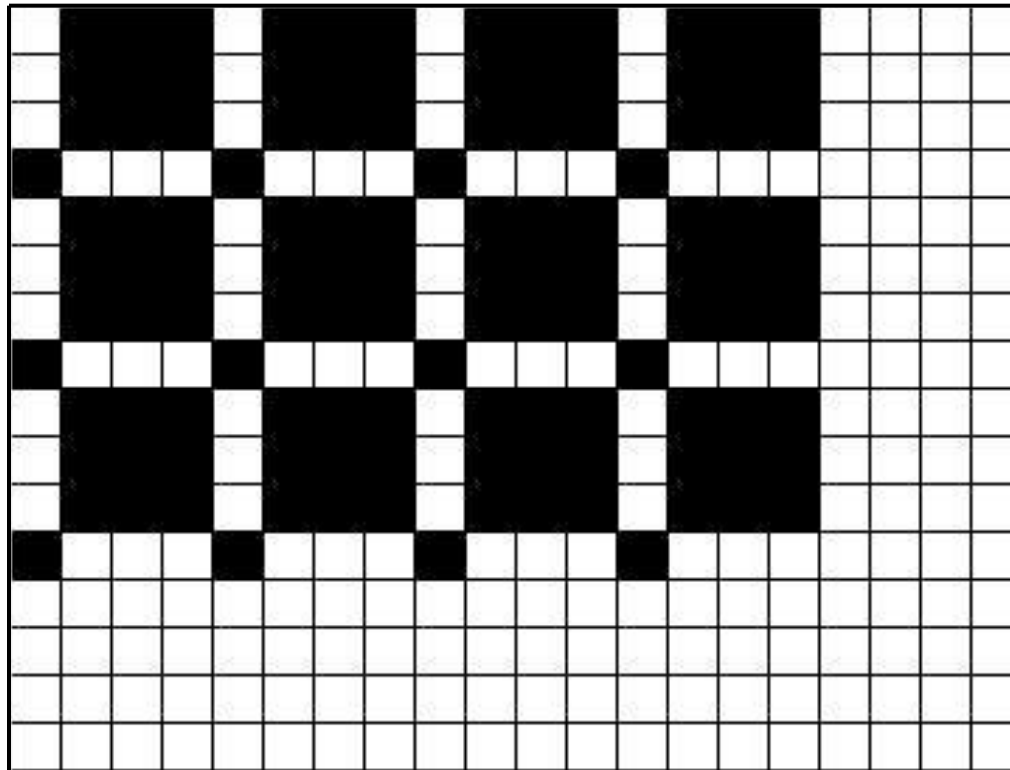




1. Kangakirjast eraldada raport, ehk 1 kirjakord
2. Niietus märgitakse kangakirja alla 2-e ruudurea kaugusele
3. Vaatan raporti esimest **vertikaalset parempoolset** mustririda ja märgin selle esimesele niieraamile musta ruuduna või ristiga
4. Vaatan järgmist vertikaalset raporti ruudurida – kui seal mustad ja valged ruudud asetsevad omavahel kuidagi teisiti kui esimeses reas, siis teen märke teisele niieraamile (kui oleks täpselt samasugune ruutude paigutus kui esimesele raamile, siis teeksin ka teis märke esimesele raamile eelneva märke kõrvale)
5. Vaatan kolmandat vertikaalset rida raportis ja näen, kas see reastus sarnaneb eelmisele või üle-eelmisele reale, kui ei, siis teen märke kolmandale niieraamile. Nii vaadatakse ja märgitakse kogu raport läbi.
6. Tallamine märgitakse samal põhimõttel, ainult nüüd vaadatakse raporti horisontaalridu suunaga alt üles
7. Esimene raporti rida märgitakse esimesele tallalauale (vasakpoolne)
8. Jne
9. Niietuse ja tallamise ristumiskohale skeemis märgitakse või õigemini kantakse raportist üle sidus (siduse pilt). – vt eelnevat joonist ja järgnevaid slide (täisekraanil – sest on efektid, mis selgitavad skeemi saamise järjekorda.

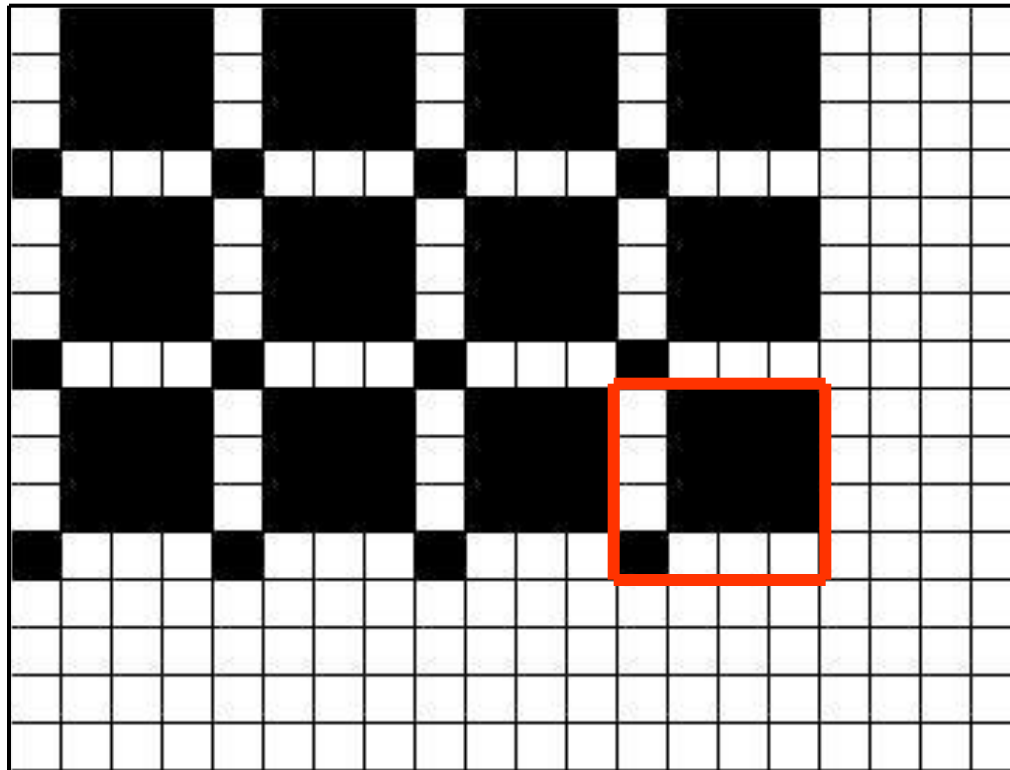
ÜLESANNE 1

Eralda punase joonega raport !



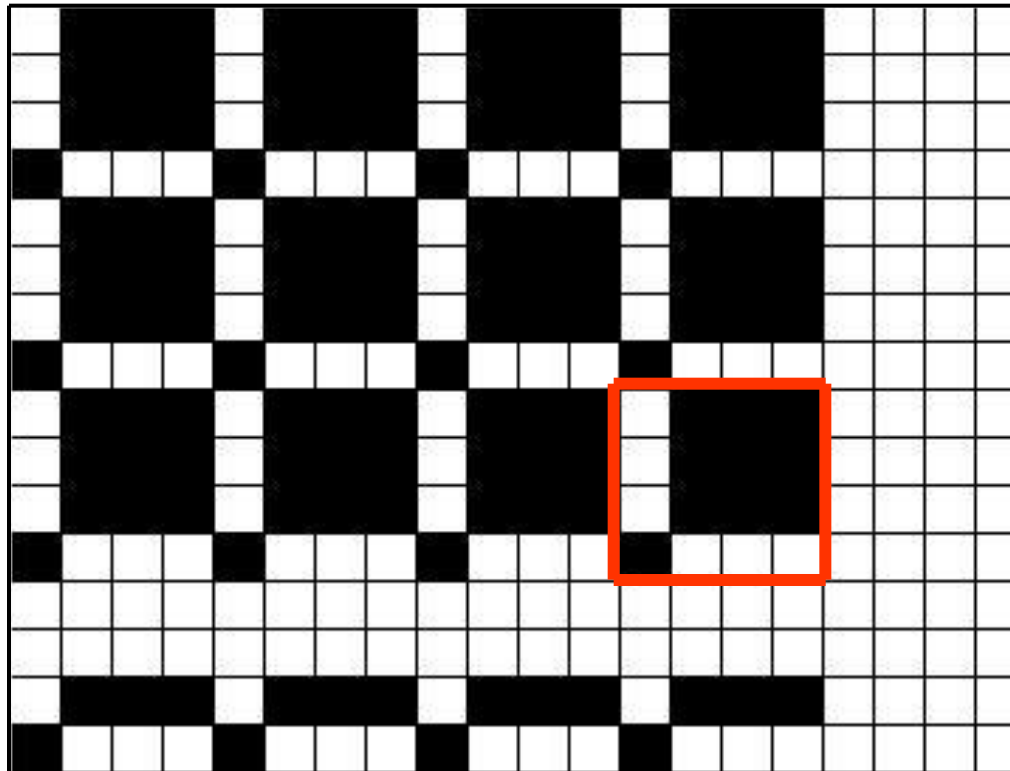
ÜLESANNE 1

Märgi niietlus!



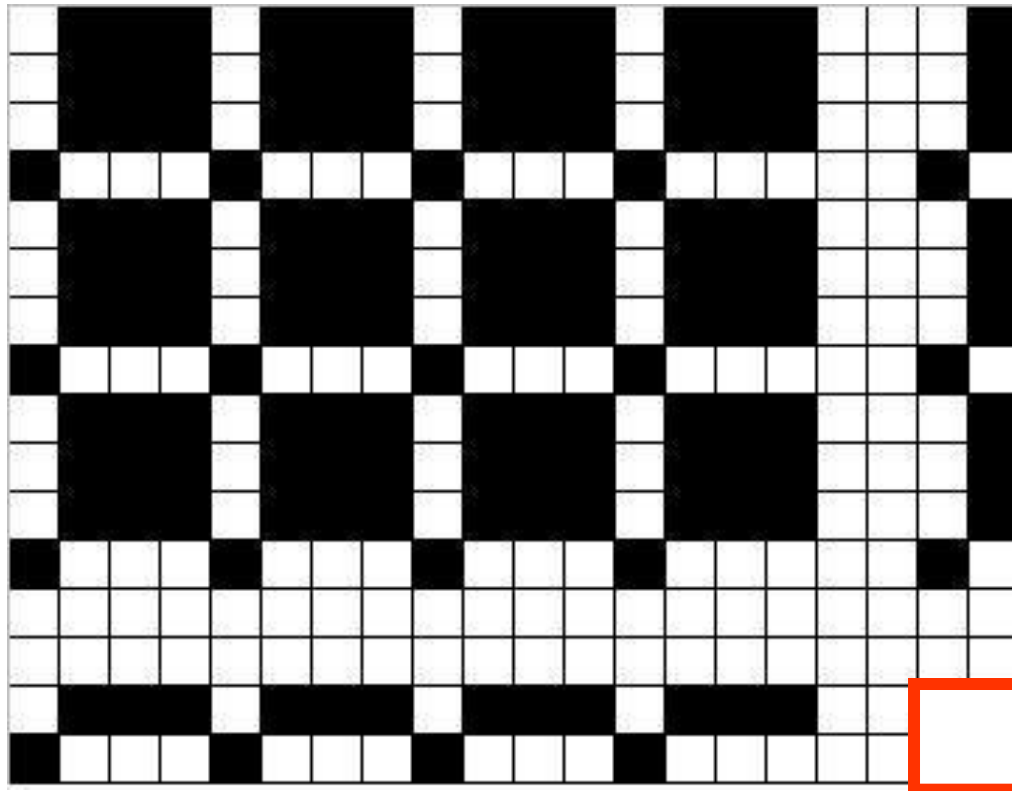
ÜLESANNE 1

Märgi tallamine!



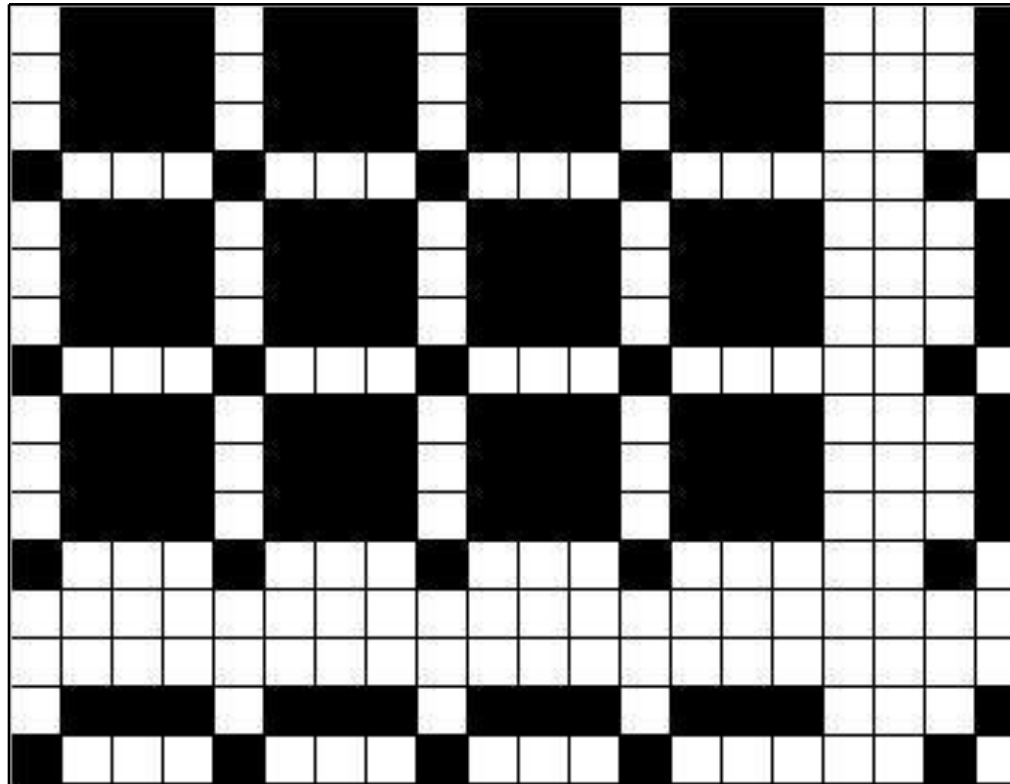
ÜLESANNE 1

Märgi sidus!



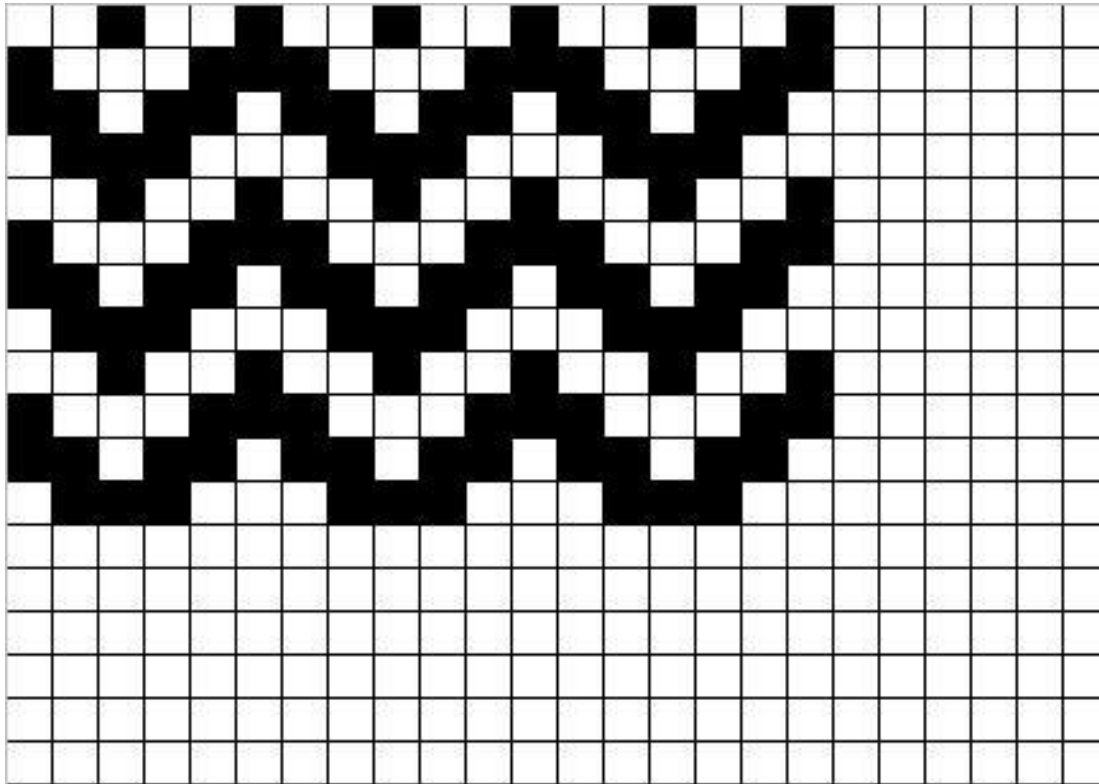
ÜLESANNE 1

Vastus!



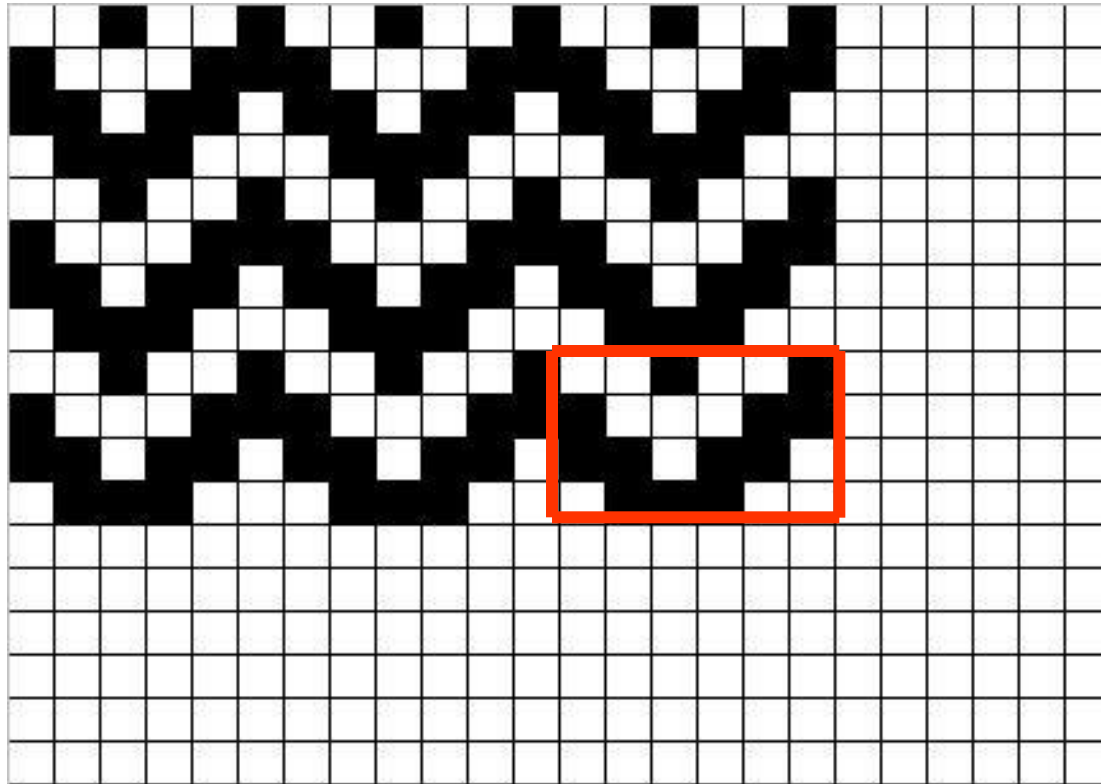
ÜLESANNE 2

Eralda punase joonega raport !



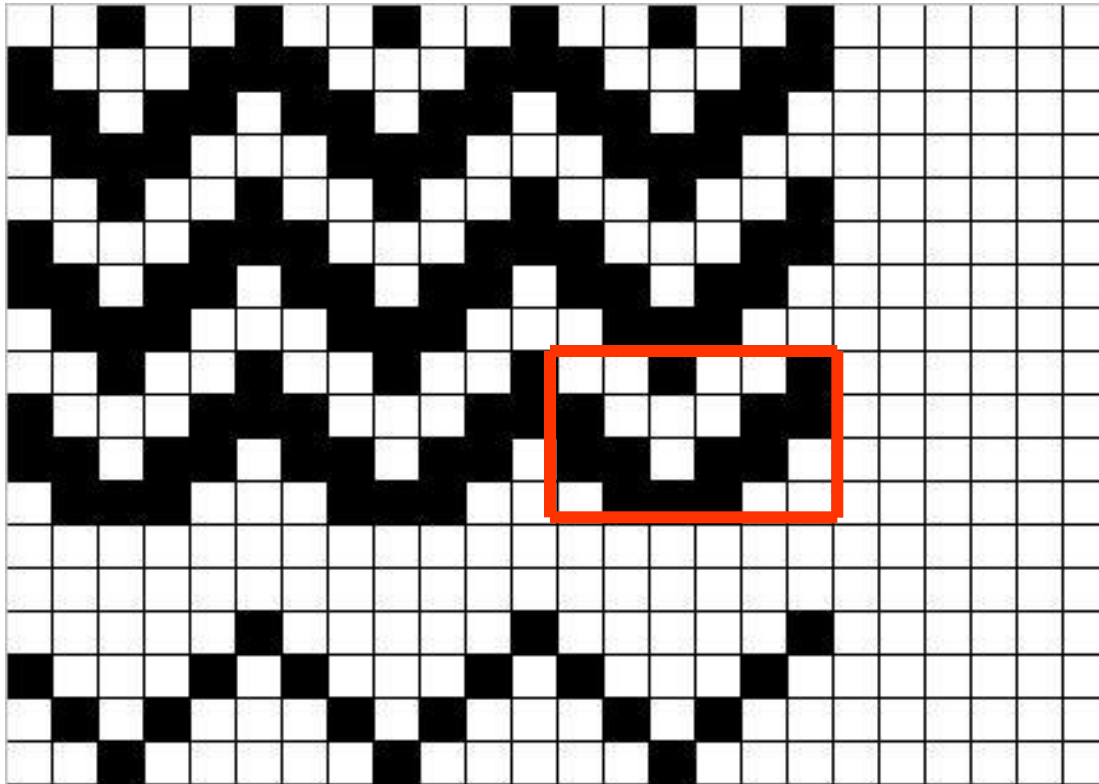
ÜLESANNE 2

Märgi niietlus!



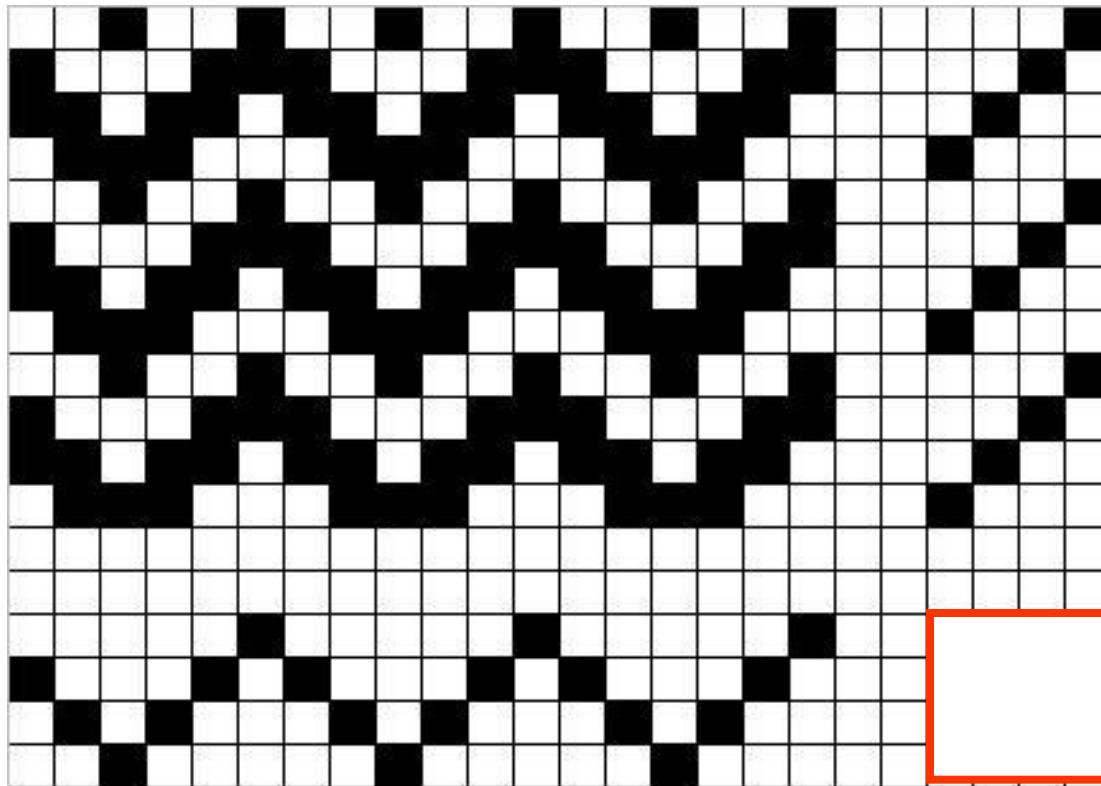
ÜLESANNE 2

Märgi tallamine!



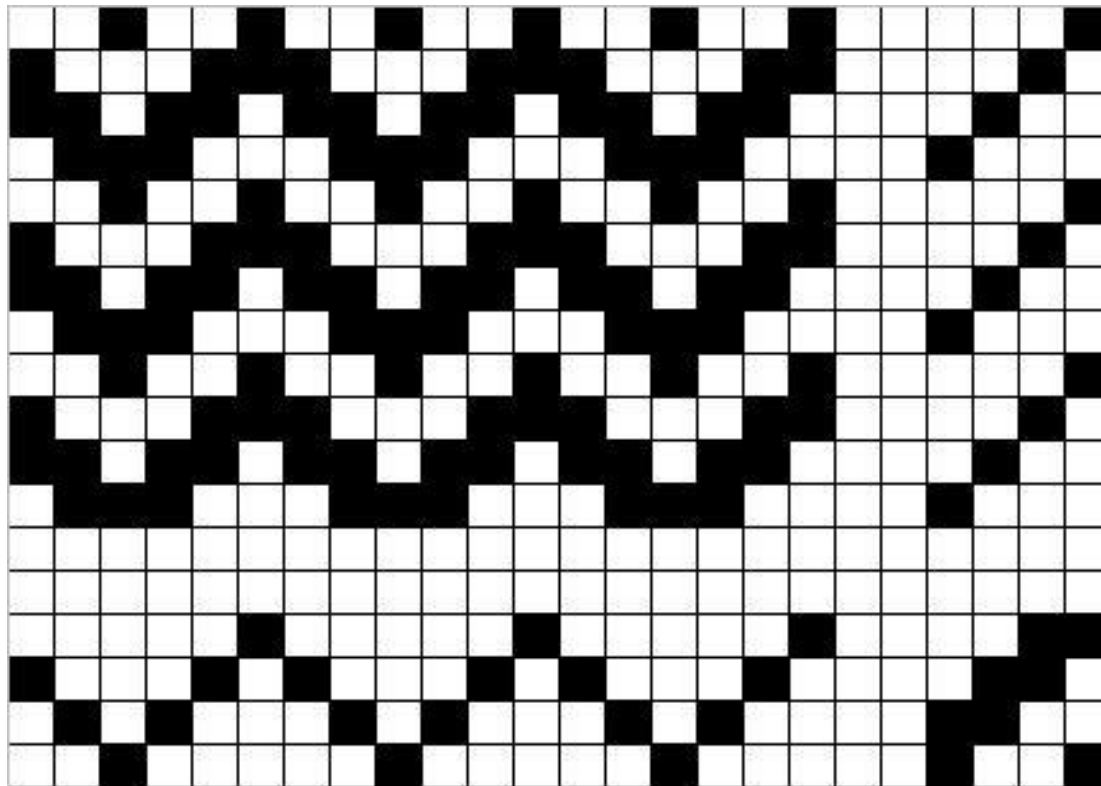
ÜLESANNE 2

Märgi sidus!



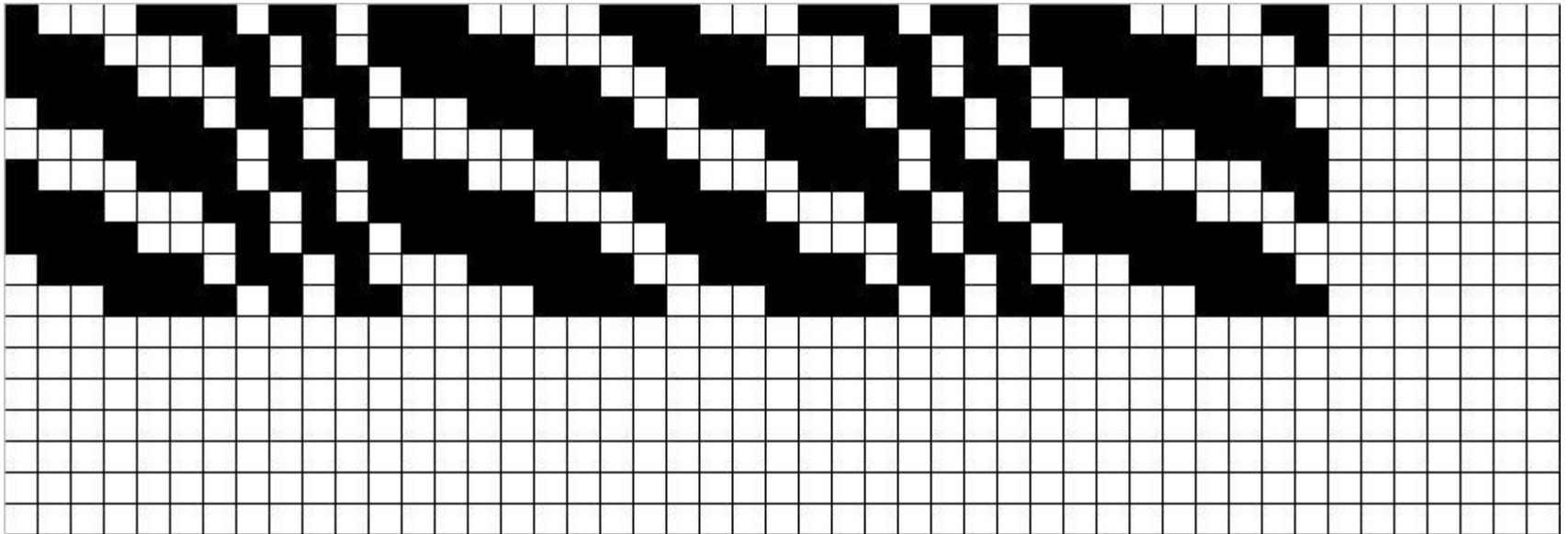
ÜLESANNE 2

Vastus!



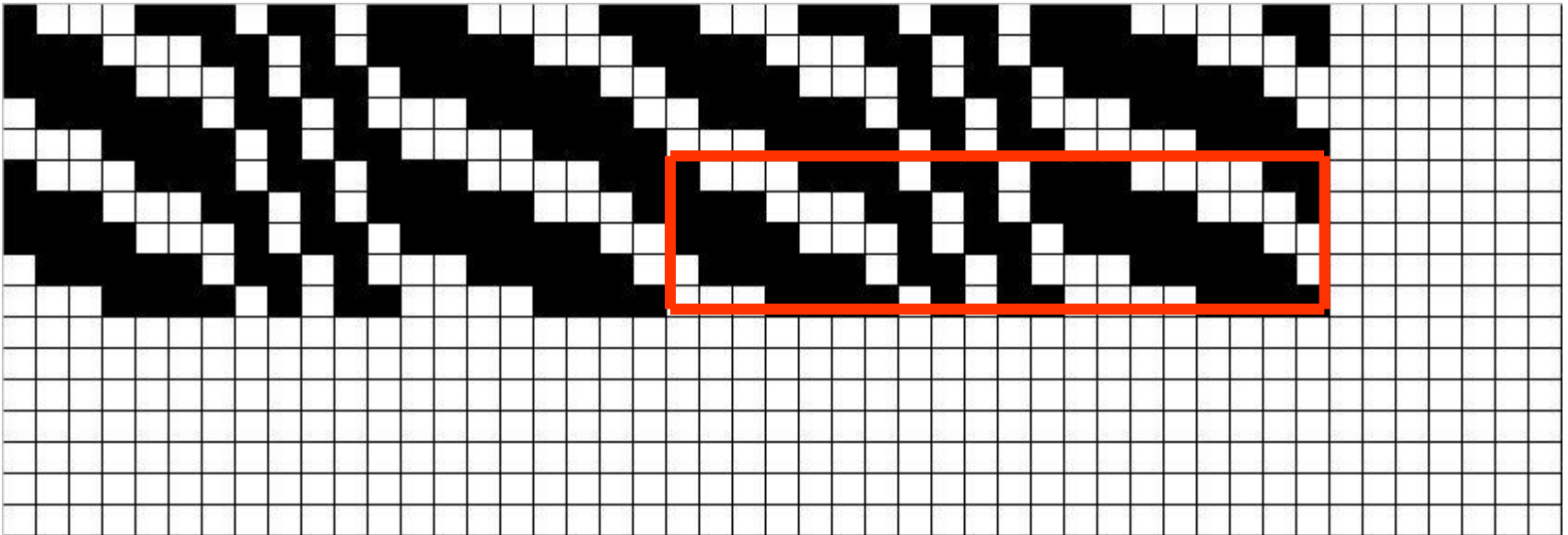
ÜLESANNE 3

Eralda punase joonega raport!



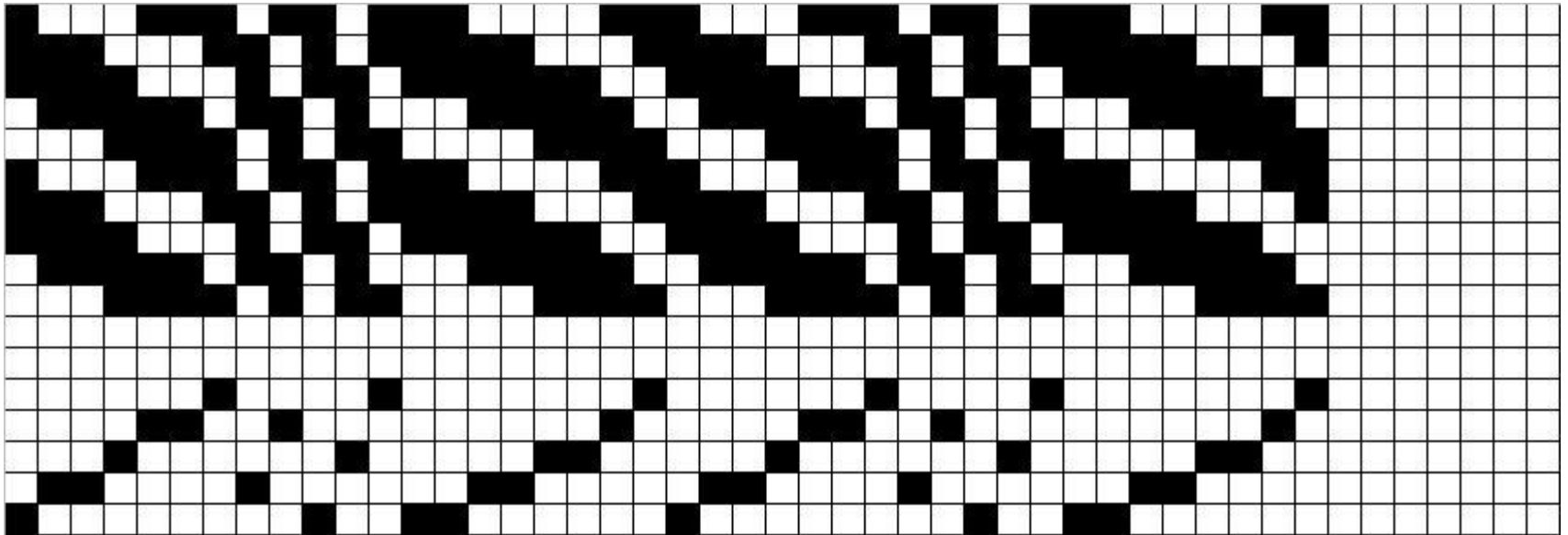
ÜLESANNE 3

Märgi niietlus!



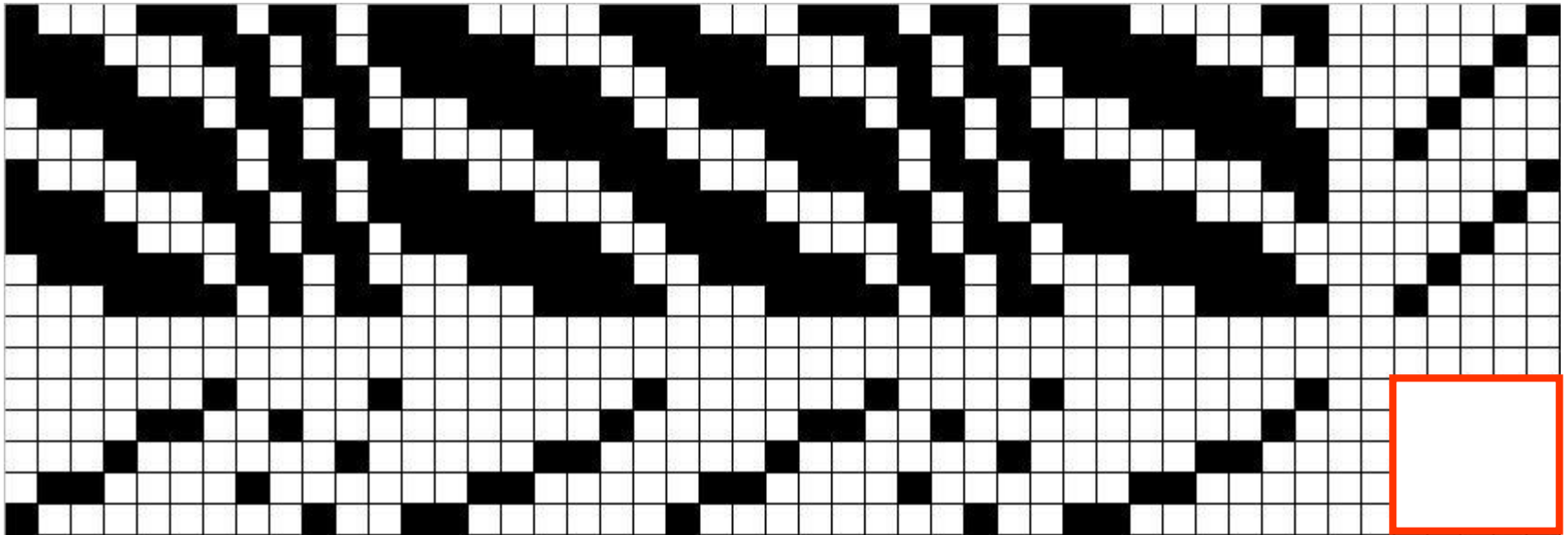
ÜLESANNE 3

Märgi tallamine!



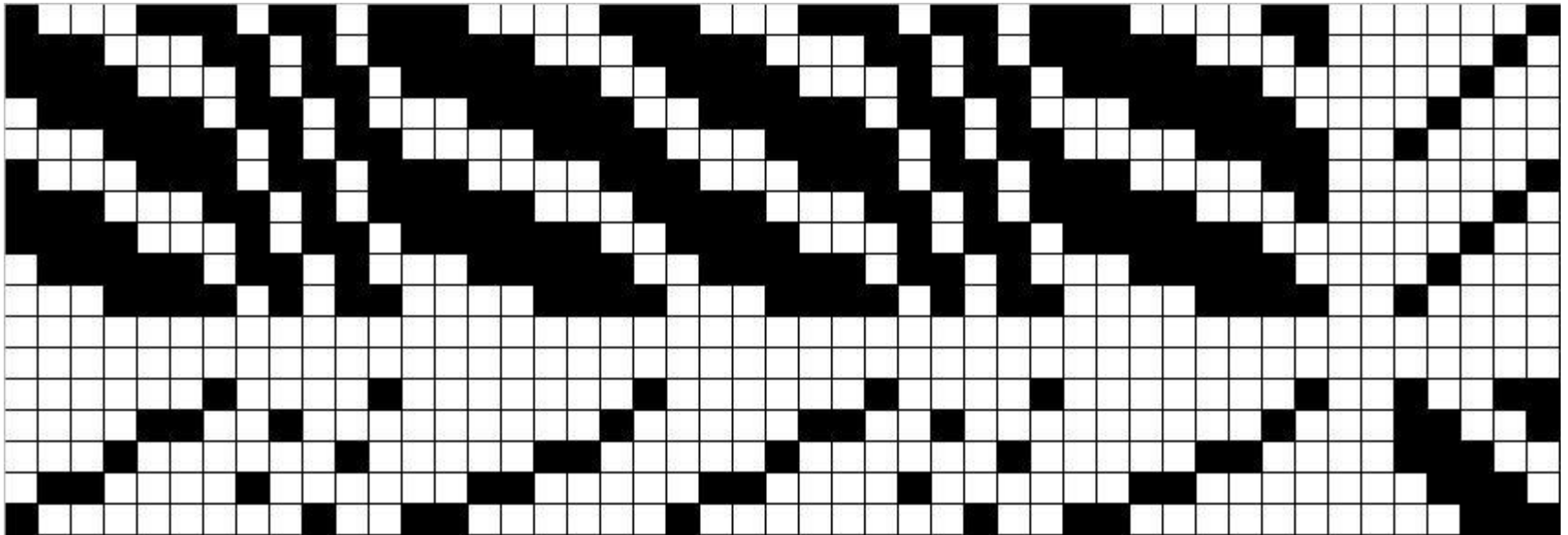
ÜLESANNE 3

Märgi sidus!



ÜLESANNE 3

Vastus!



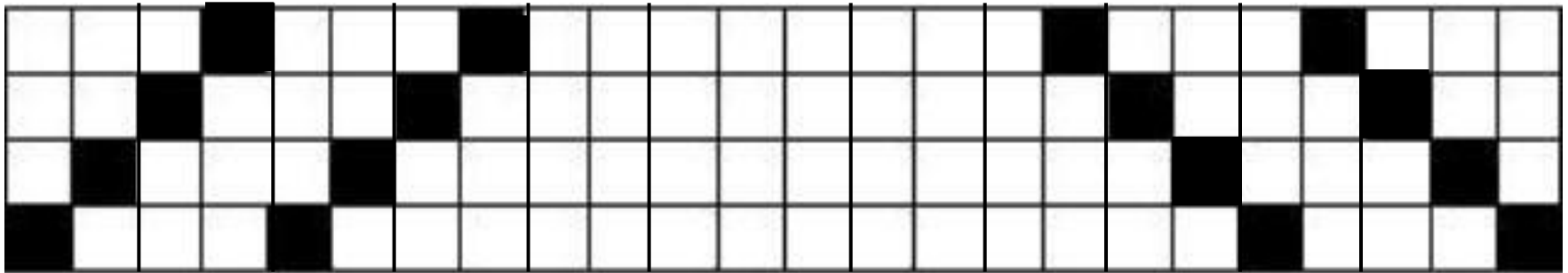
NIETLUSED

- Iga kangatüüp nõuab eriilmelist niietlust.
- Niietluse nimetuse järgi võib ära määrata kanga tüübi.
- Niietluste abil luuakse ka uusi kangakirju.

REAS e. JÄRJELINE NIETLUS

a) tagant ette

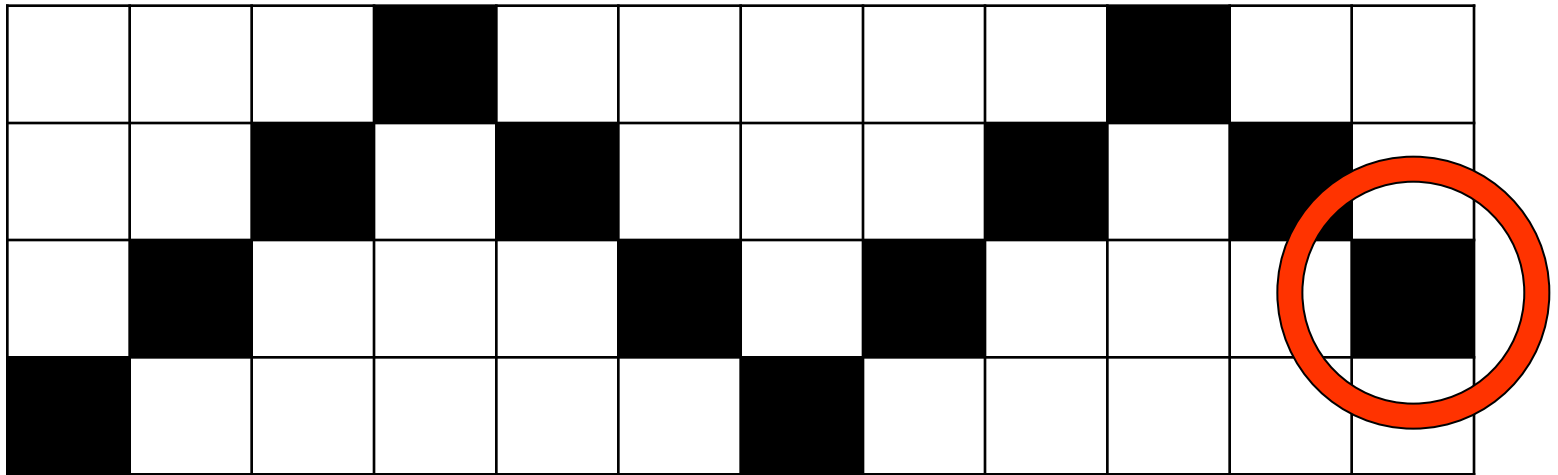
b) eest taha



- * Enimkasutatav niietlus.
- * Sobib labastele, toimsetele, atlass- ja kreppkangastele.

NURKNIETLUS

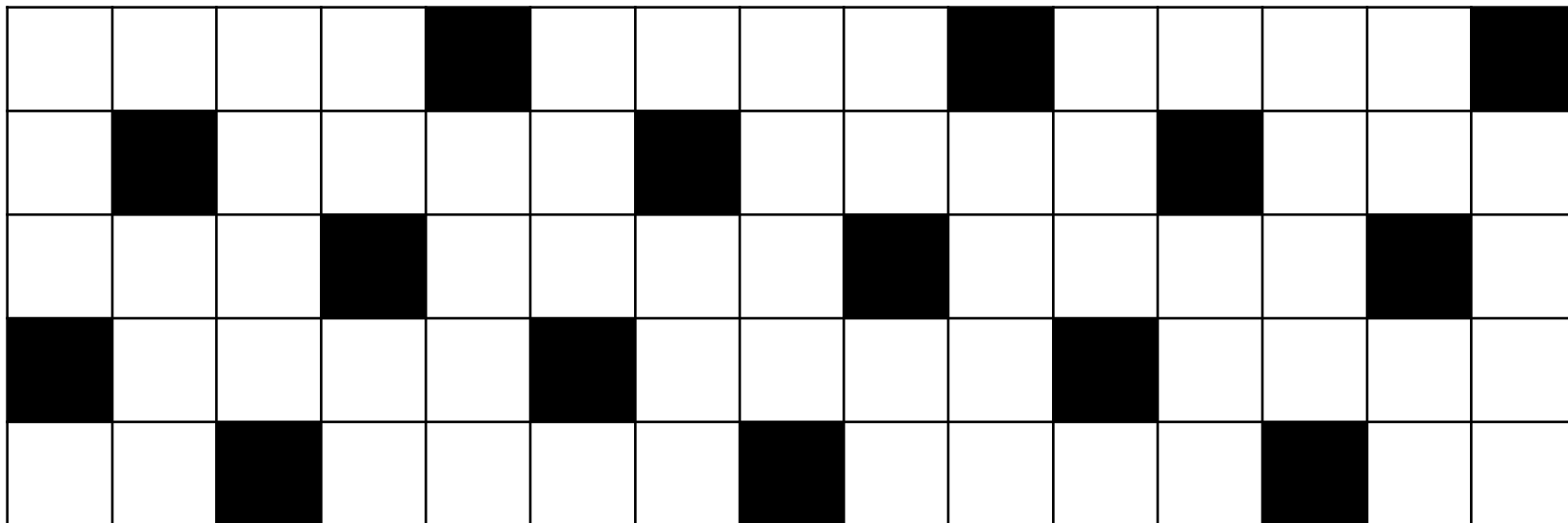
c)



- * Palju kasutatav niietlus.
- * Sobib rist-, murd-, nurktoimsetele, vahvel- ja kreppkangastele.

ATLASS- e. HAJUNIETLUS

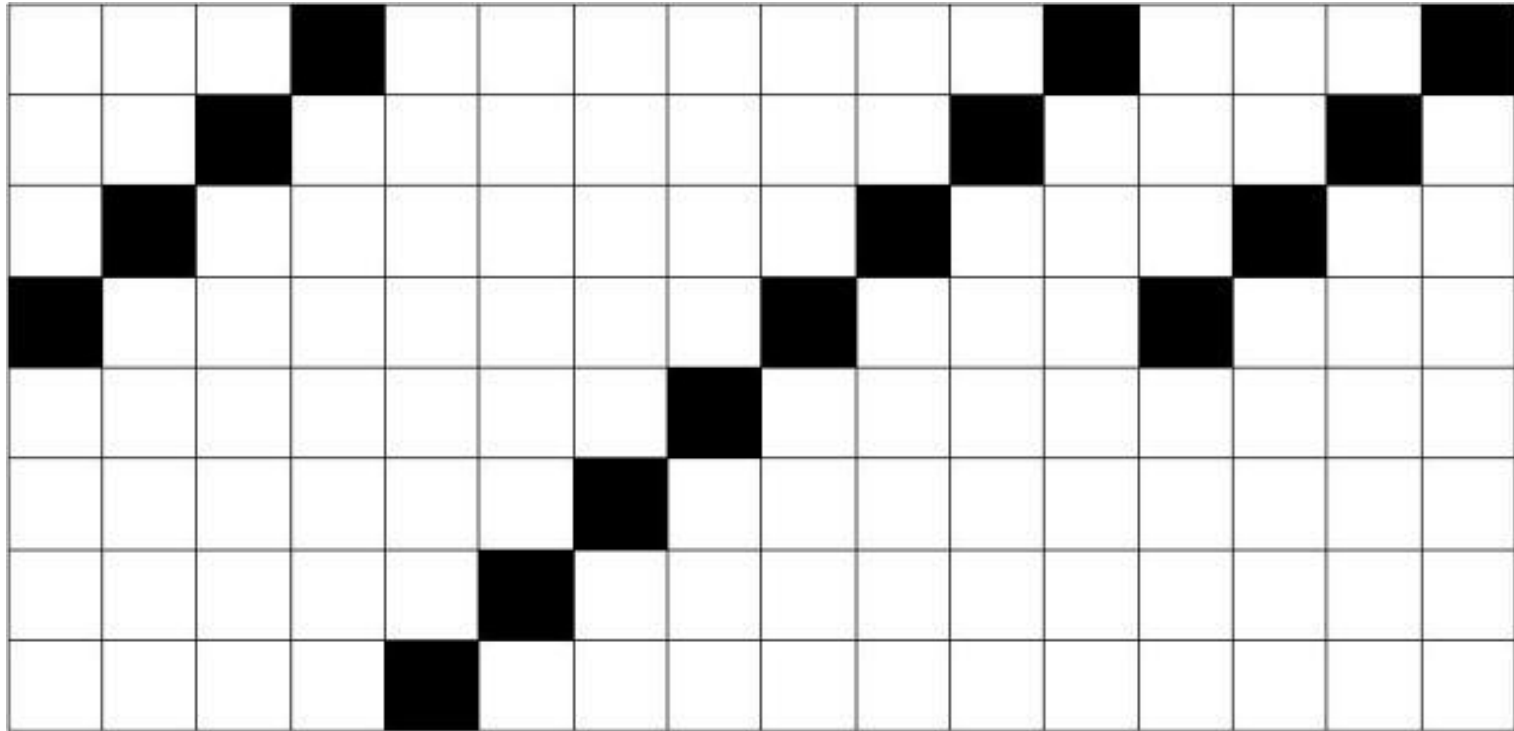
d)



- * Raskesti meeleSpeetav.
- * Kasutatakse atlasskangaste puhul, kui soovitakse kududa tihedaid, peenest materjalist kangaid (lõngad hõõrduvad vähem ja ei katke nii kergesti).

RÜHMNIETLUS

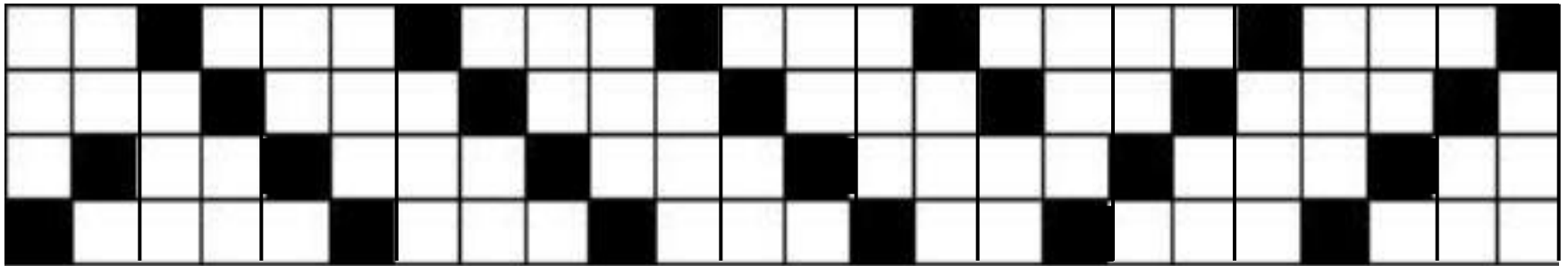
e)



- * Kujuneb neis kangais, kus kirjas on erinevaid tervikosi, mis sisuliselt kuuluvad erirühmadesse.
- * Kasutatakse kiri-, drell-, ja suurendatud seadlustega kangaste puhul.

MURDNIETLUS

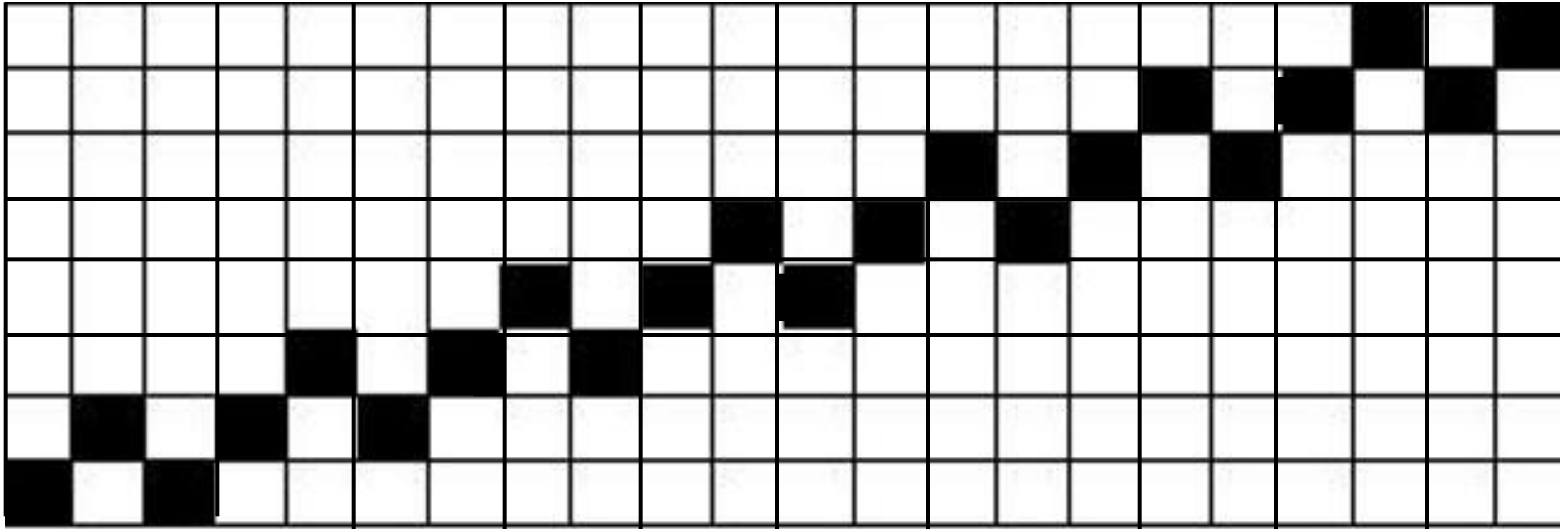
f)



- * Toimejooned ei ole nurkselt vaid murduvad.
- * Kasutatakse toimsete villaste kangaste puhul.

ASTANGNIETLUS

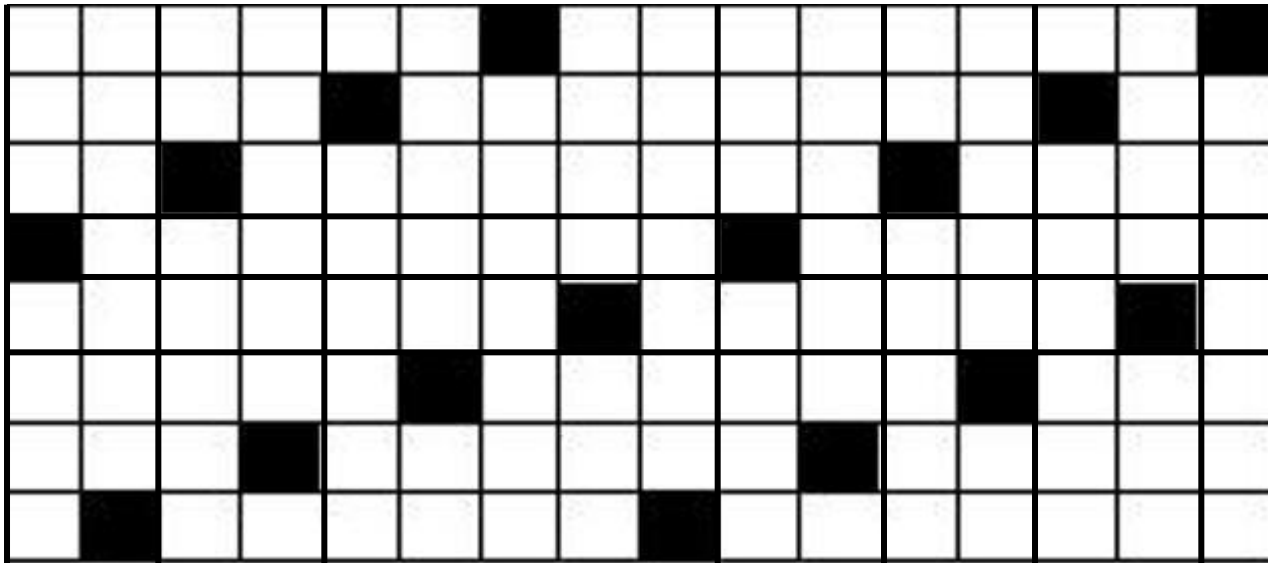
g)



- * Astmeliselt on liidetud väikesed toimejoone osad.
- * Kasutatakse suuremate risttoimsete kirjade puhul.

LAHKNIETLUS

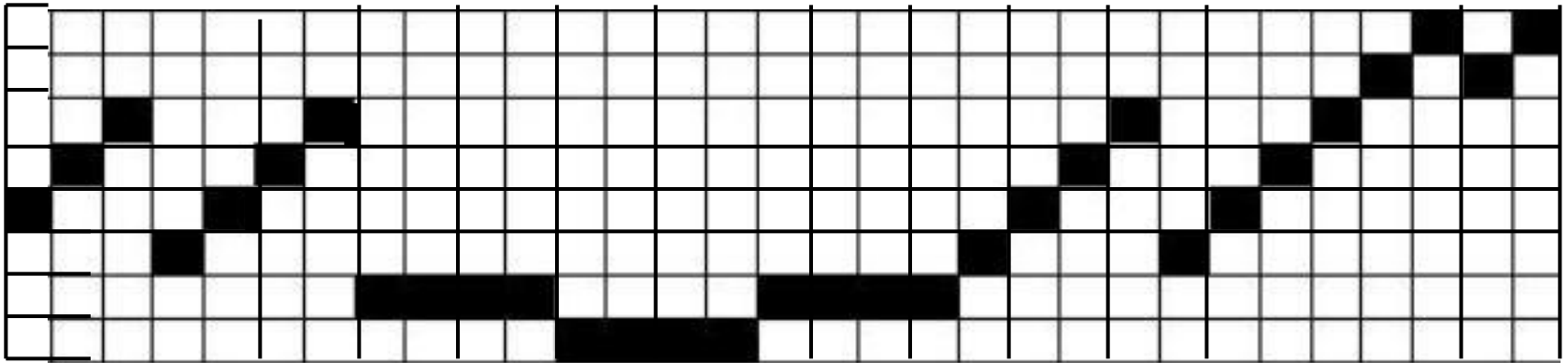
h)



* Vajatakse põiktoimsete- ja kreppkangaste tuletamisel.

LIITNIIETLUS

i)



* Kasutatakse liitkangaste puhul, kus mitmed niietlused on omavahel liidetud.

SIDUSE UURIMINE

Lõime- ja koelõnga määramine kangatükil

Kui riidetükil on ära lõigatud koeservad, siis lõimesuunda võib leida järgmiselt:

- Kangast venitades - koesuund venib rohkem, lõimesuund vähem;
- Lõimelõng on tõmbamisel: tugevam, ühtlasem, tugevamalt (rohkem) korrutatud, õhem-peenem;
- Tõmmatakse kanga eri suundadest lõngad välja ja võrreldakse neid omavahel – lõimelõng on sirgem;
- Lõnga tihedus on lõimesuunal suurem;

SIDUSE UURIMINE

Lõime- ja koelõnga määramine kangatükil

- Vaadates kangast vastu valgust võib märgata lõimesuunas kerget triibulisust;
- Mustriistel kangastel enamasti triibud ühtivad lõimesuunaga;
- Karustatud kangaste karus on lõimesuunaline;
- Ebatasasused lõngatihedusel on üldiselt koesuunas;

SIDUSE UURIMINE

Lõime- ja koelõnga määramine kangatükil

- Poollinastel/poolvillastel kangastel on lõim puuvillane;
- Kui toimse kanga diagonaaljooned “jooksevad” alt vasakult üles paremale, siis lõim on vertikaalsuunas.

NB! Kui kangal on koeserv näha, siis - lõim on alati koeservaga paralleelne!!!

KIRJA MÄRKIMINE RIIDETÜKI ABIL

**Abivahenditena kasutada luupi ja tõmbi
otsaga nõela.**

1. Kanga servad lõigata tasaseks.
2. Mõned lõngad tõmmata ülaservast ja paremast servast välja.
3. Kirja märkimist alustada paremalt lõimelõnga paremale tõmmates. Musta ruuduna märgitakse lõim siis, kui ta asetseb koelõnga peal. Nii märgitakse alt üles kuni on selgelt näha korduvus.

KIRJA MÄRKIMINE RIIDETÜKI ABIL

**Abivahenditena kasutada luupi ja tõmbi
otsaga nõela.**

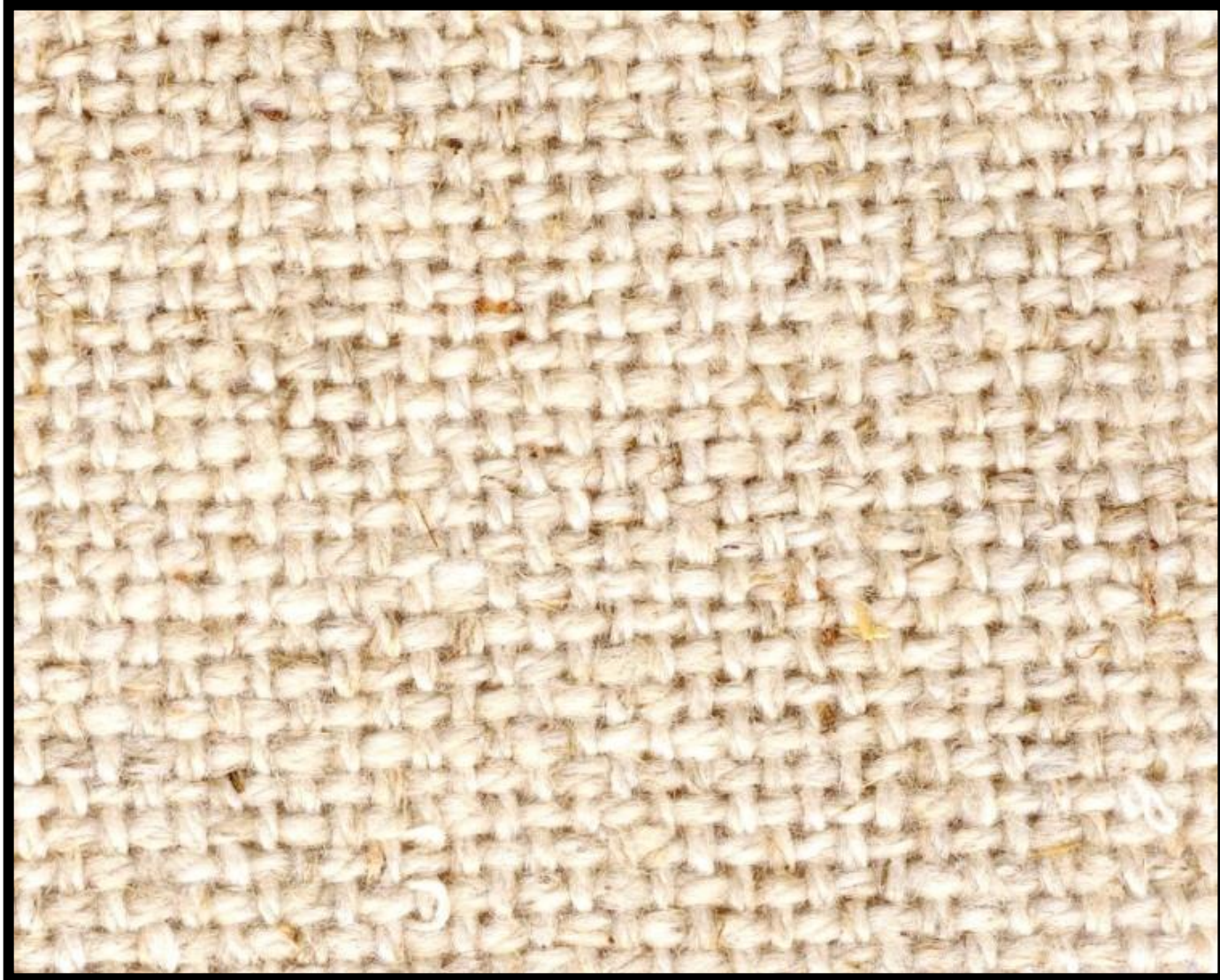
4. Eemaldada see lõimelõng kangast.
5. Töö kordub järgmise lõimelõnga juures.
6. Jätkatakse kuni kordumine on ilmnenud.
7. Märgitud joonisel eraldatakse kirjakord e.
raport.

Ülesanne!



KANGATEHNIKAD
I Ühekordsed kangad
LIHTKANGAD
a. Algkangad

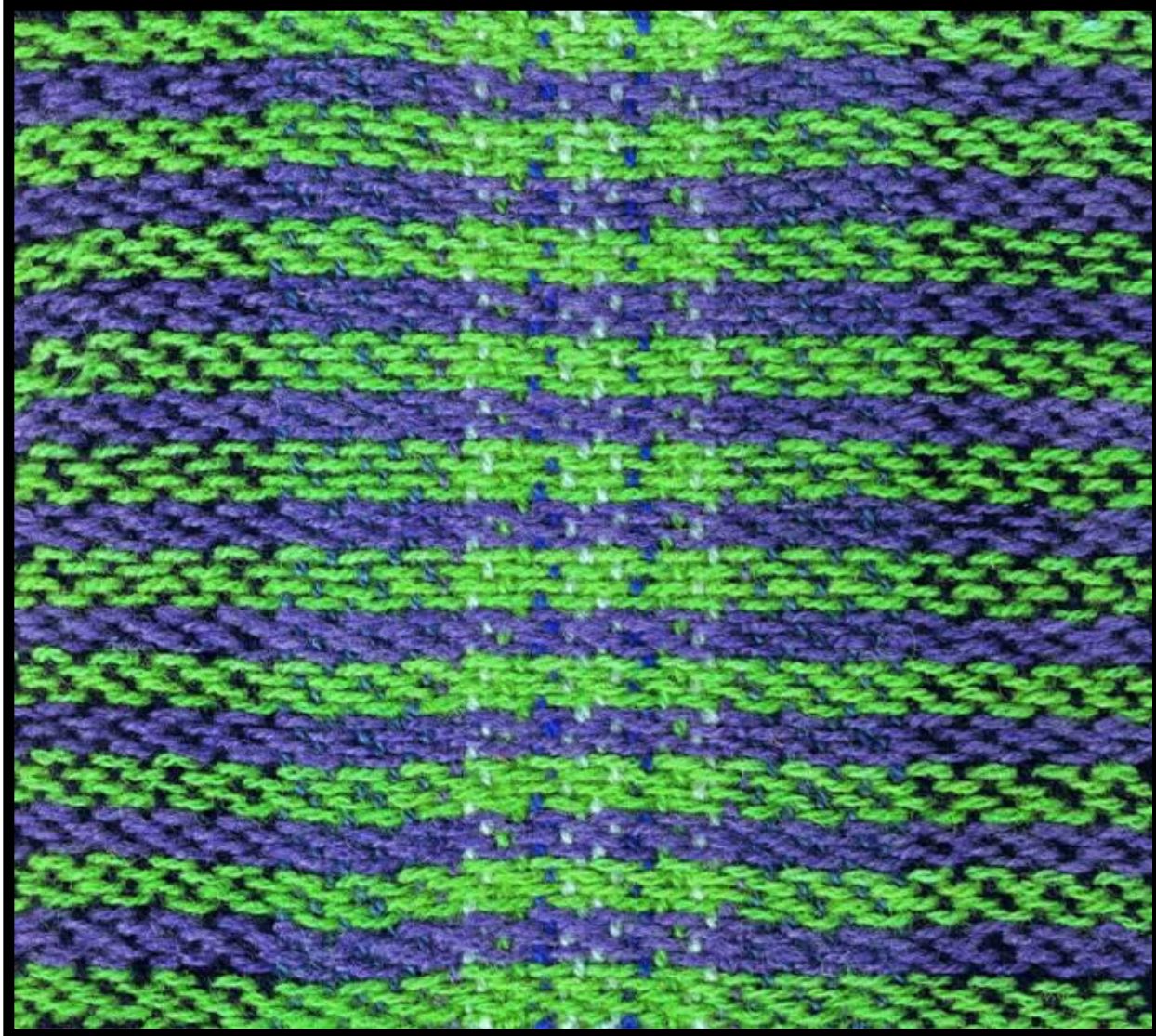
a. Alkangad Labane



a. Alkangad Toimne



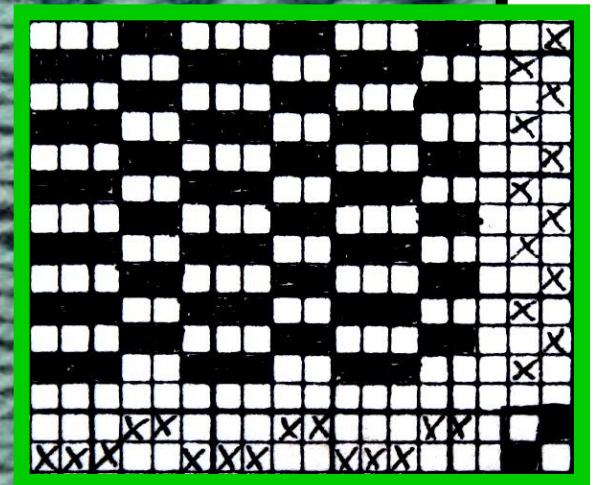
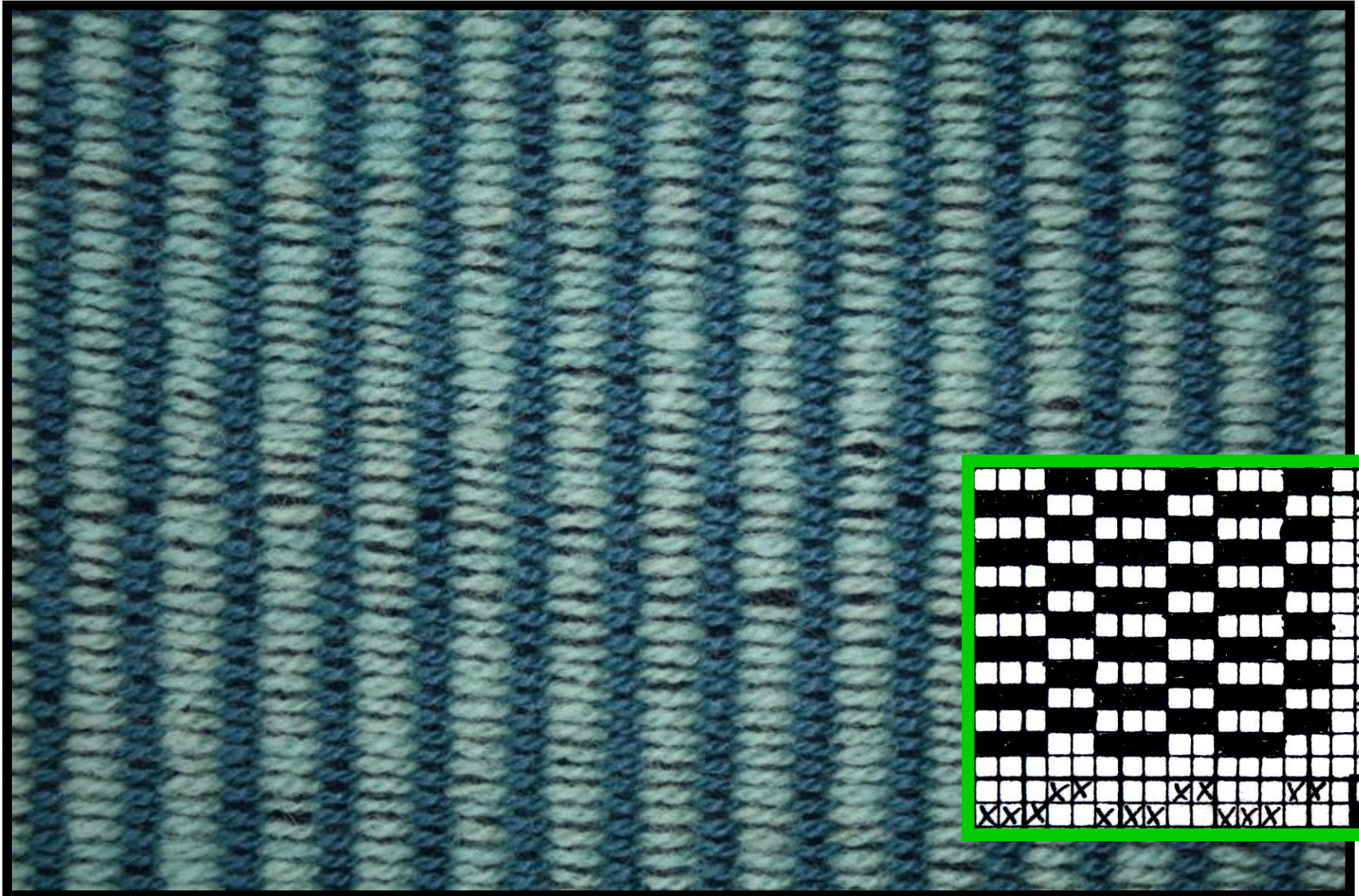
a. Alpkangad Atlas





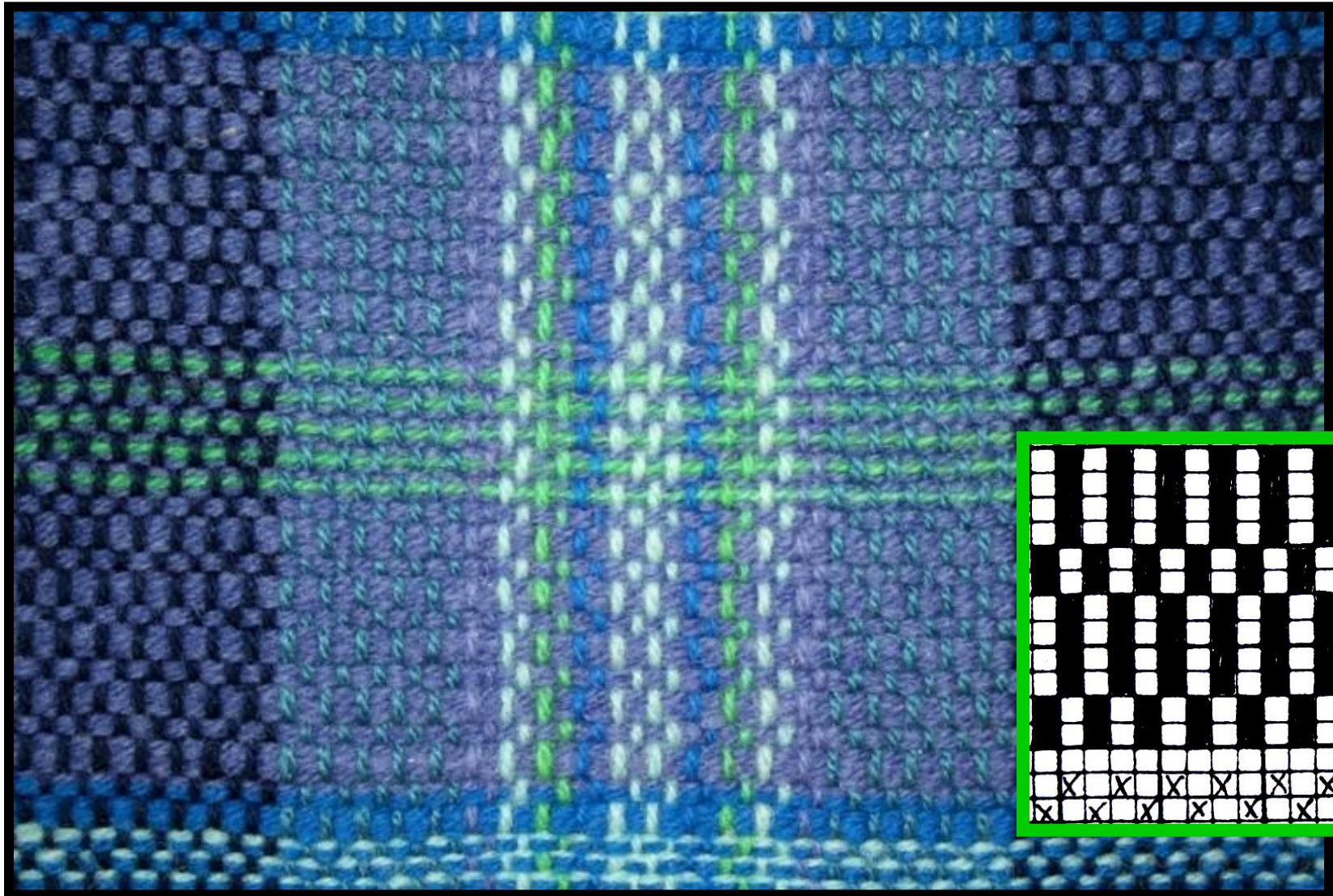
KANGATEHNIKAD
I Ühekordsed kangad
LIHTKANGAD
b. Tuletatud kangad

b. Tuletatud kangad Koerips



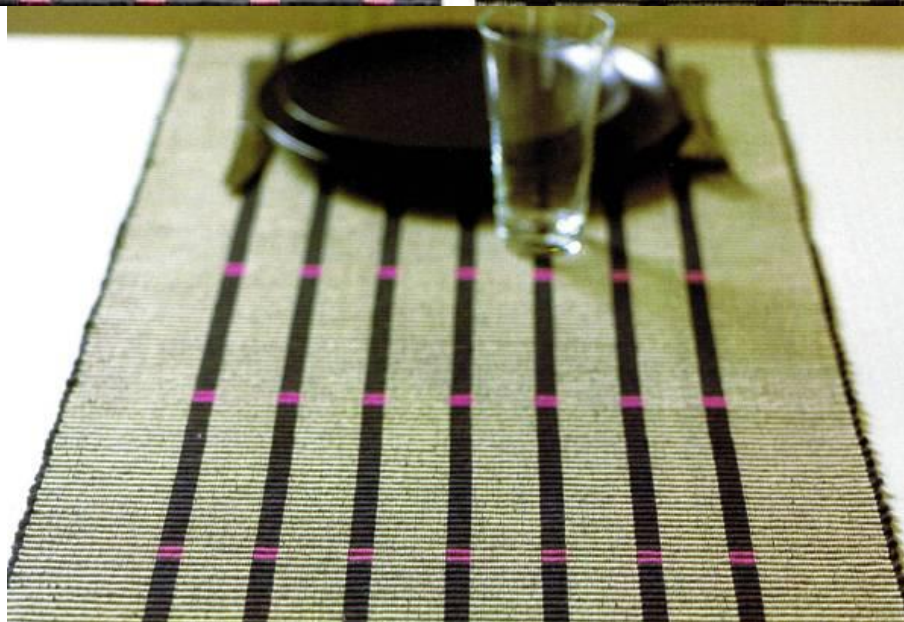
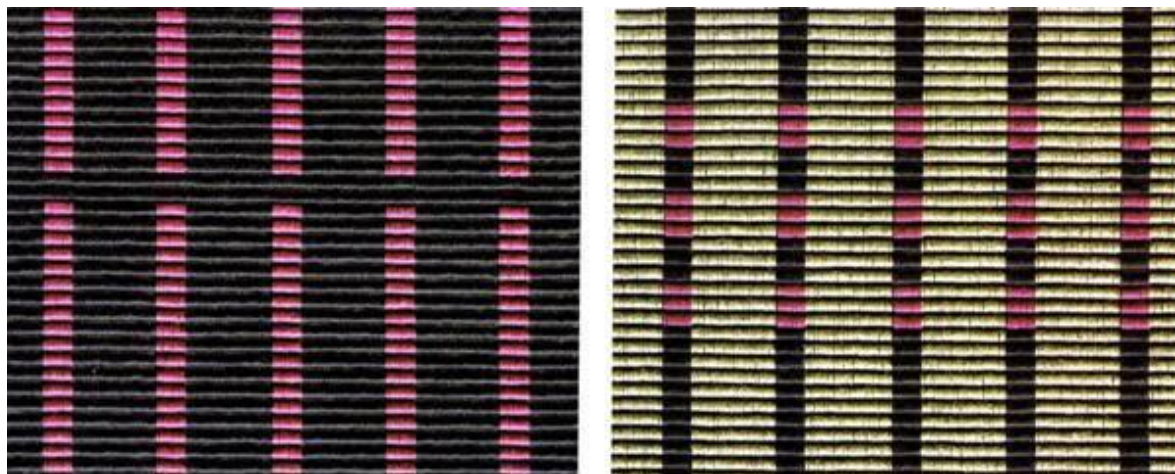
b. Tuletatud kangad

Lõimerips



b. Tuletatud kangad

Lõimerips

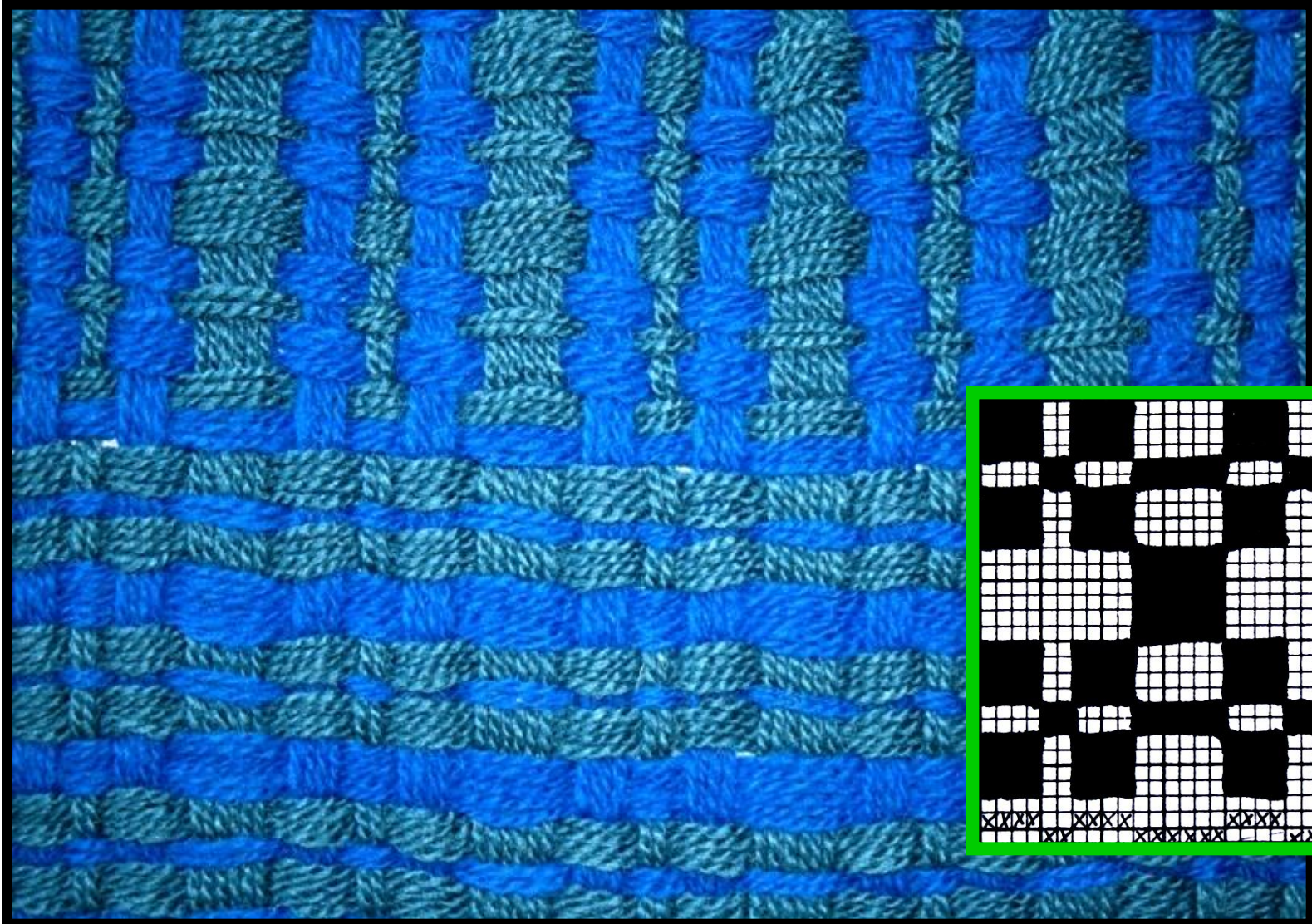


b. Tuletatud kangad

Lõimerips



b. Tuletatud kangad Panama

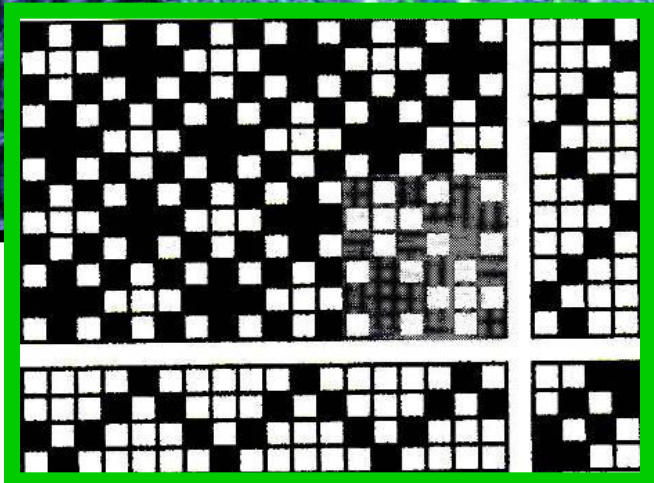
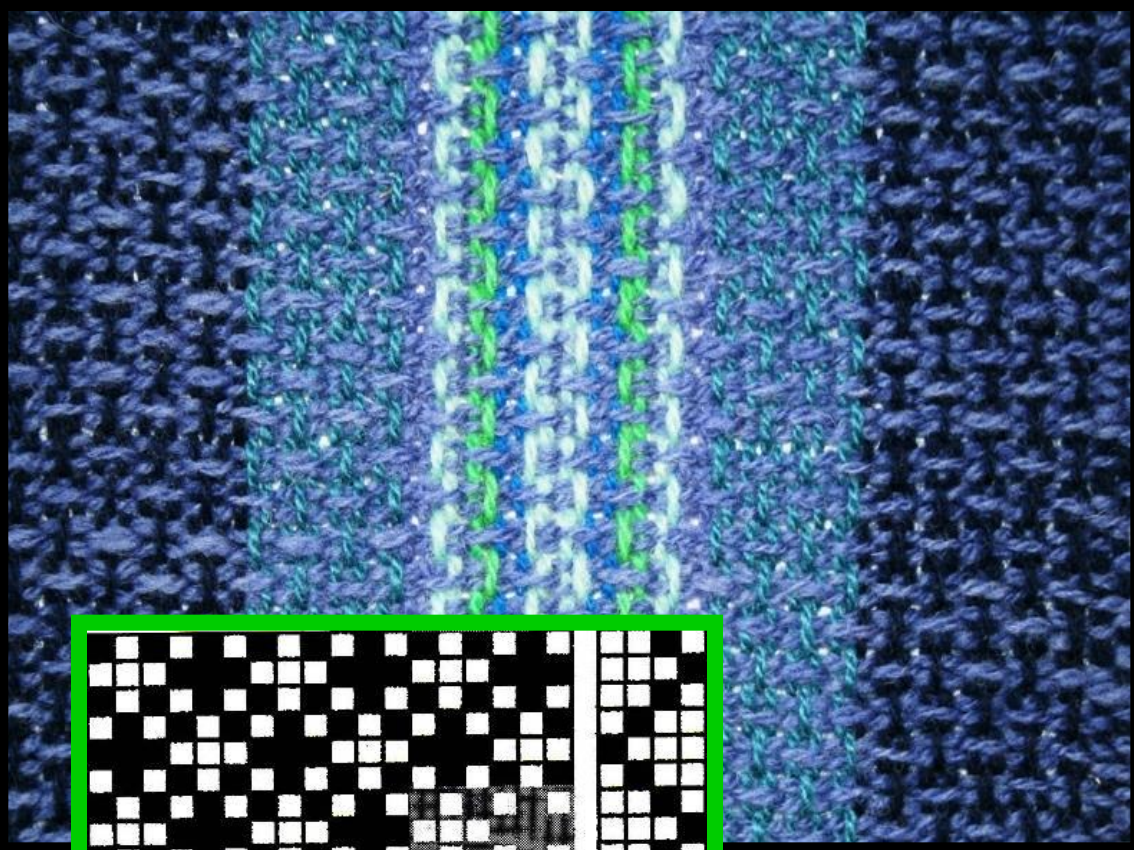
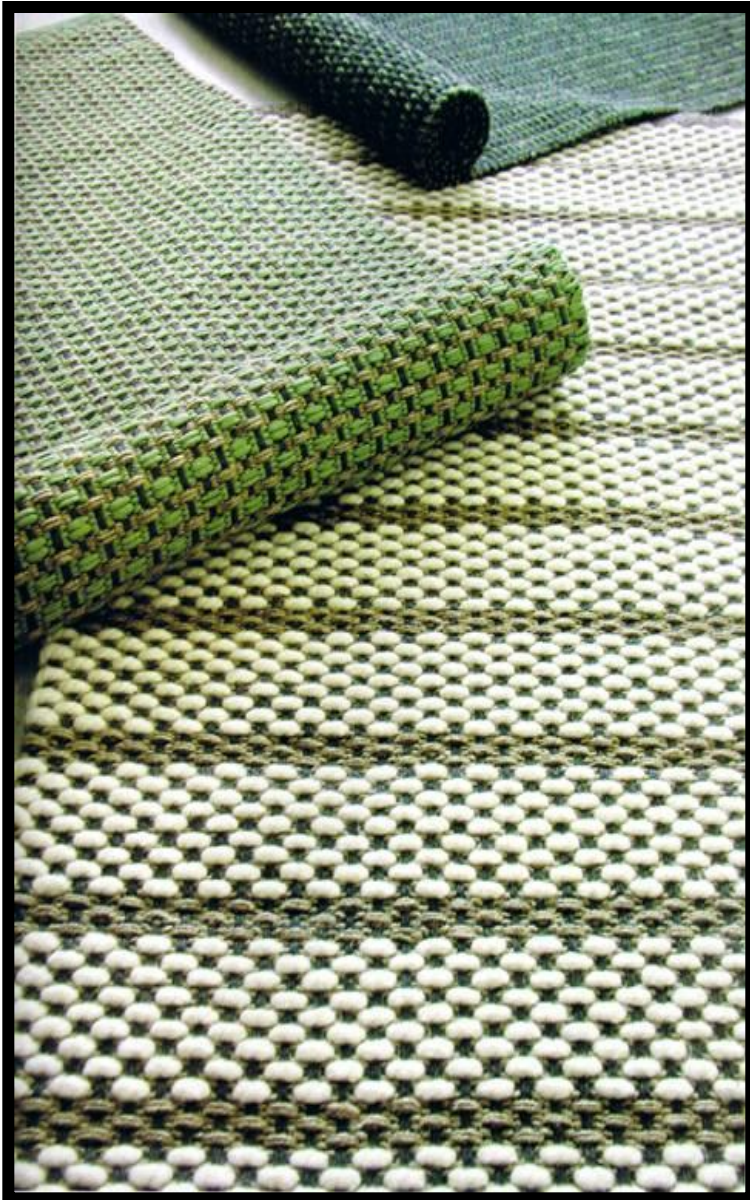


b. Tuletatud kangad Panama



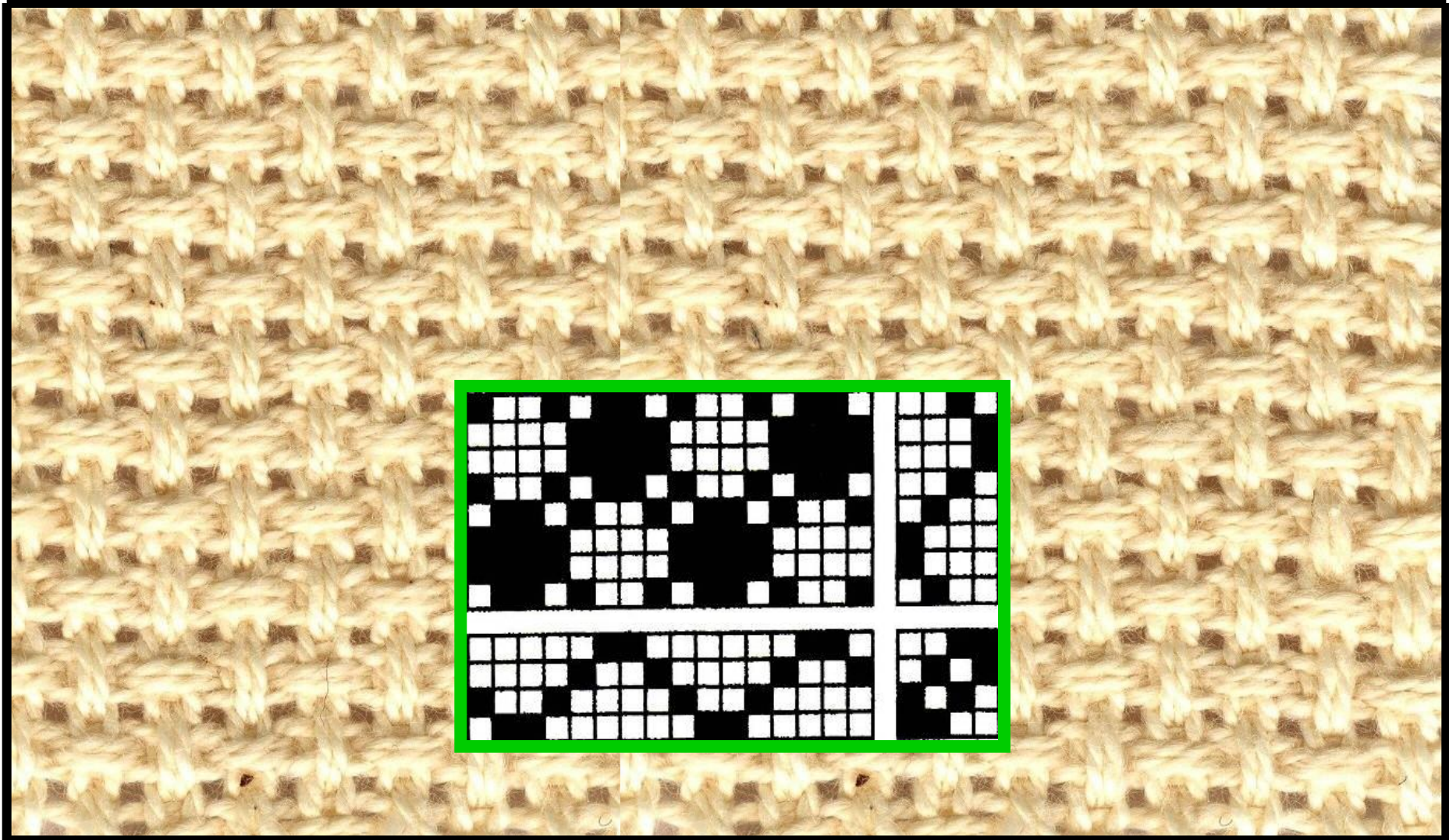
b. Tuletatud kangad

Kanvaa



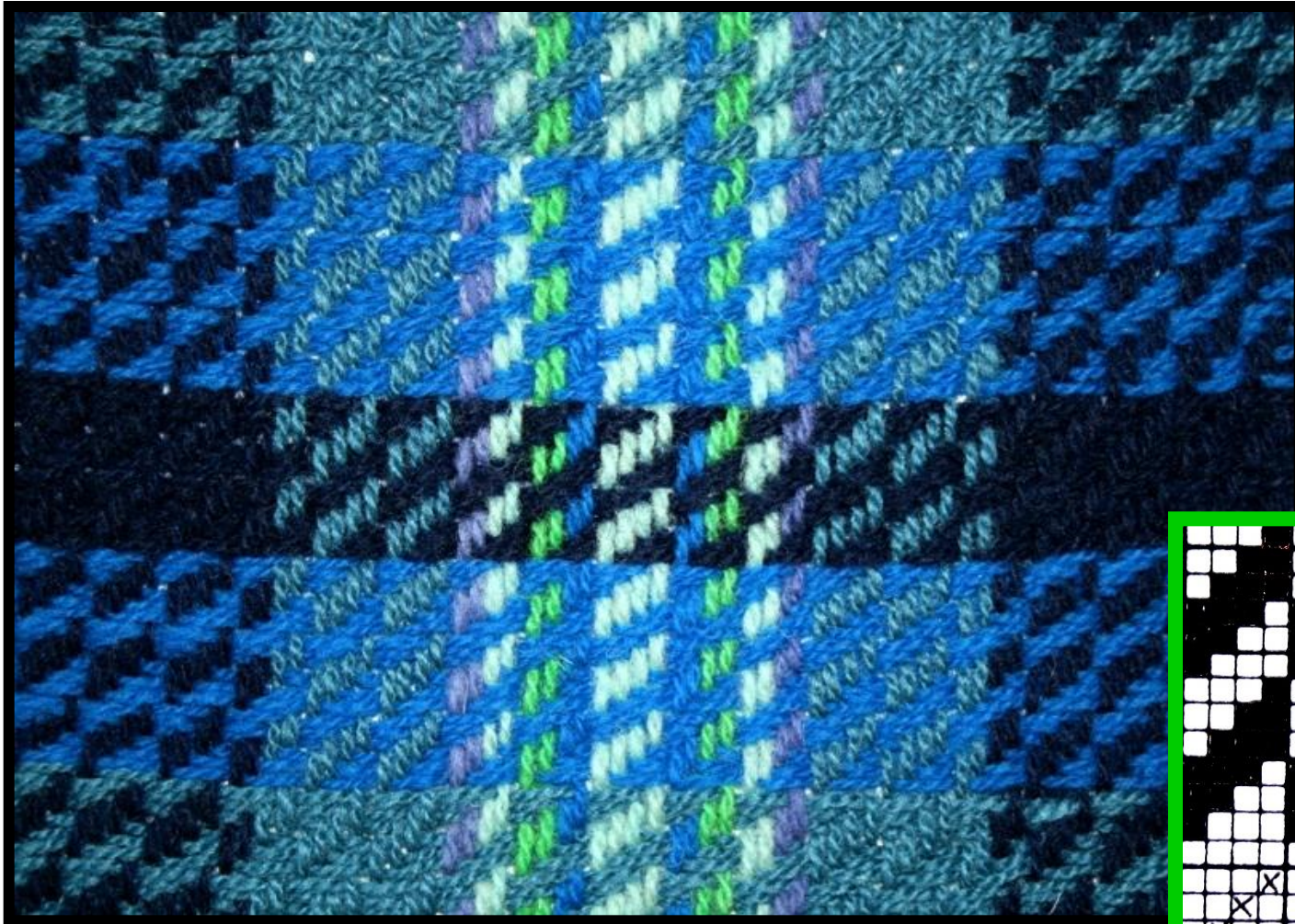
b. Tuletatud kangad

Džuut

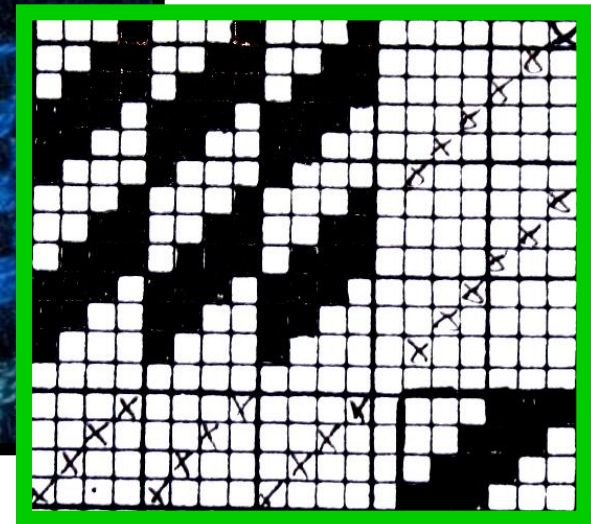


b. Tuletatud kangad

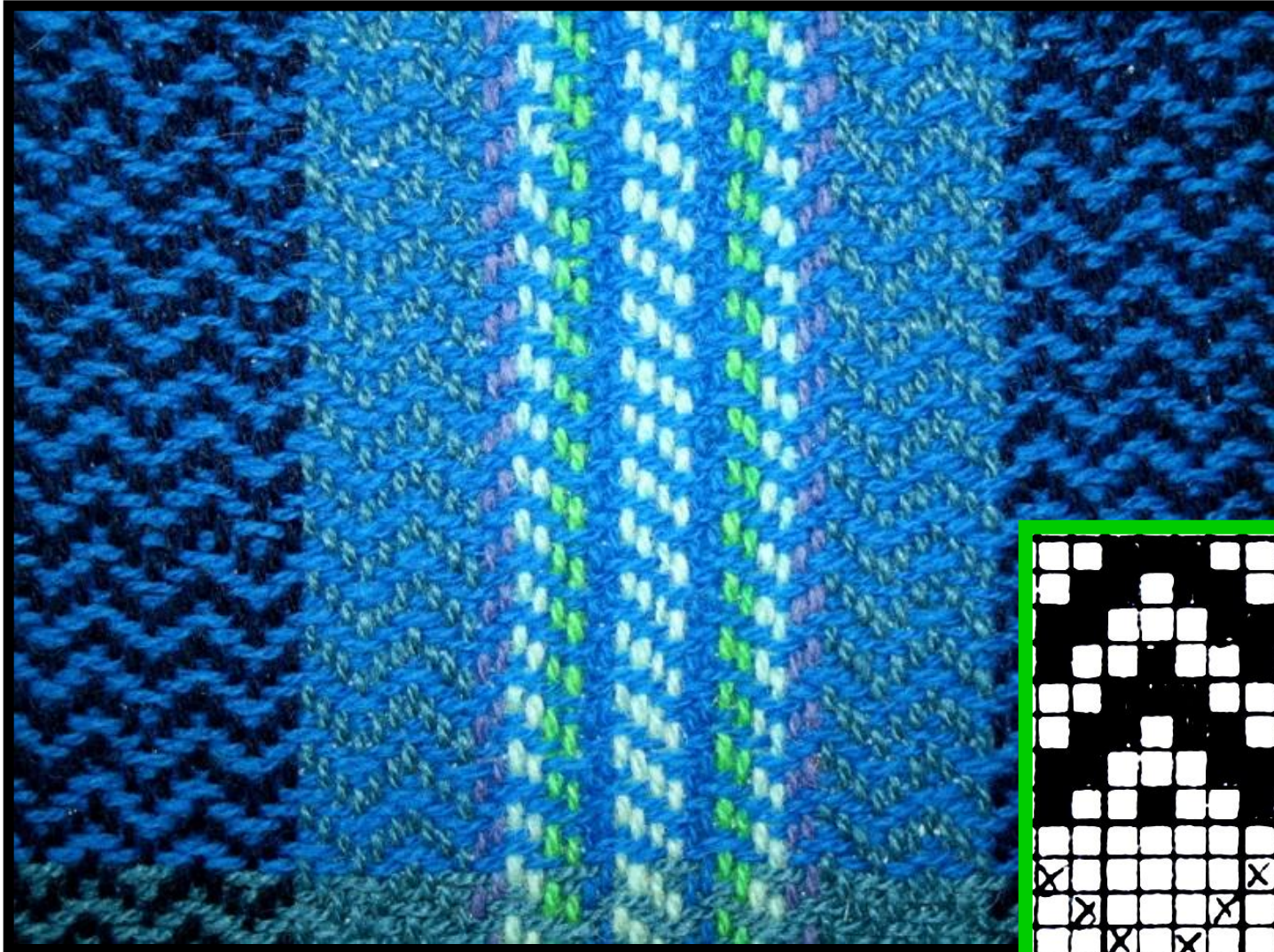
Mitmesugused toimised



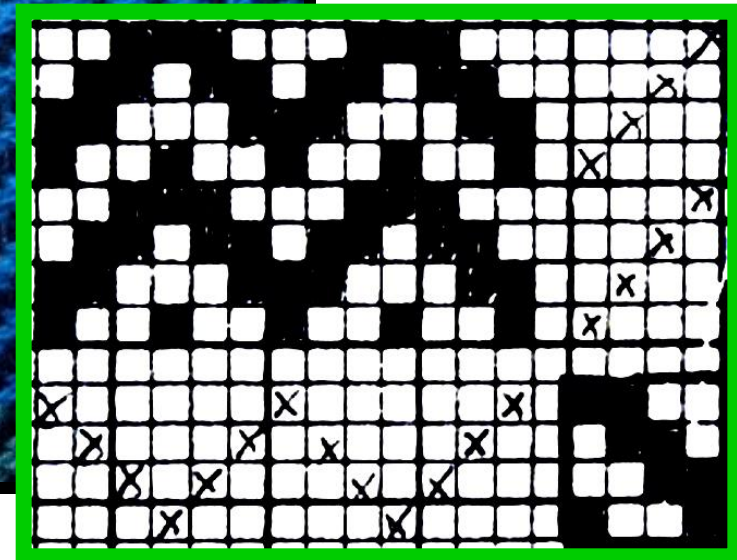
Murdtoimne



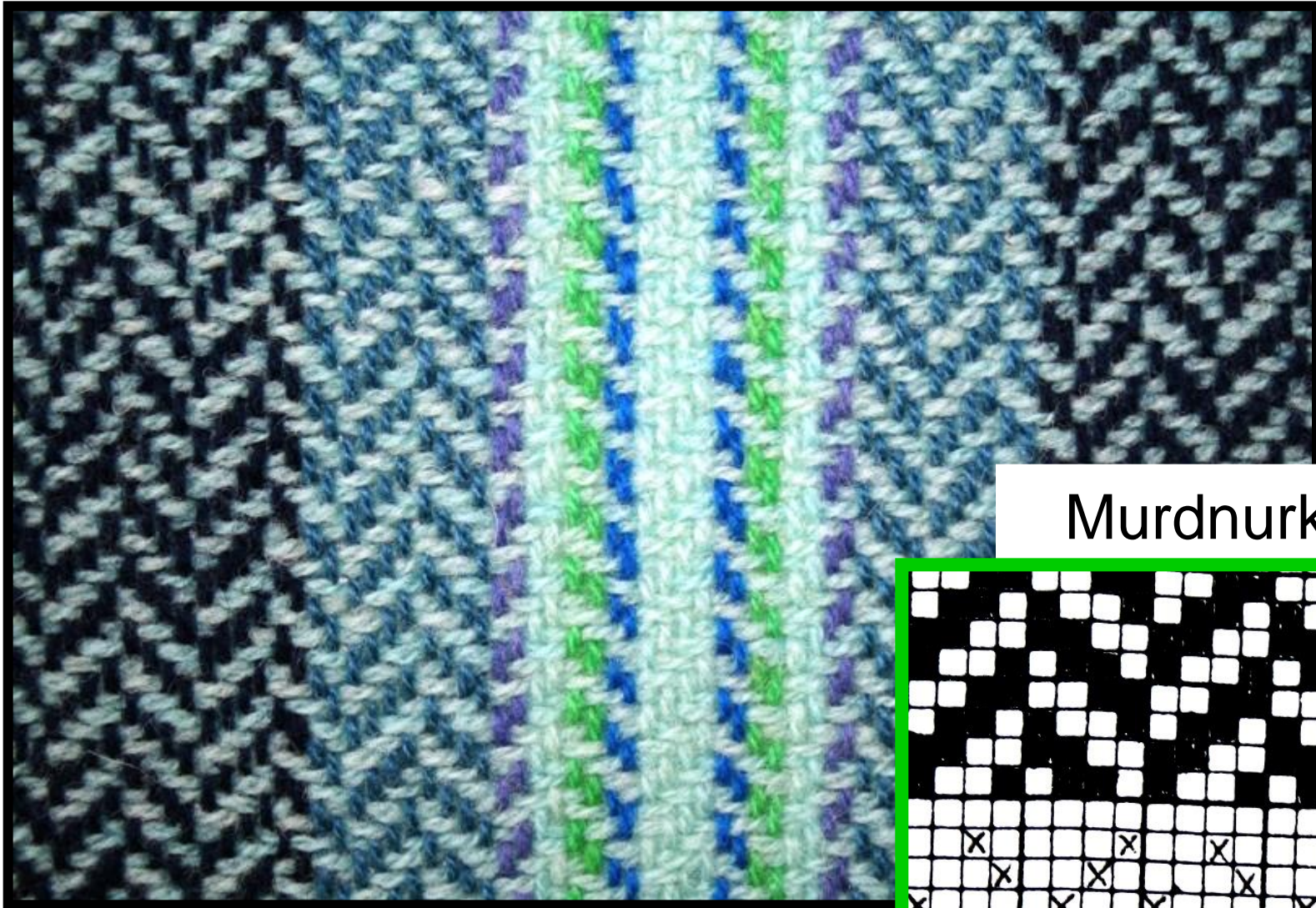
b. Tuletatud kangad



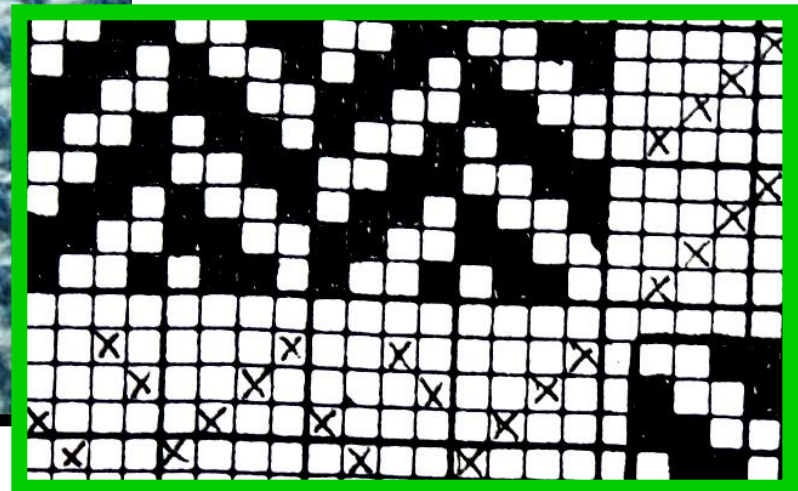
Nurktoimne



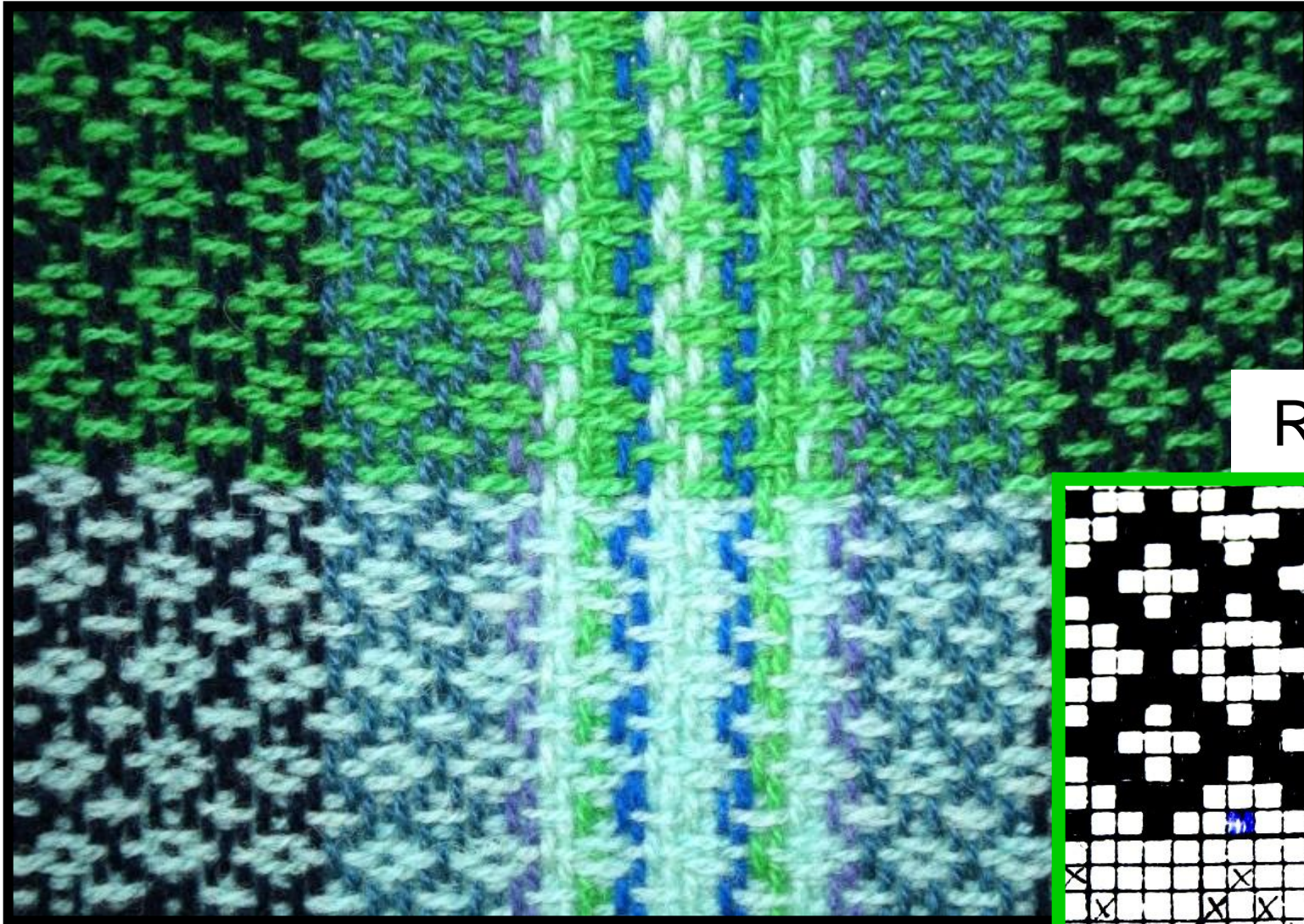
b. Tuletatud kangad



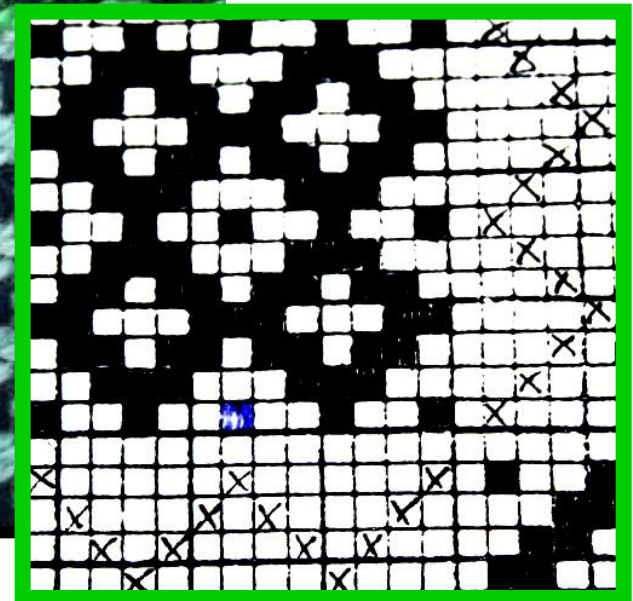
Murdnurktoimne



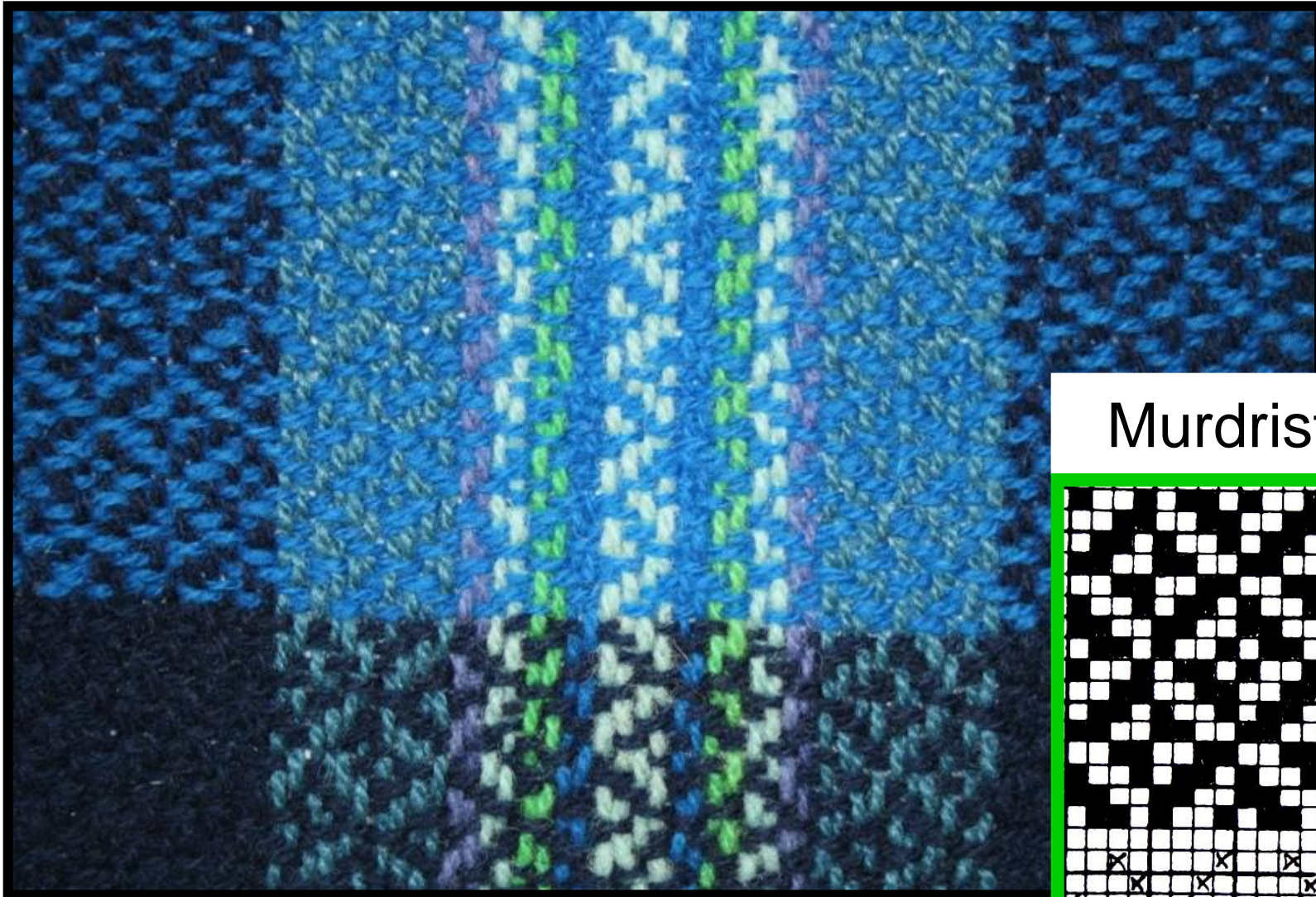
b. Tuletatud kangad



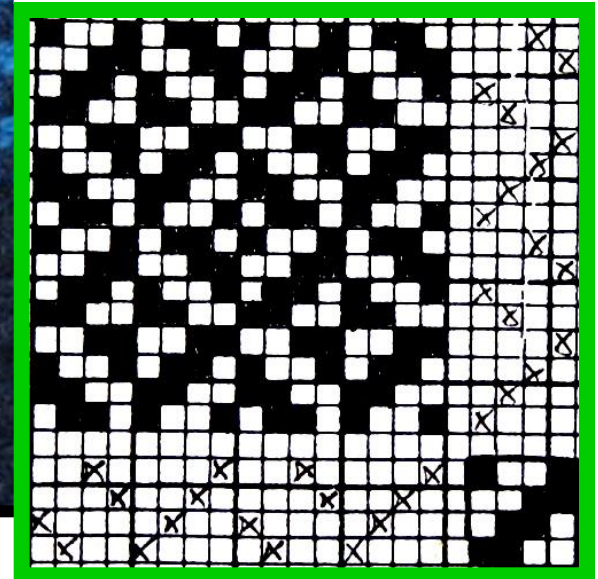
Risttoimne



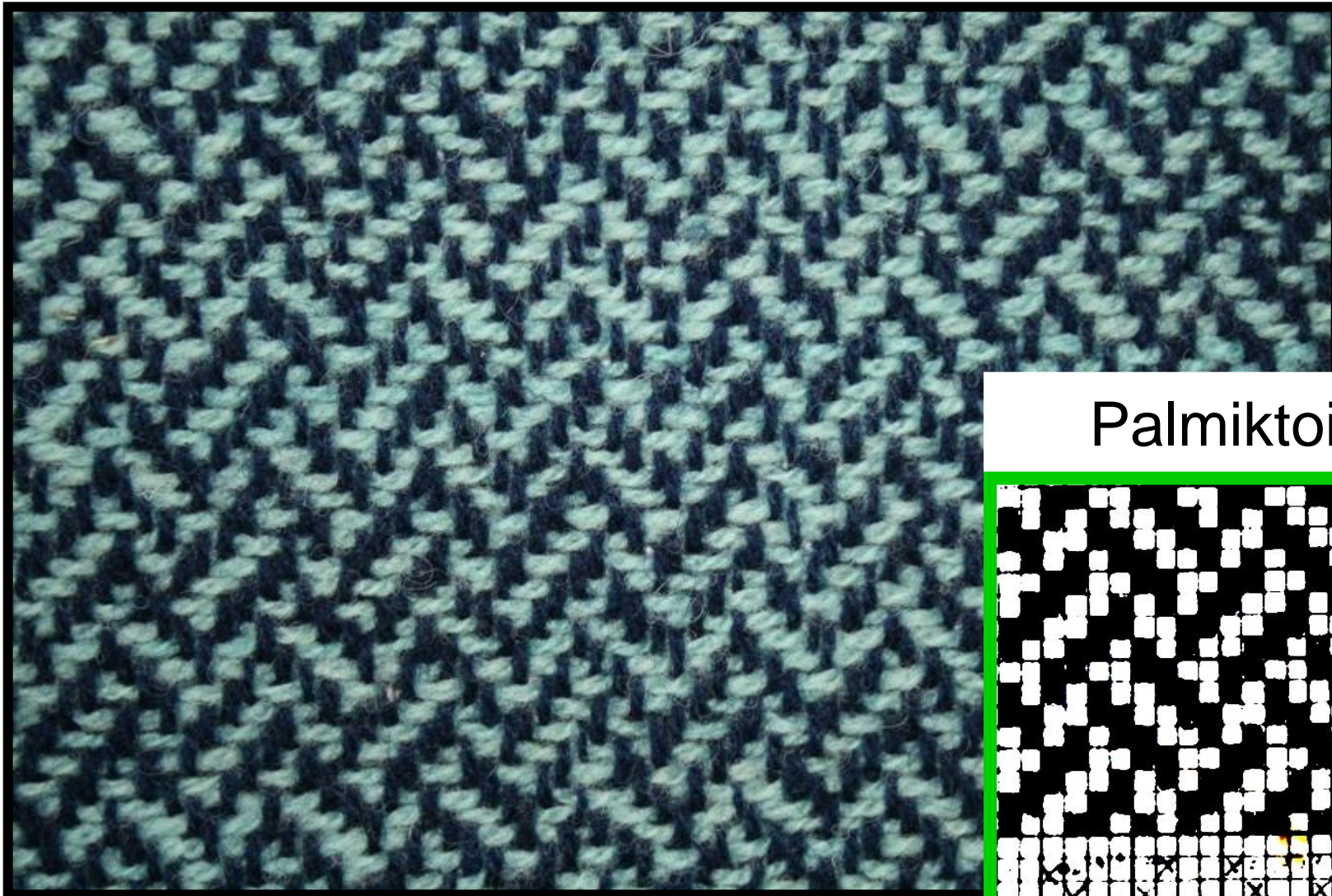
b. Tuletatud kangad



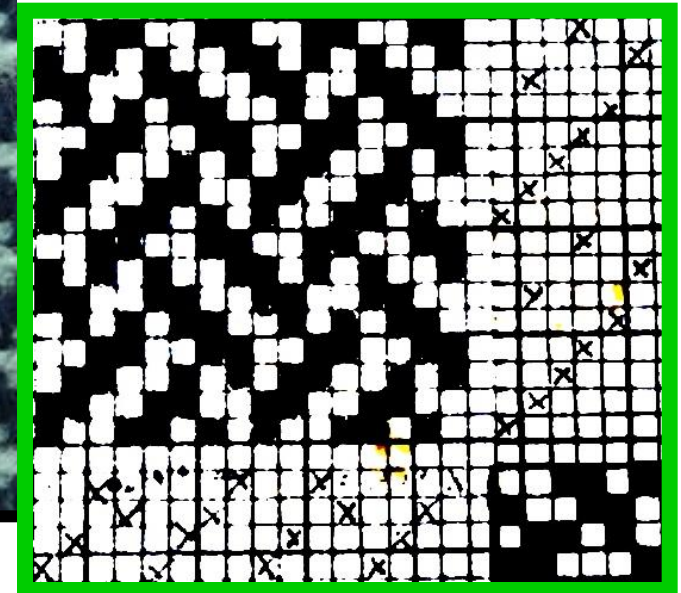
Murdristoimne



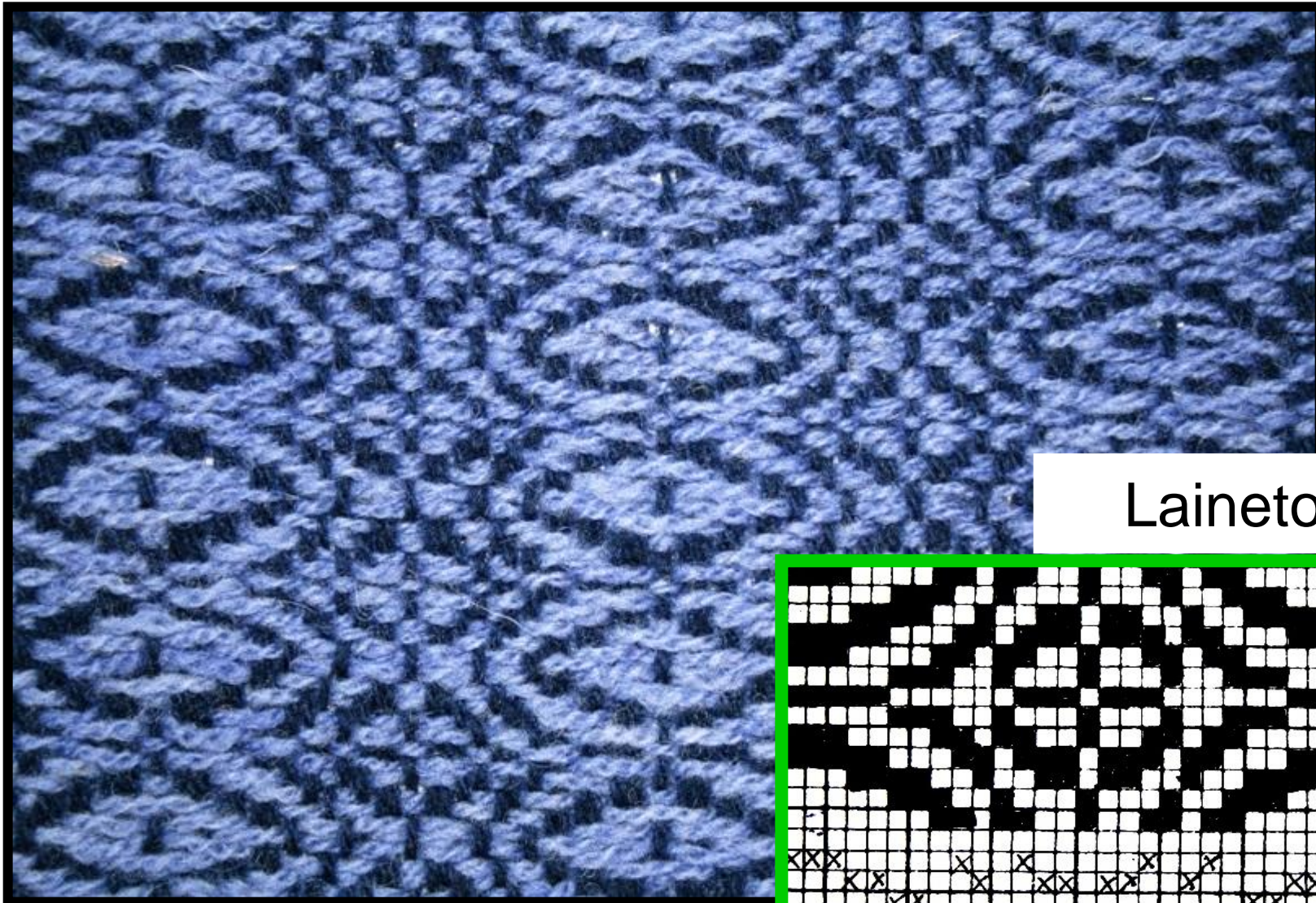
b. Tuletatud kangad



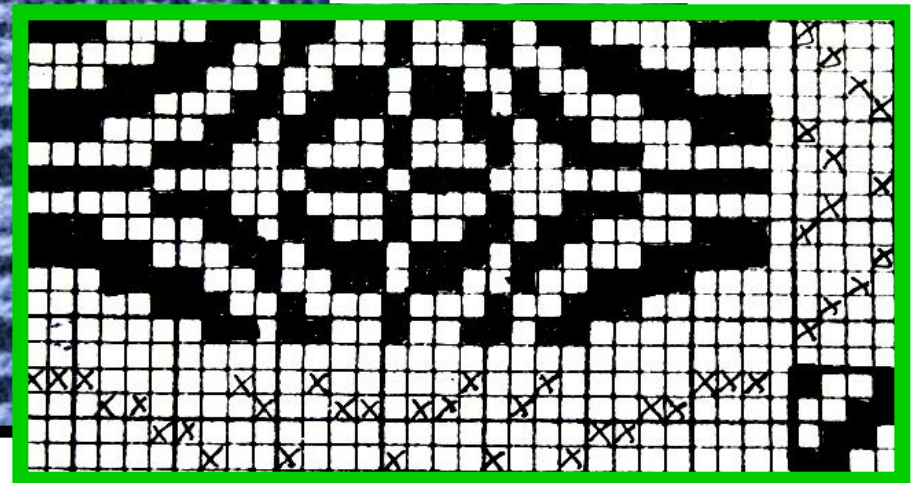
Palmiktoimne



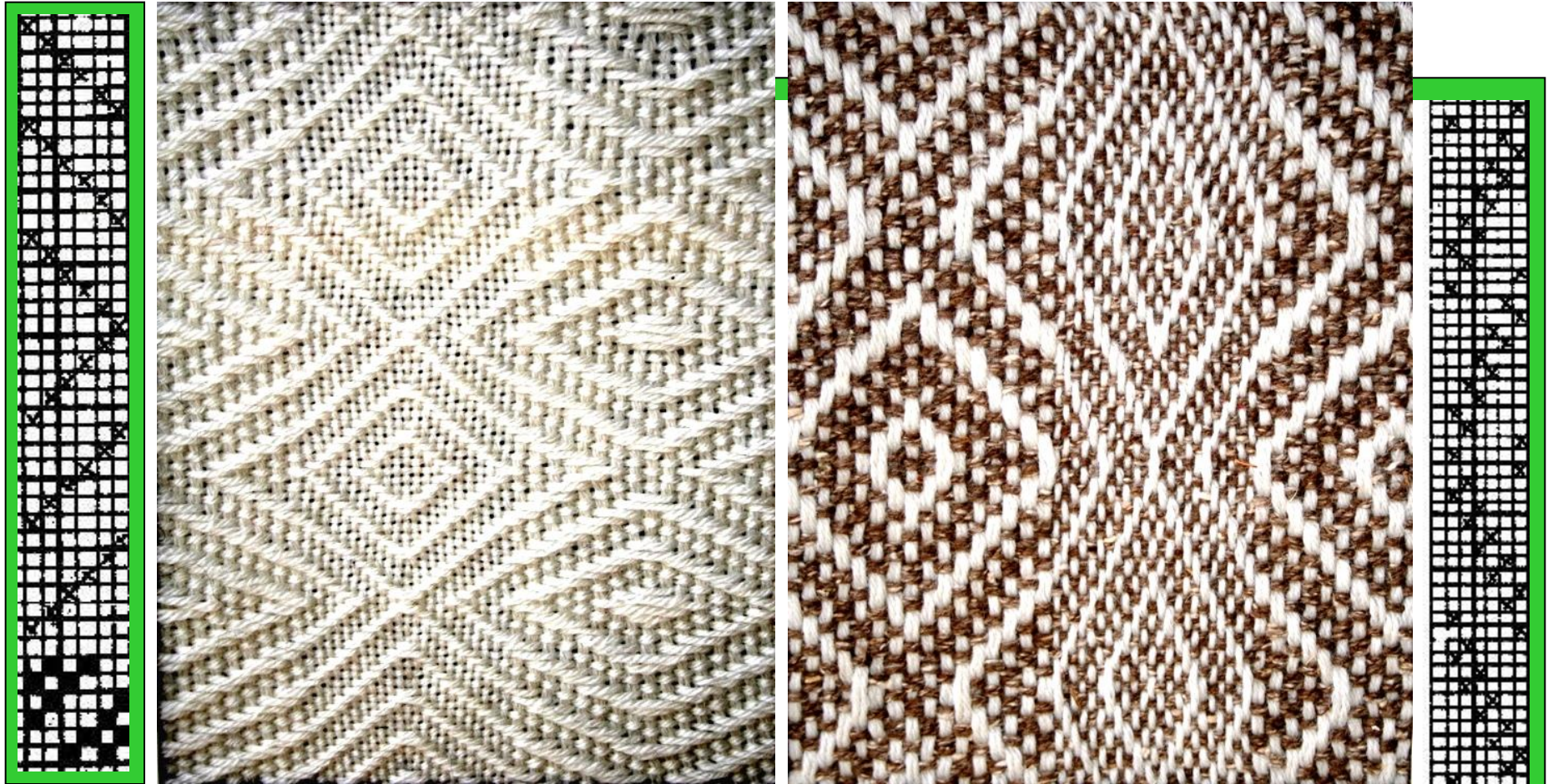
b. Tuletatud kangad



Lainetoimne



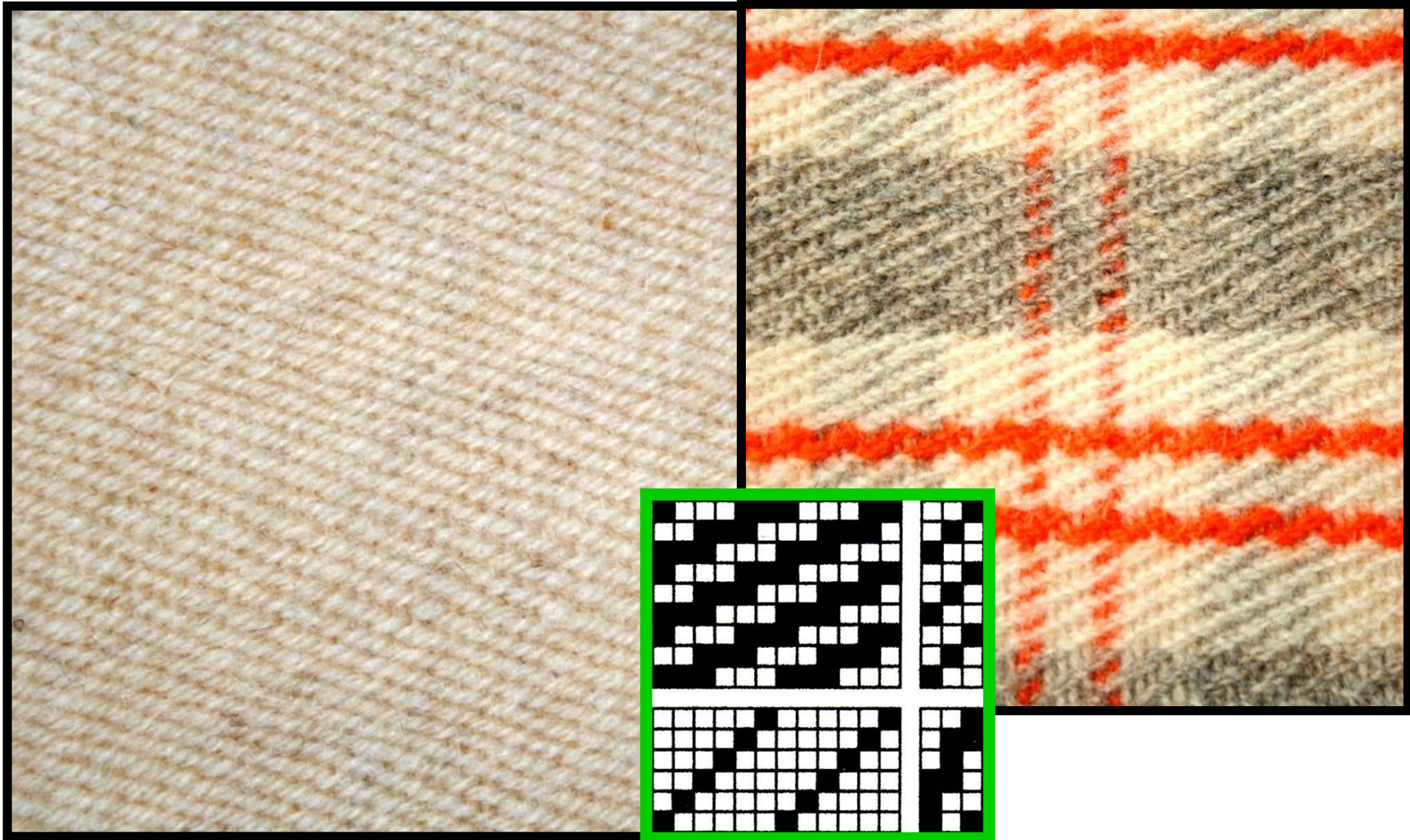
b. Tuletatud kangad



Astangtoimne

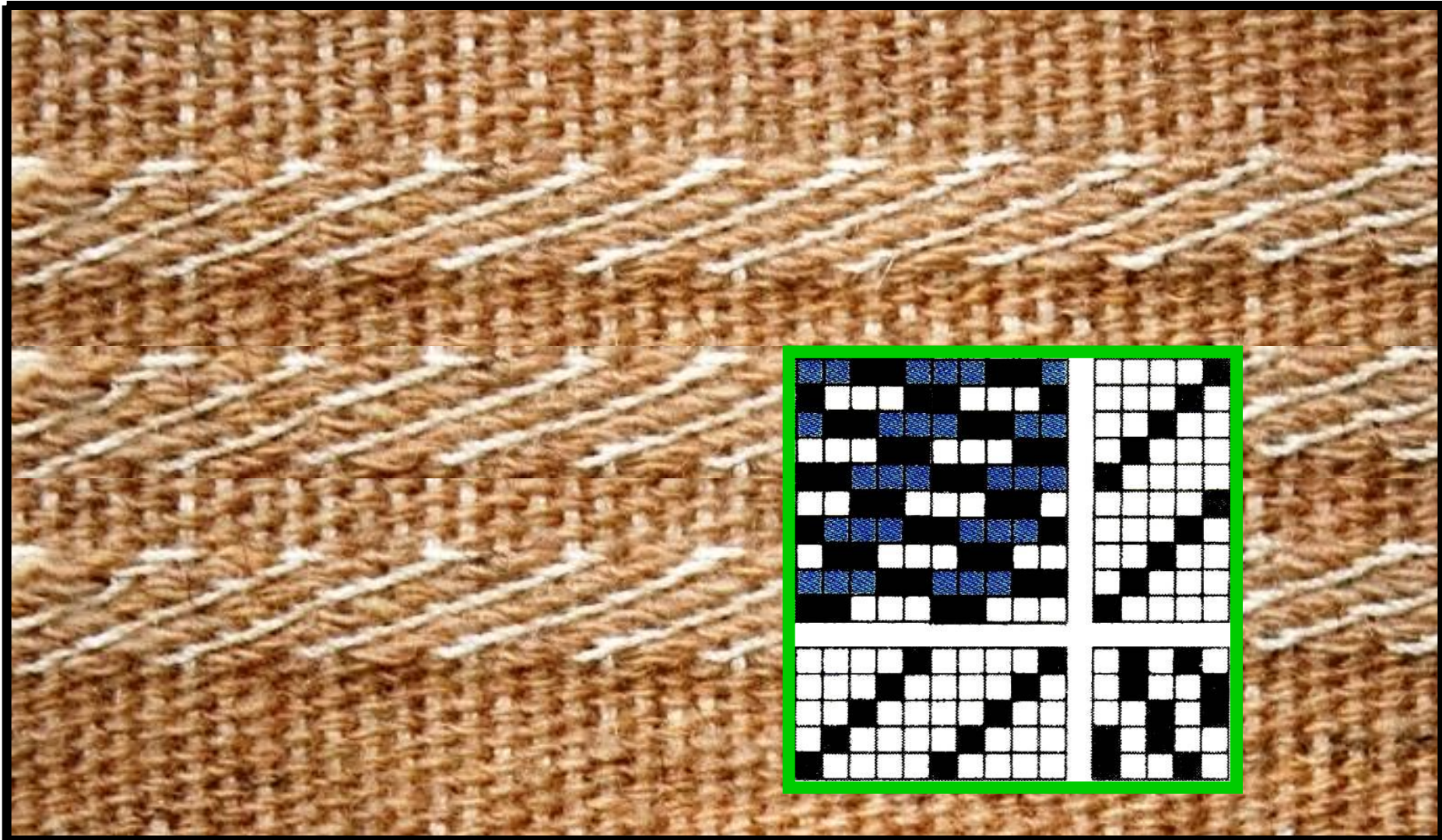
b. Tuletatud kangad

Viltutoimne



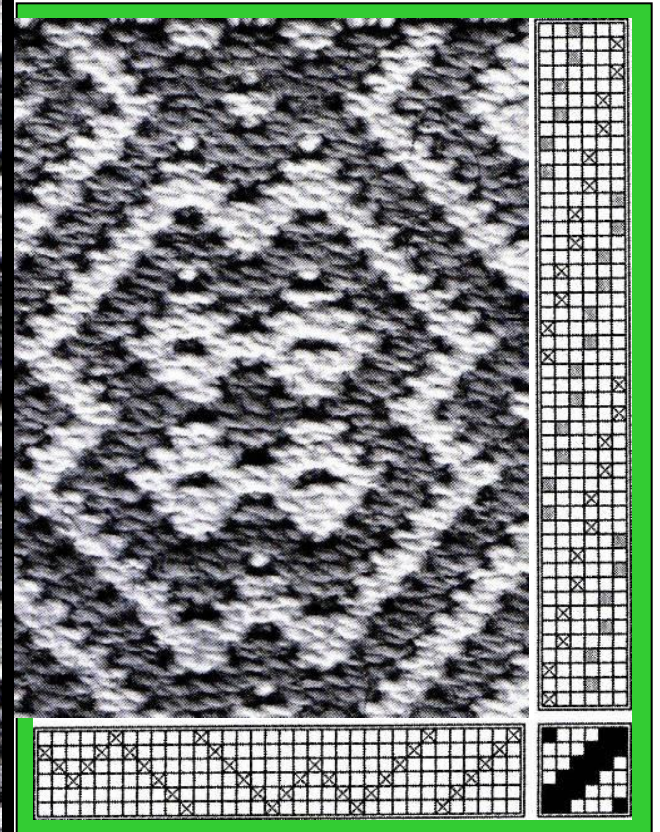
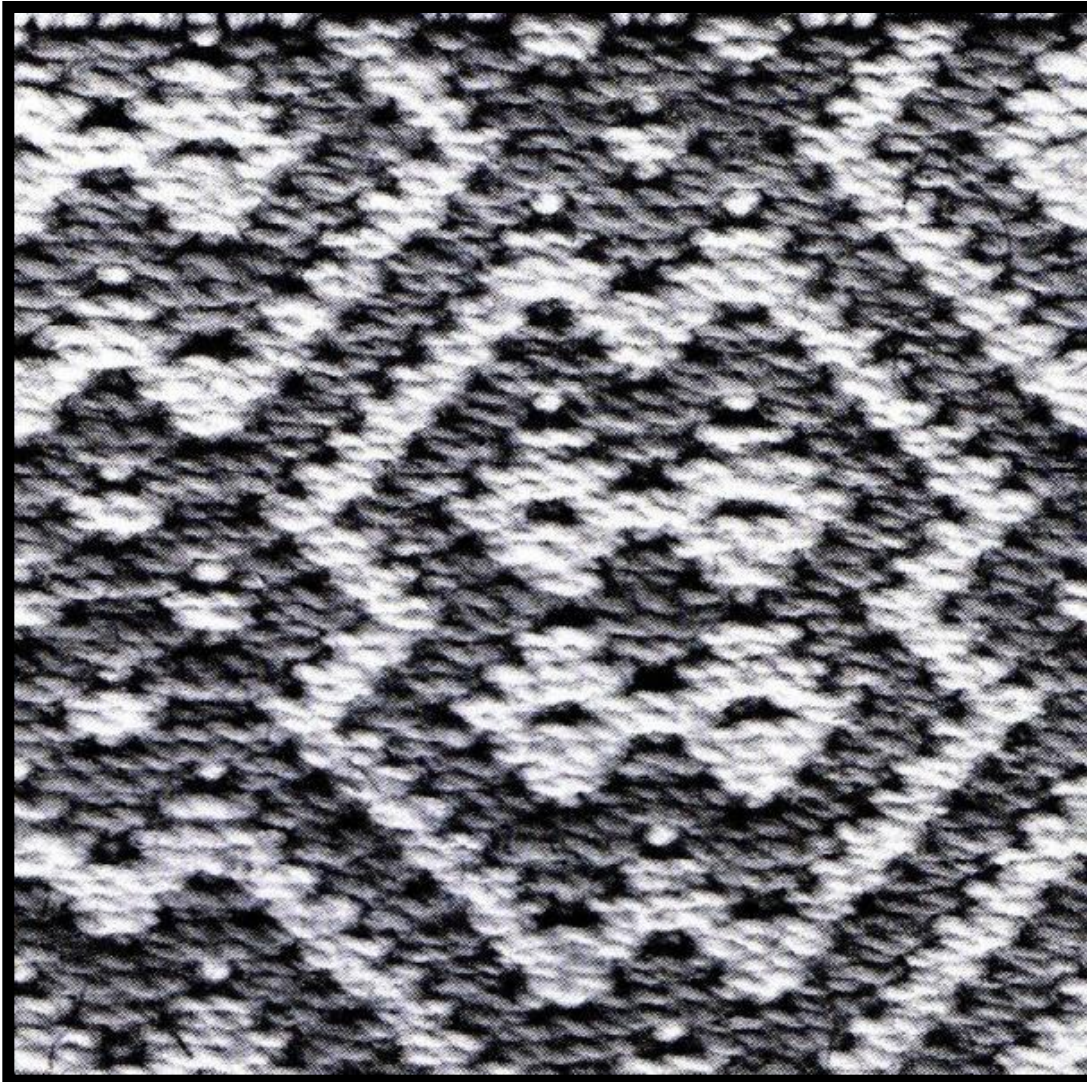
b. Tuletatud kangad

Vilturips



b. Tuletatud kangad

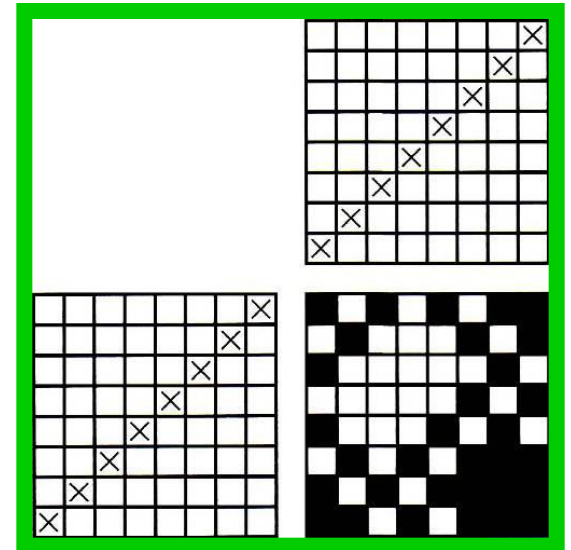
Toimselaadiline koekiririps



b. Tuletatud kangad



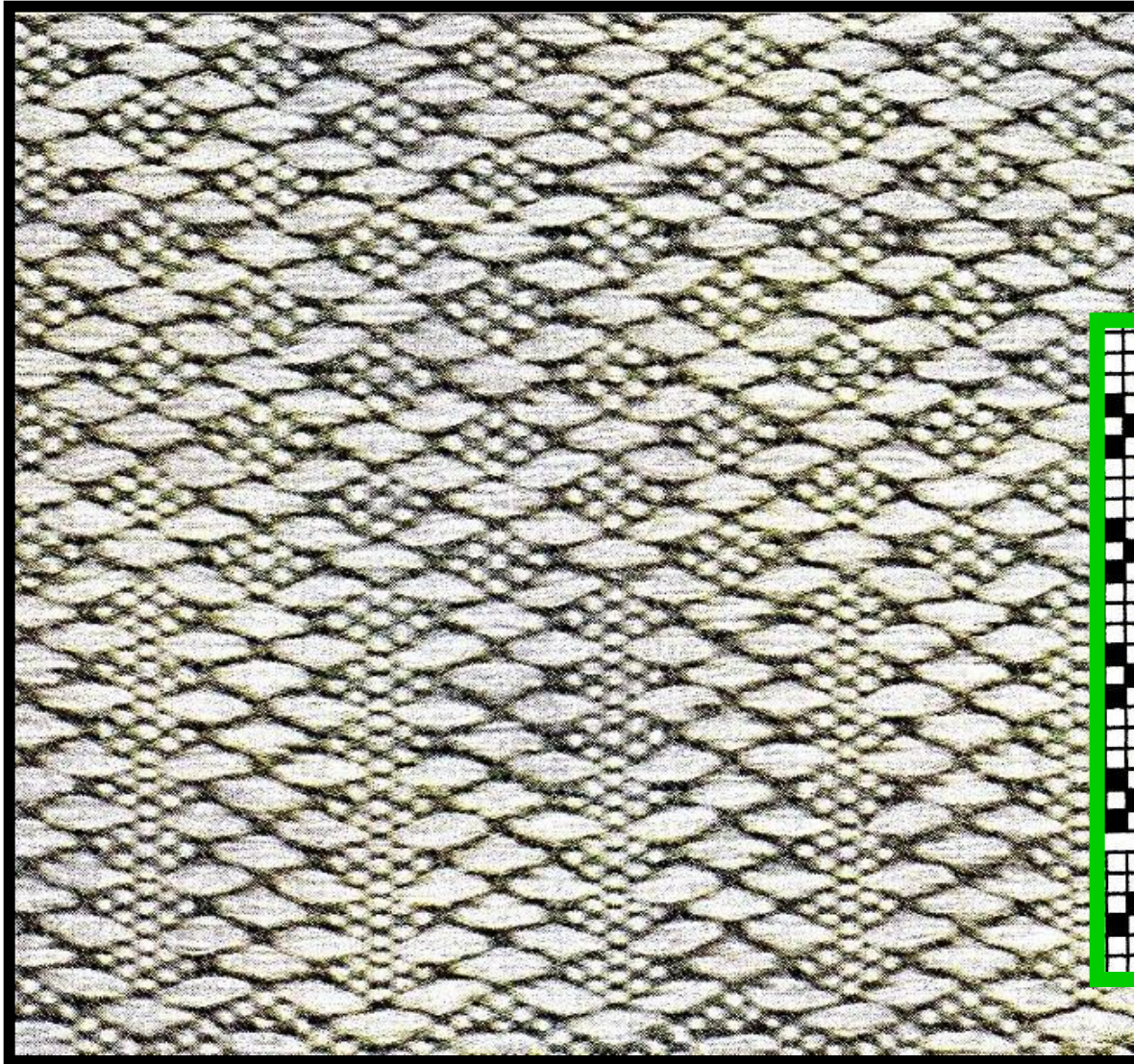
Vahvelkangas



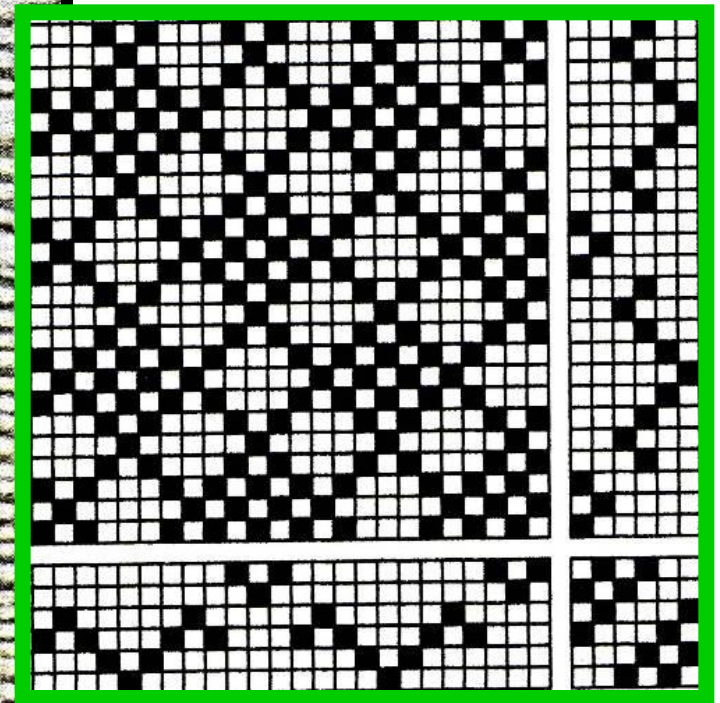
b. Tuletatud kangad Vahvelkangas



b. Tuletatud kangad



Põhjasidus

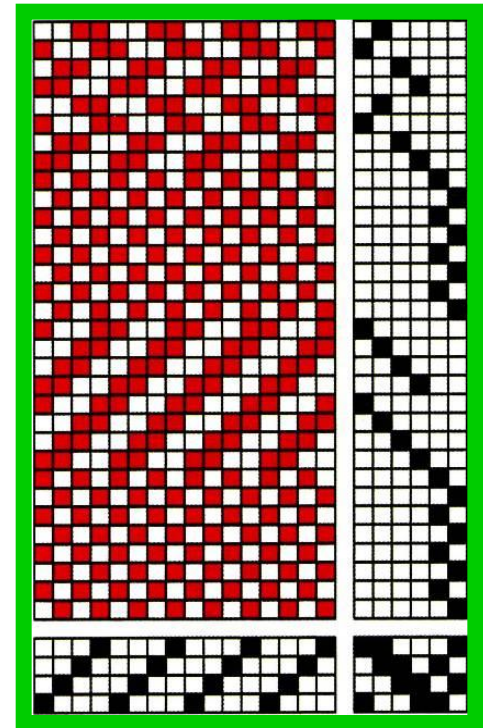




KANGATEHNIKAD
I Ühekordsed kangad
LIITKANGAD
c. Liitkangad

c. Liitkangad

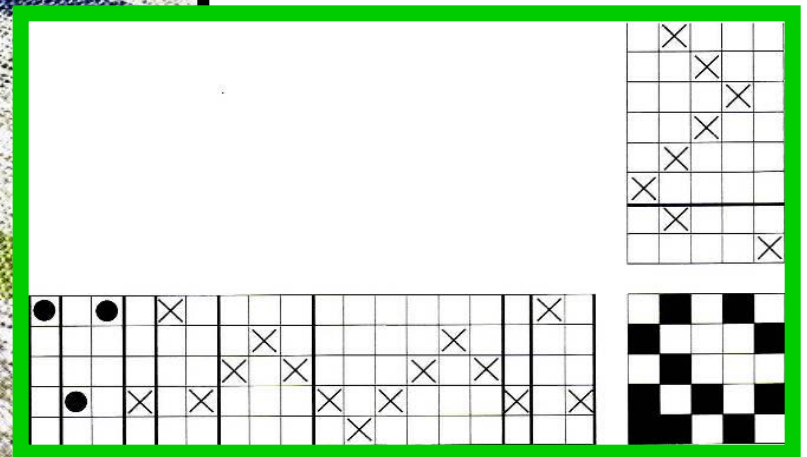
Labane toimsega



c. Liitkangad

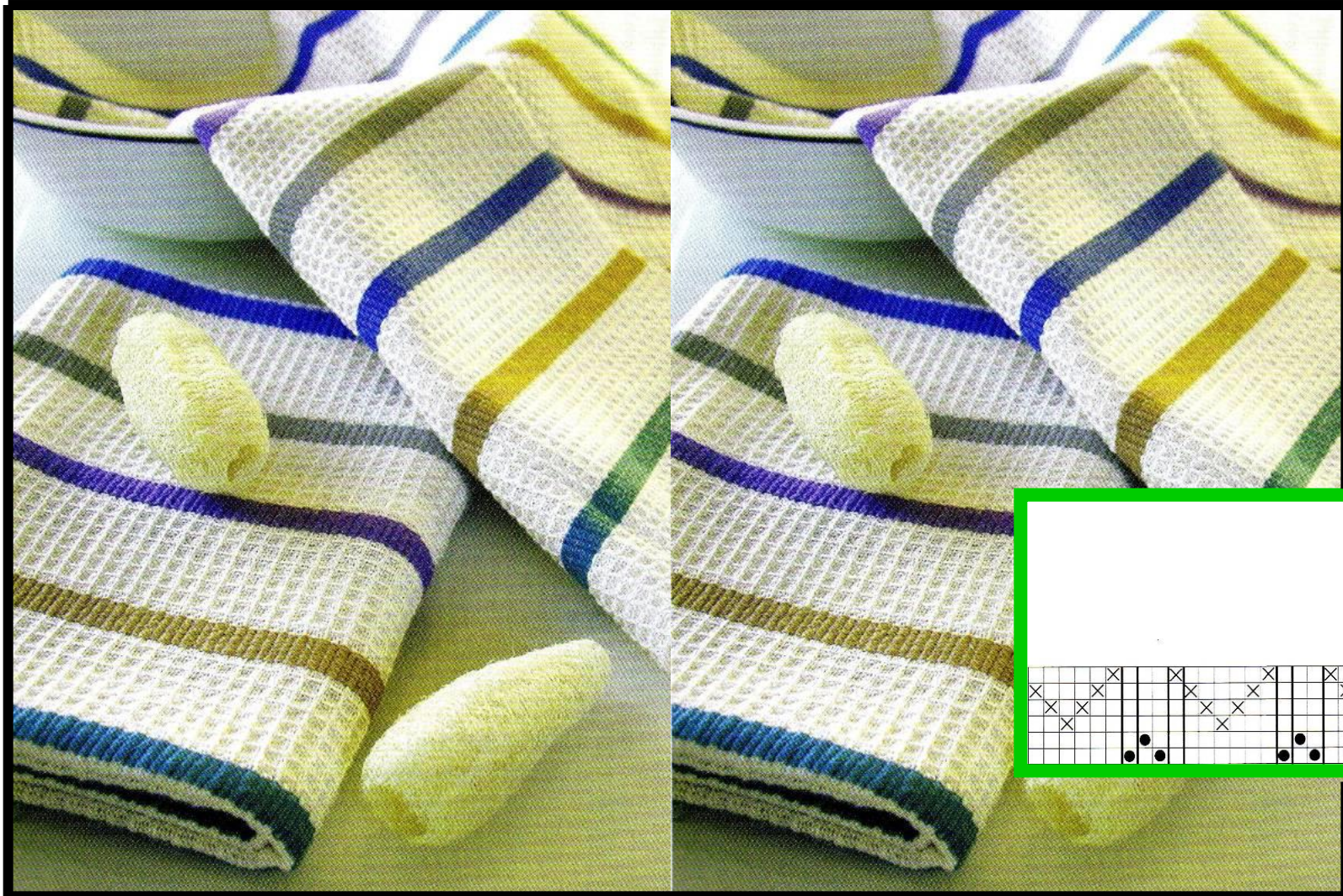


Labane vahvliga

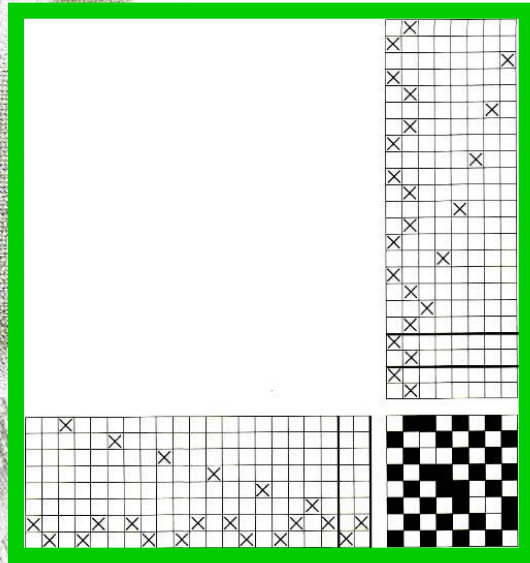
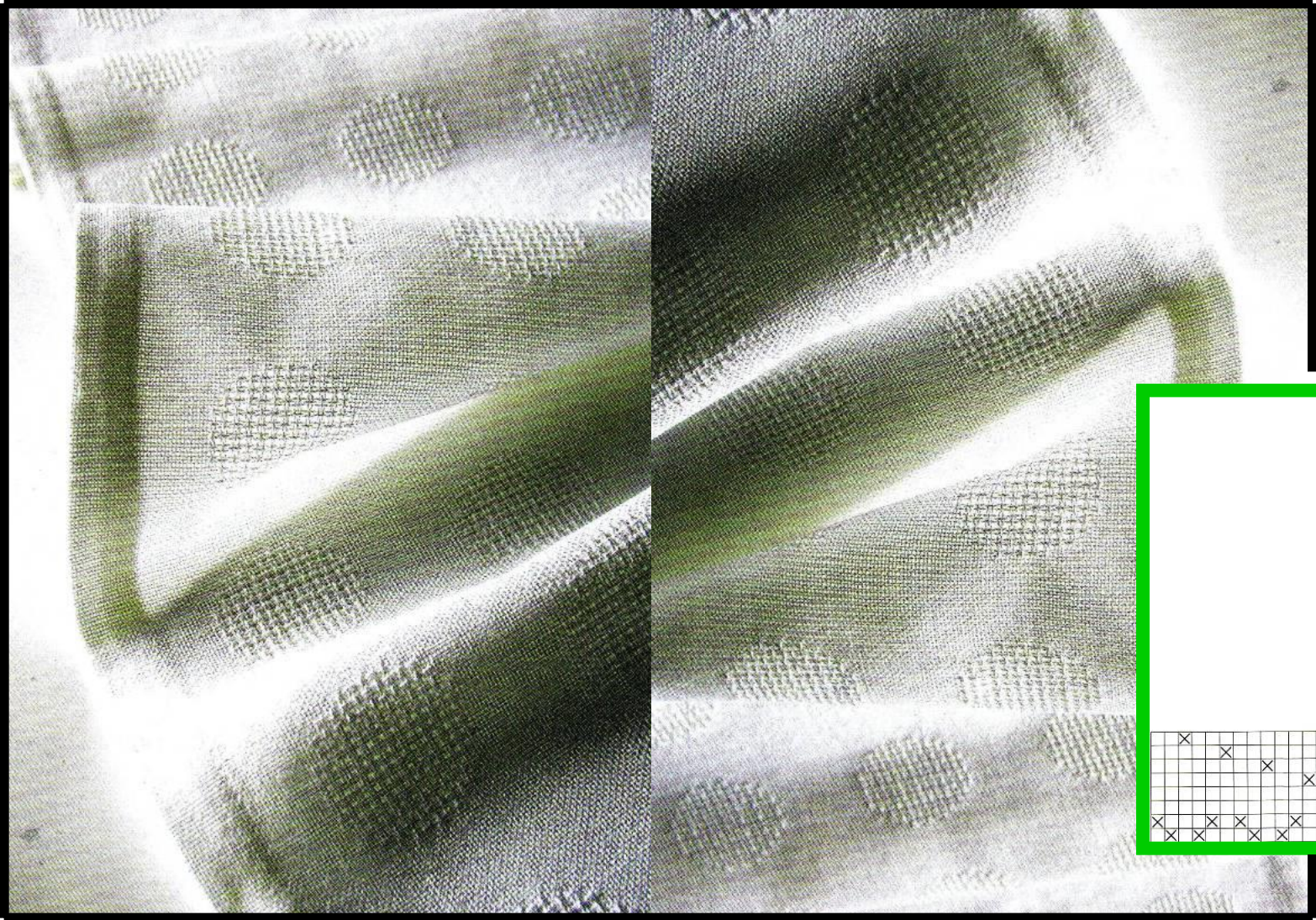


c. Liitkangad

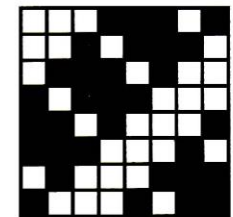
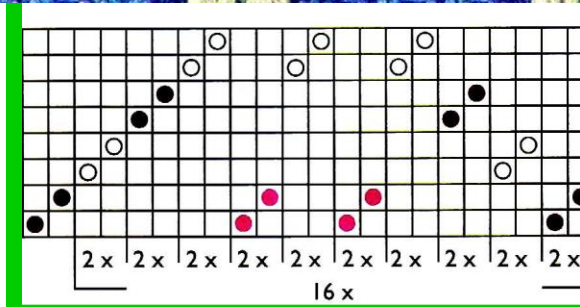
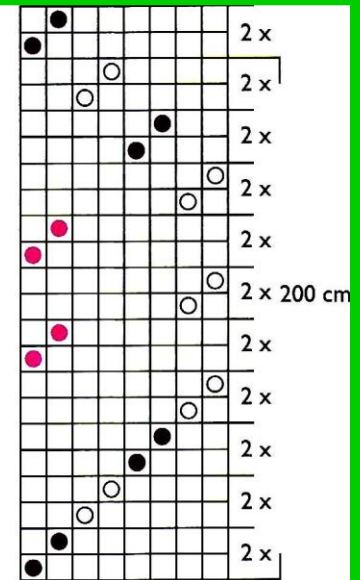
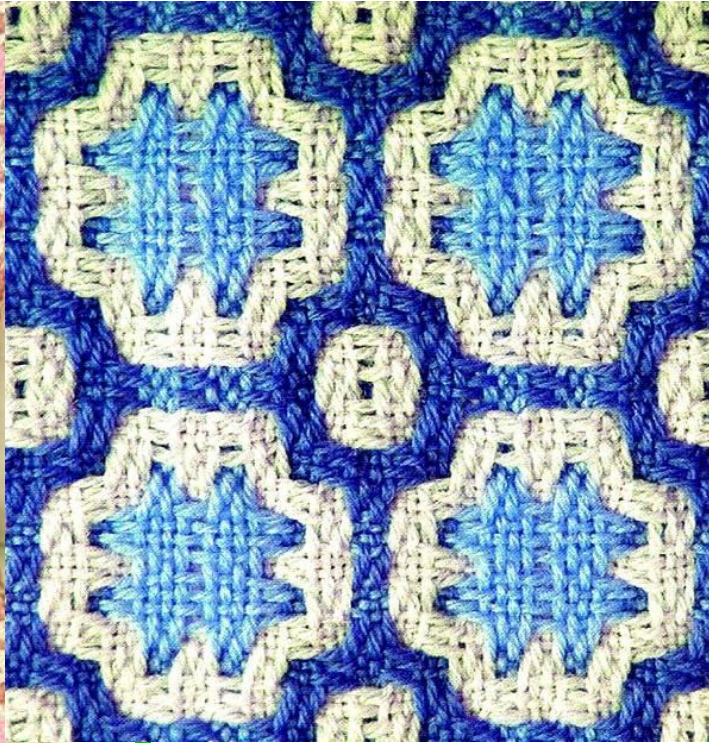
Lõimerips vahvliga



c. Liitkangad Labane kanvaaga

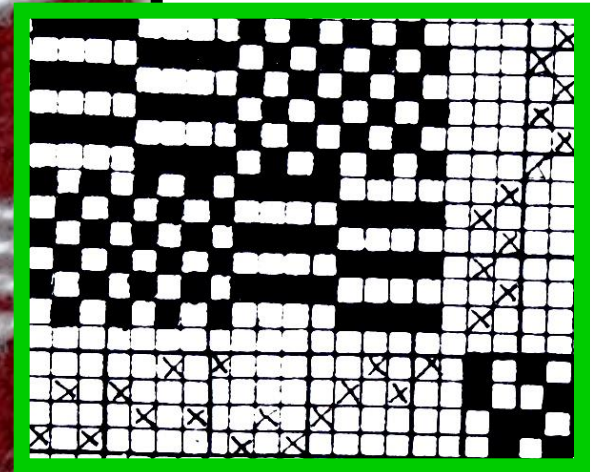


c. Liitkangad Labane panamaga

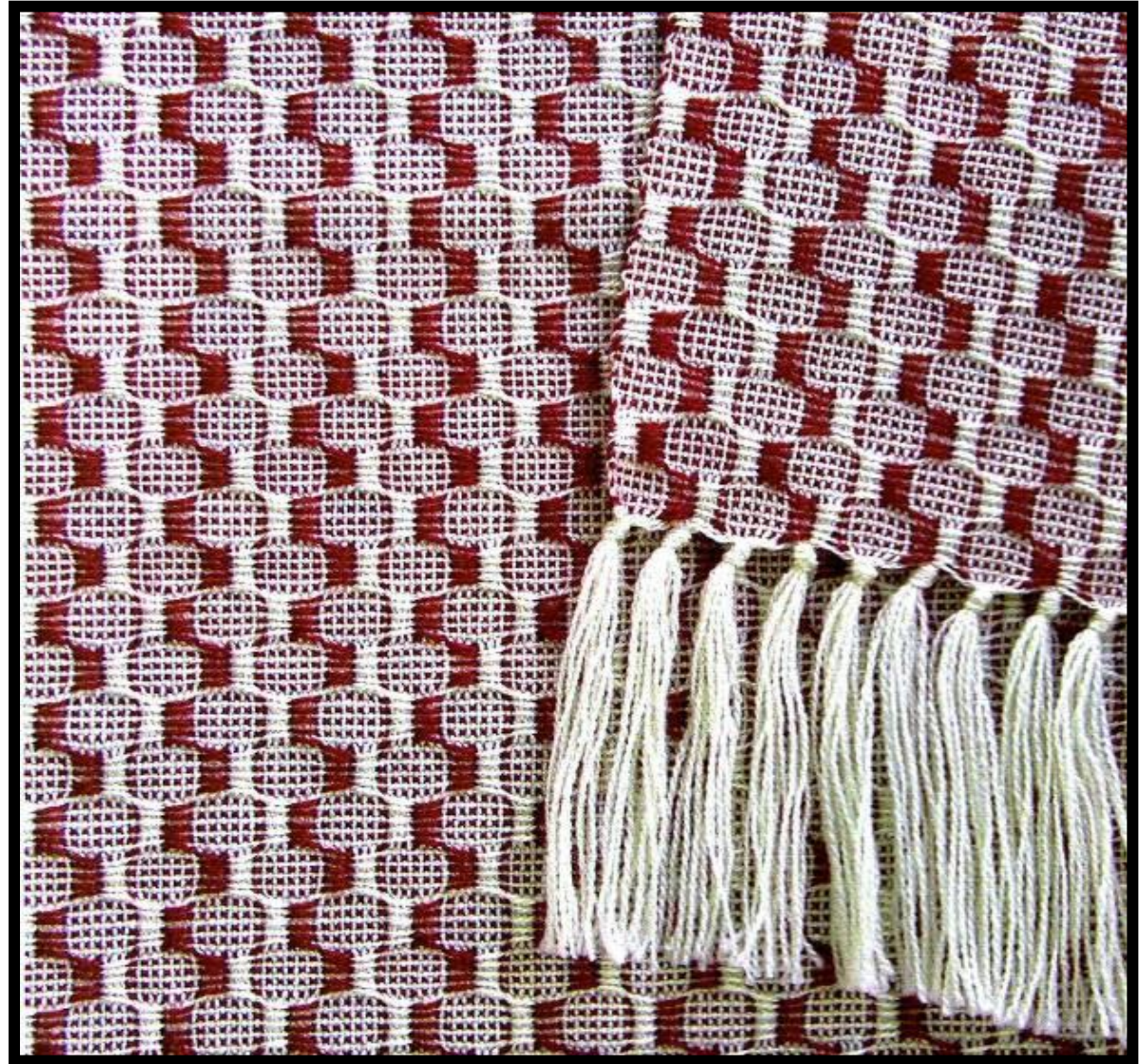


c. Liitkangad

Lepalina

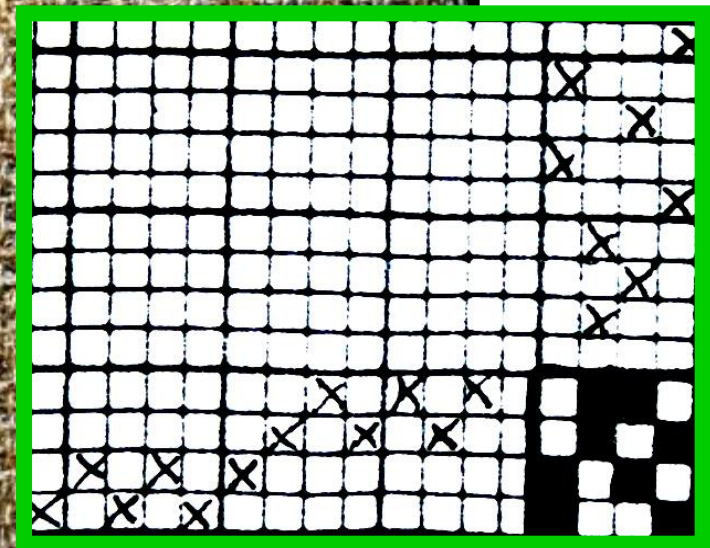
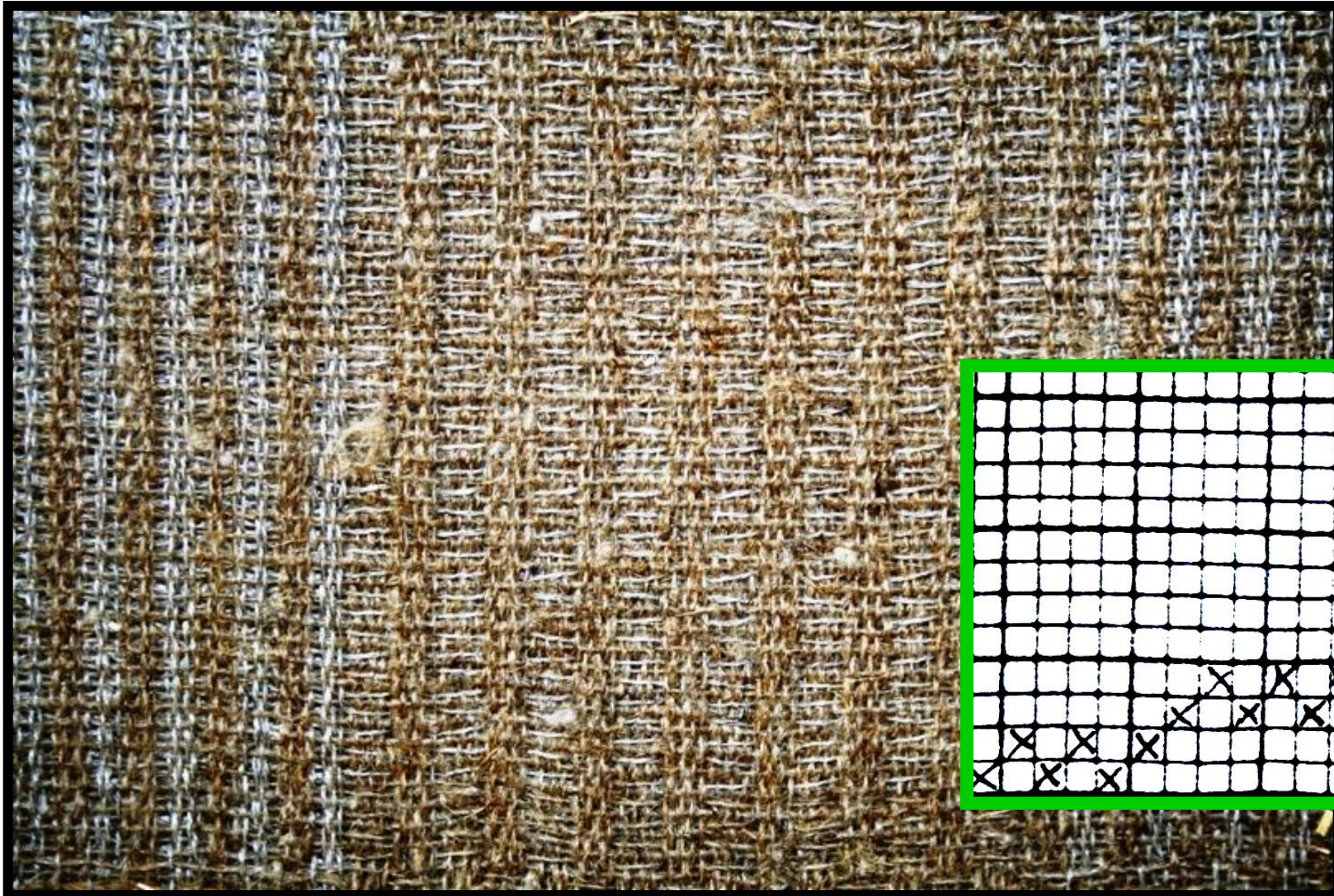


c. Liitkangad Lepalina



c. Liitkangad

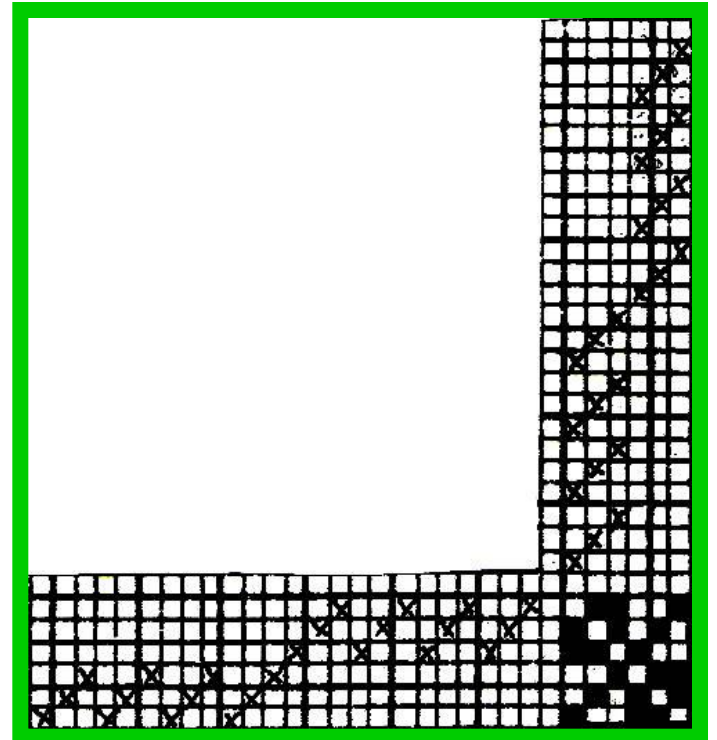
Seadrell



c. Liitkangad



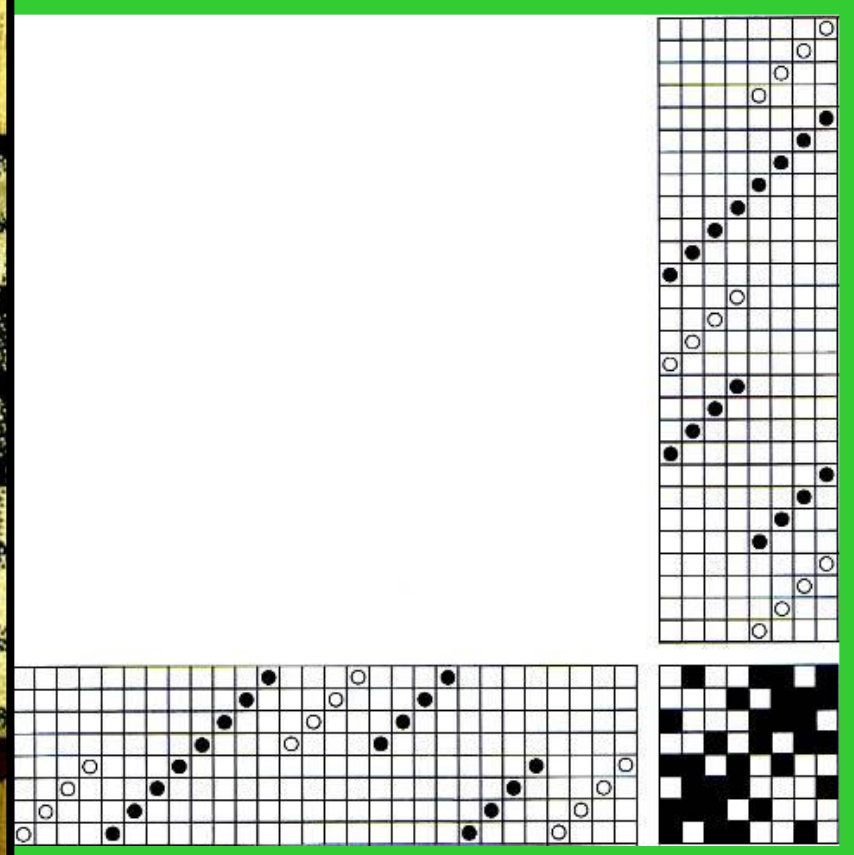
Drell





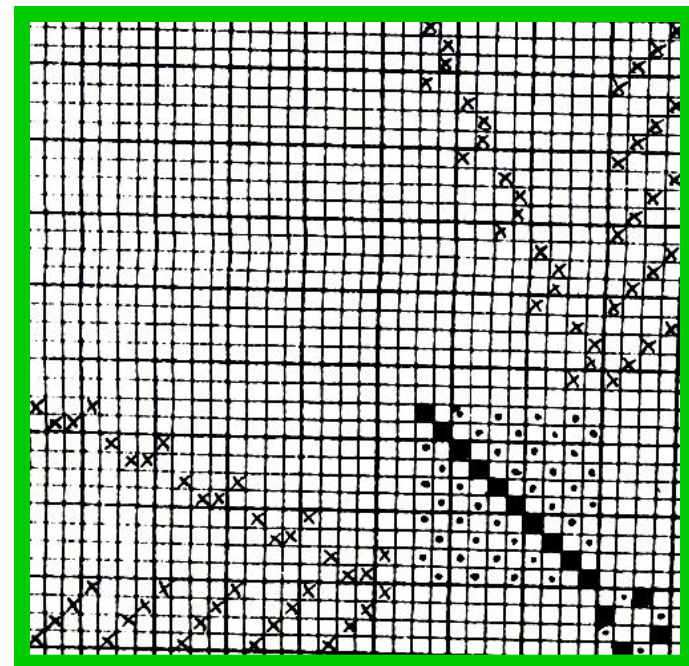
c. Liitkangad

Drell



c. Liitkangad

Drell pikksilmniitega



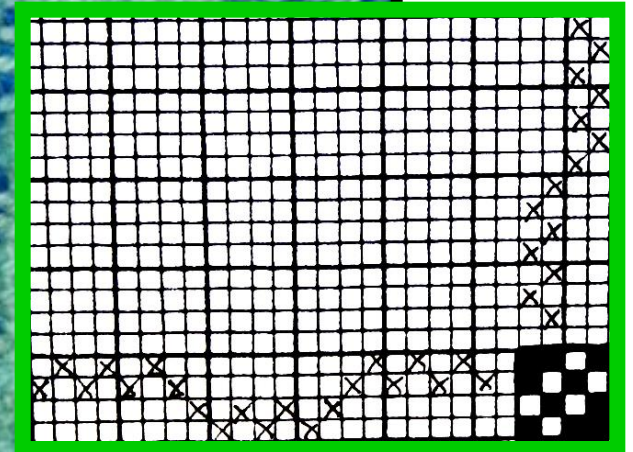
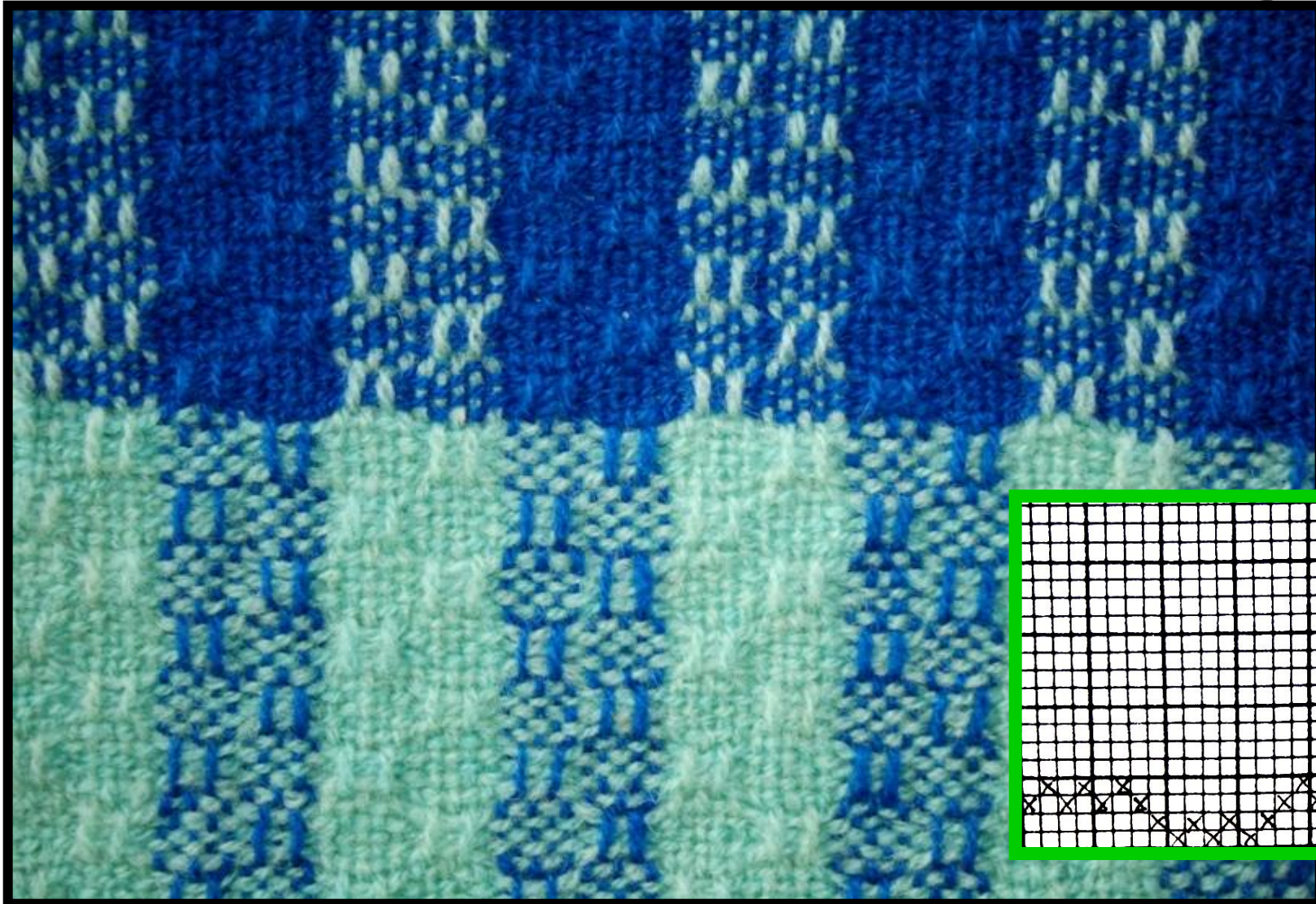
c. Liitkangad Damast



c. Liitkangad Naastuline

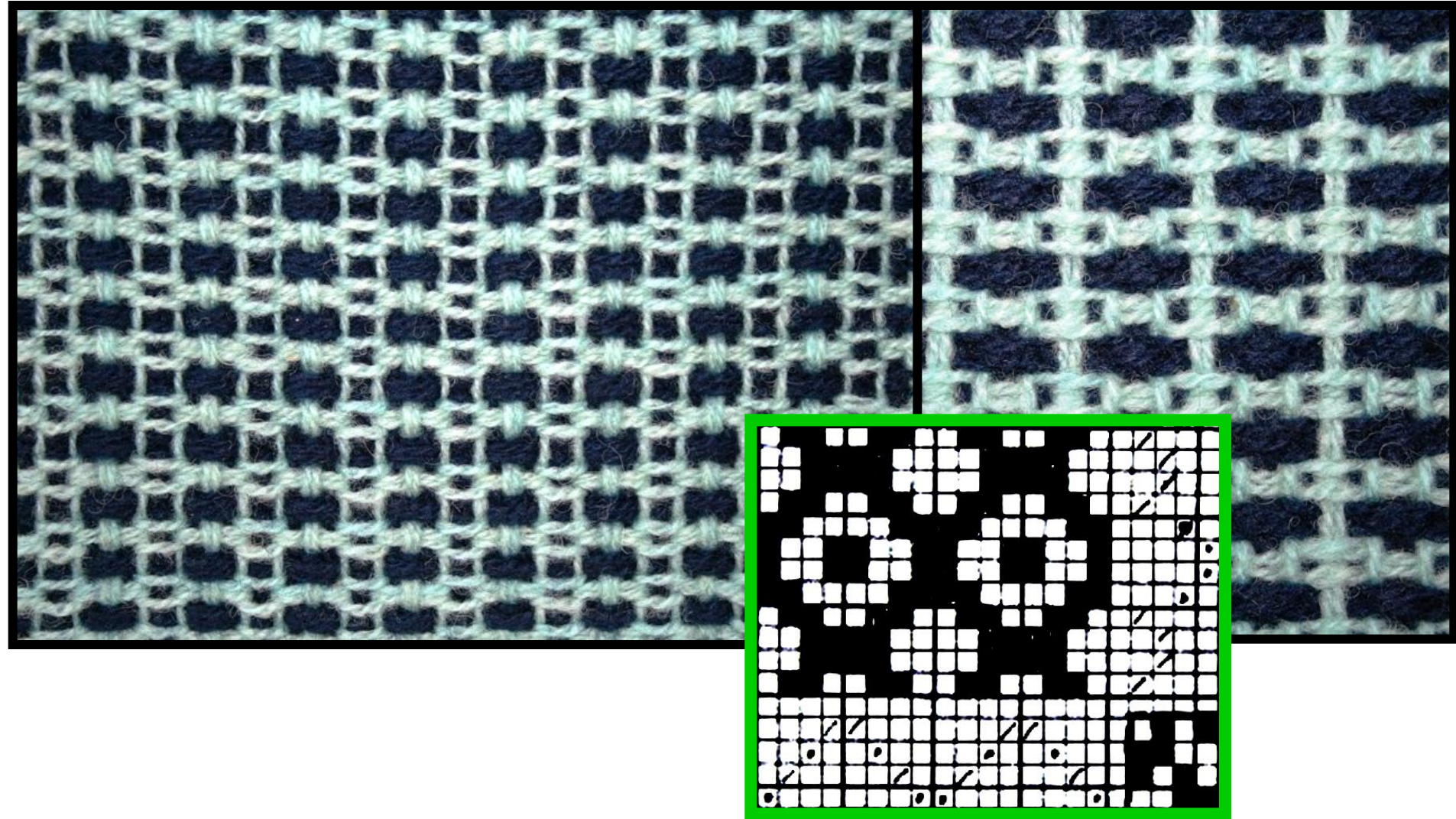


c. Liitkangad Naastkirikangas



c. Liitkangad

Krepid





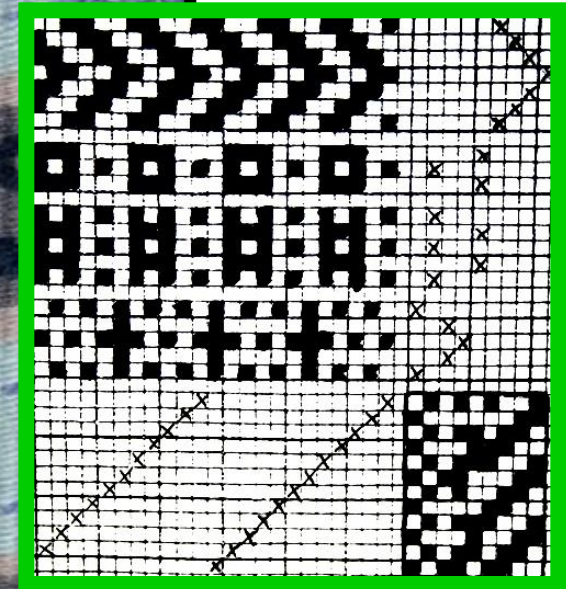
KANGATEHNIKAD

**II Lisalõngasüsteemidega
kangad**

A. KIRIKANGAD

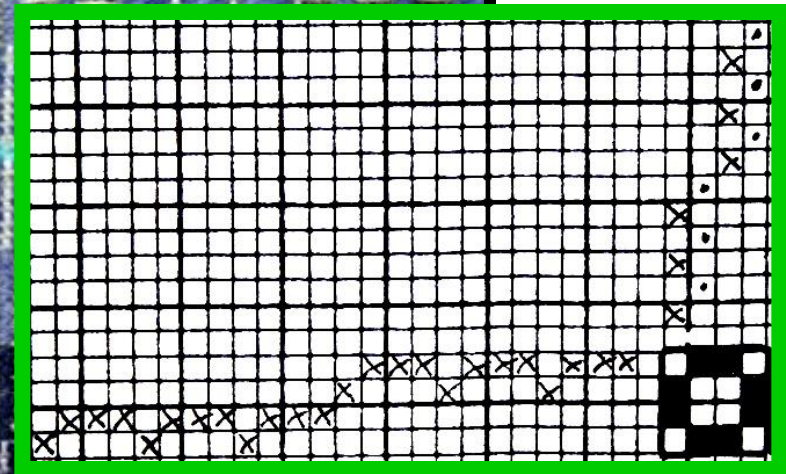
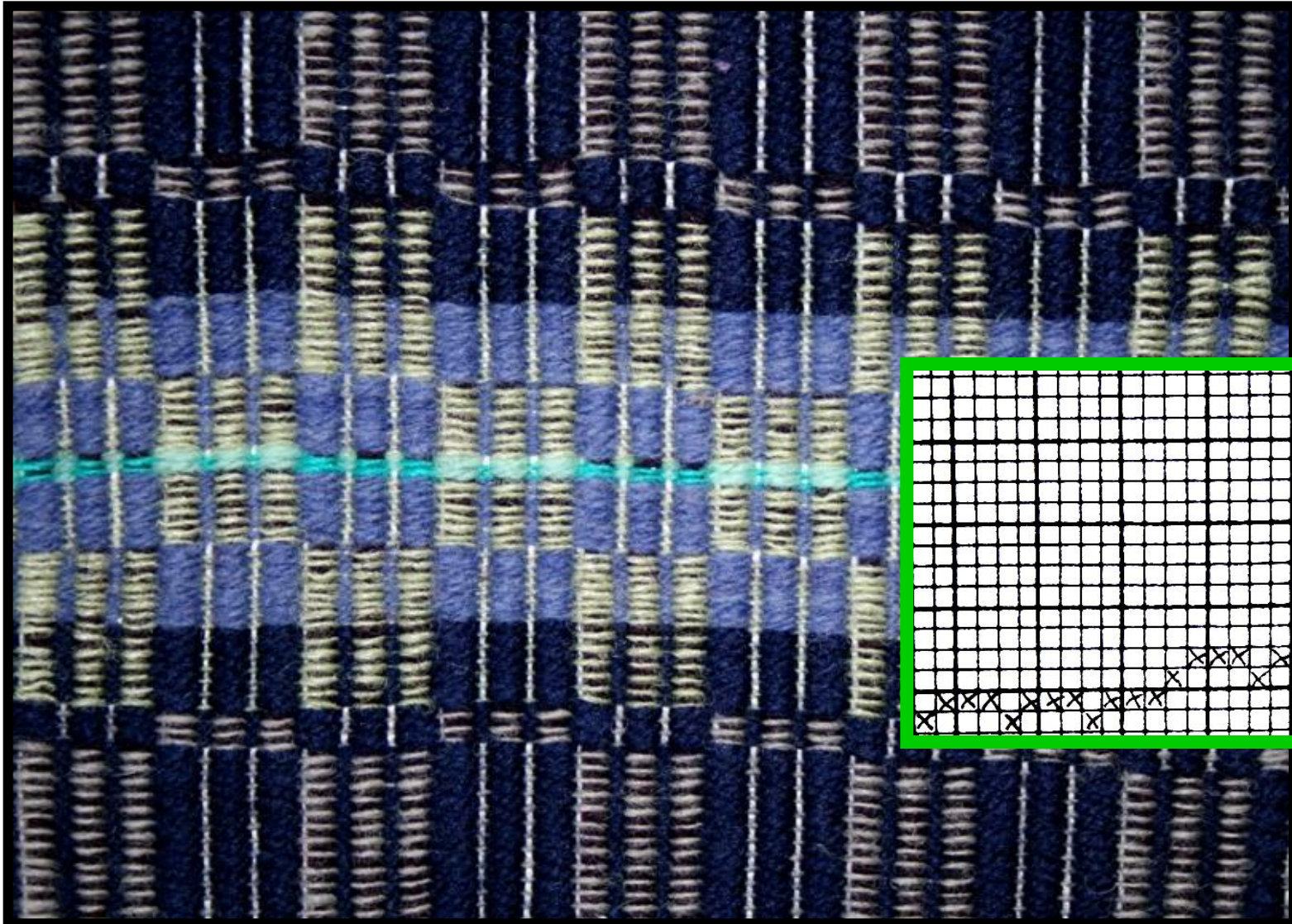
A. KIRIKANGAD

Sõbakirikangas



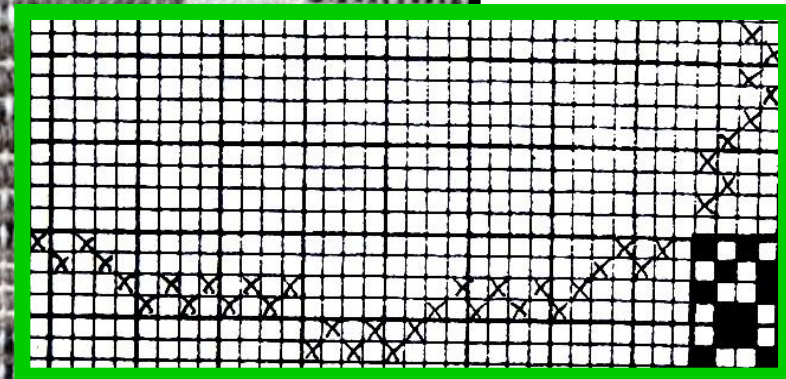
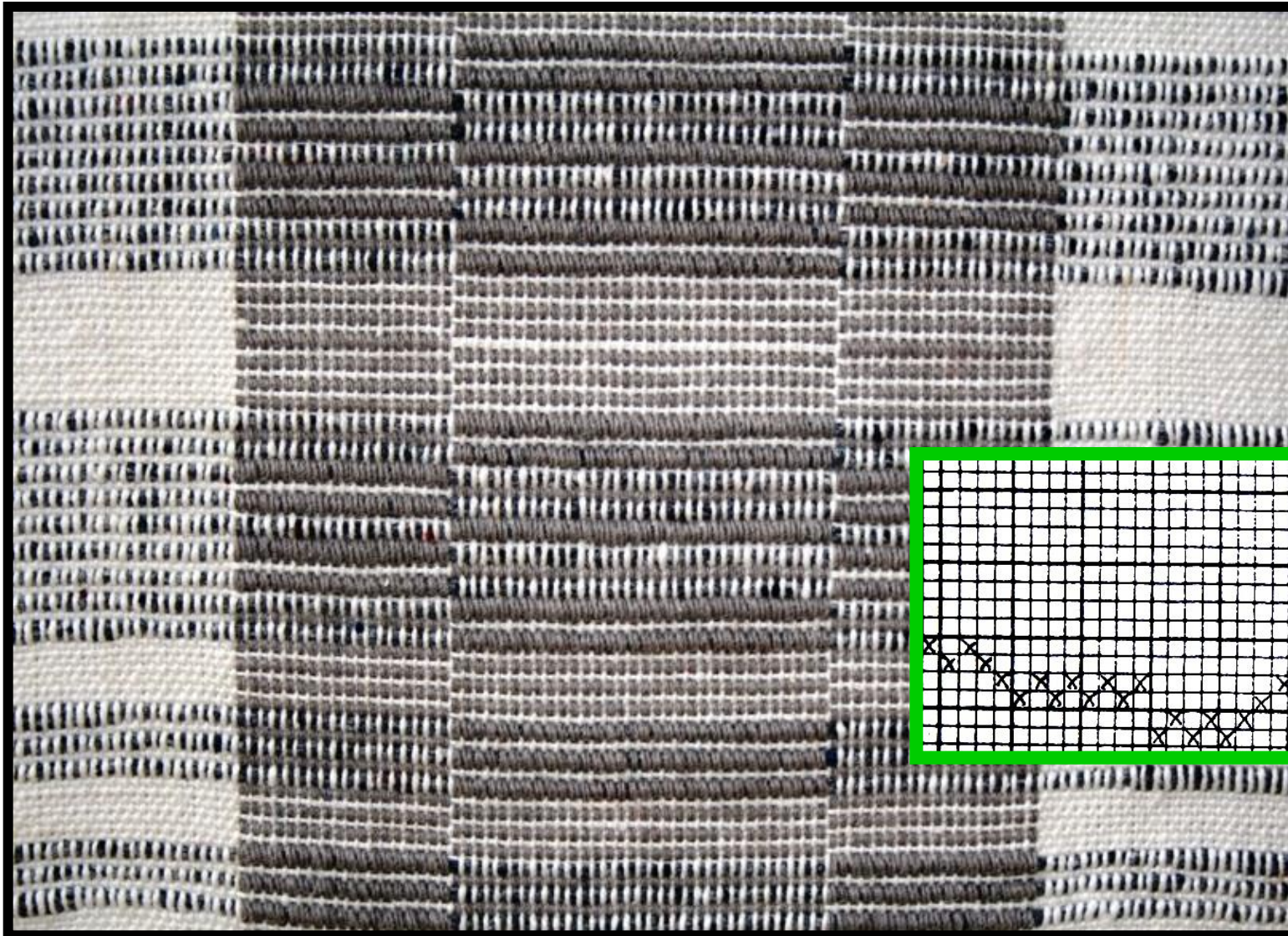
A. KIRIKANGAD

Koekiririps



A. KIRIKANGAD

Lõimkiririps



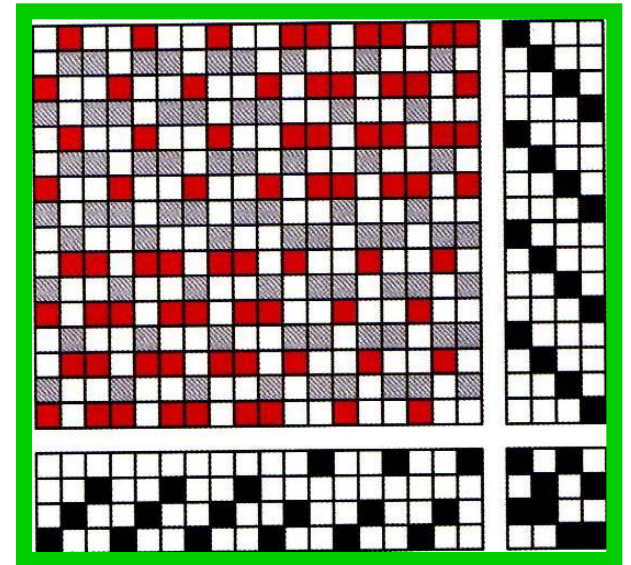
A. KIRIKANGAD

Lõimkiririps



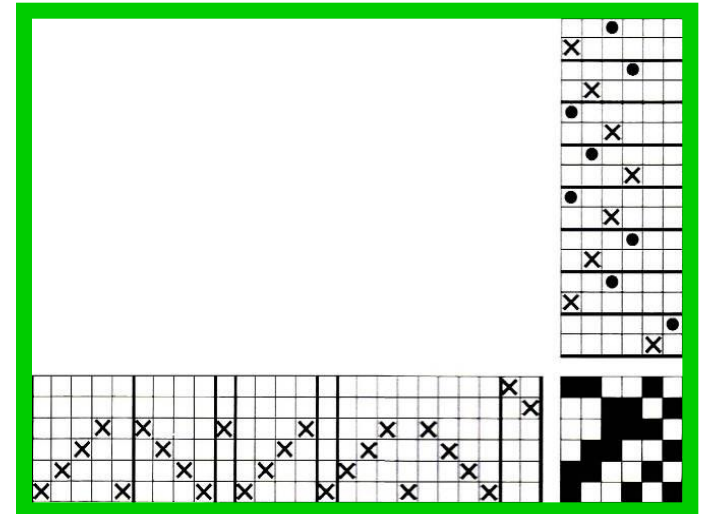
A. KIRIKANGAD

Koekirikangas



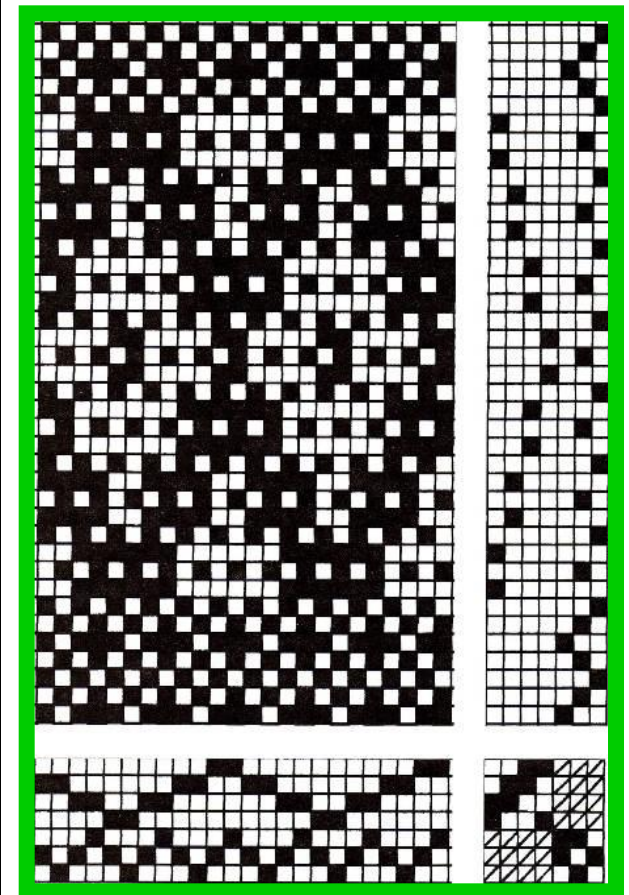
A. KIRIKANGAD

Koekirikangas



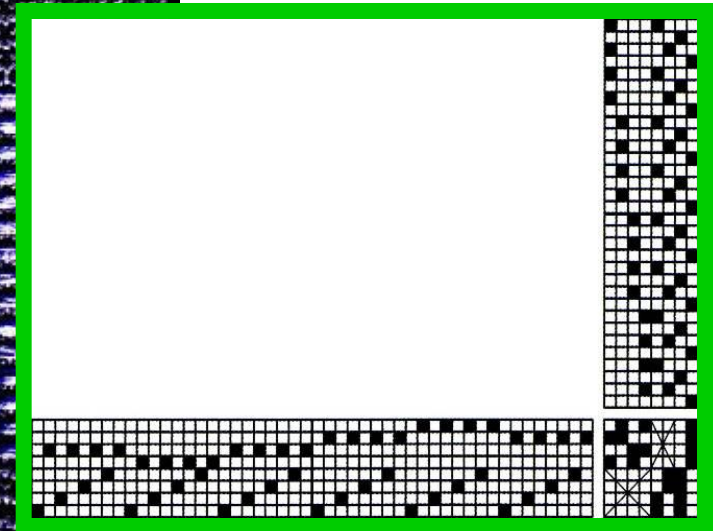
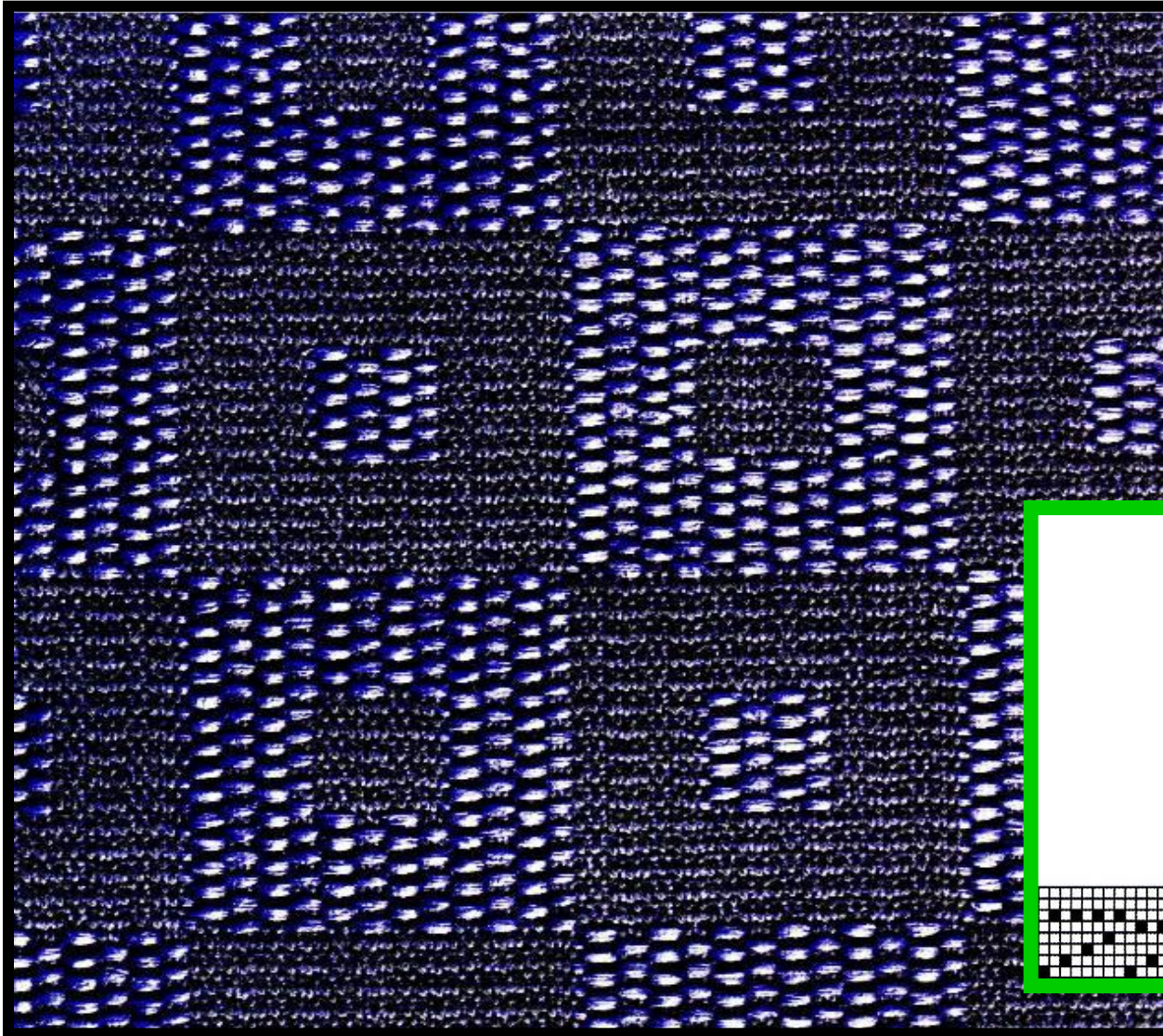
A. KIRIKANGAD

Kirikangas pikksilmniitega



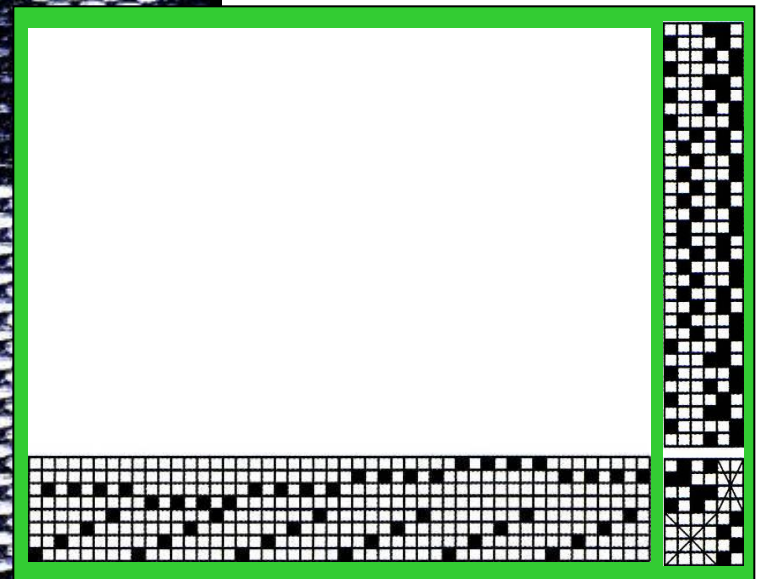
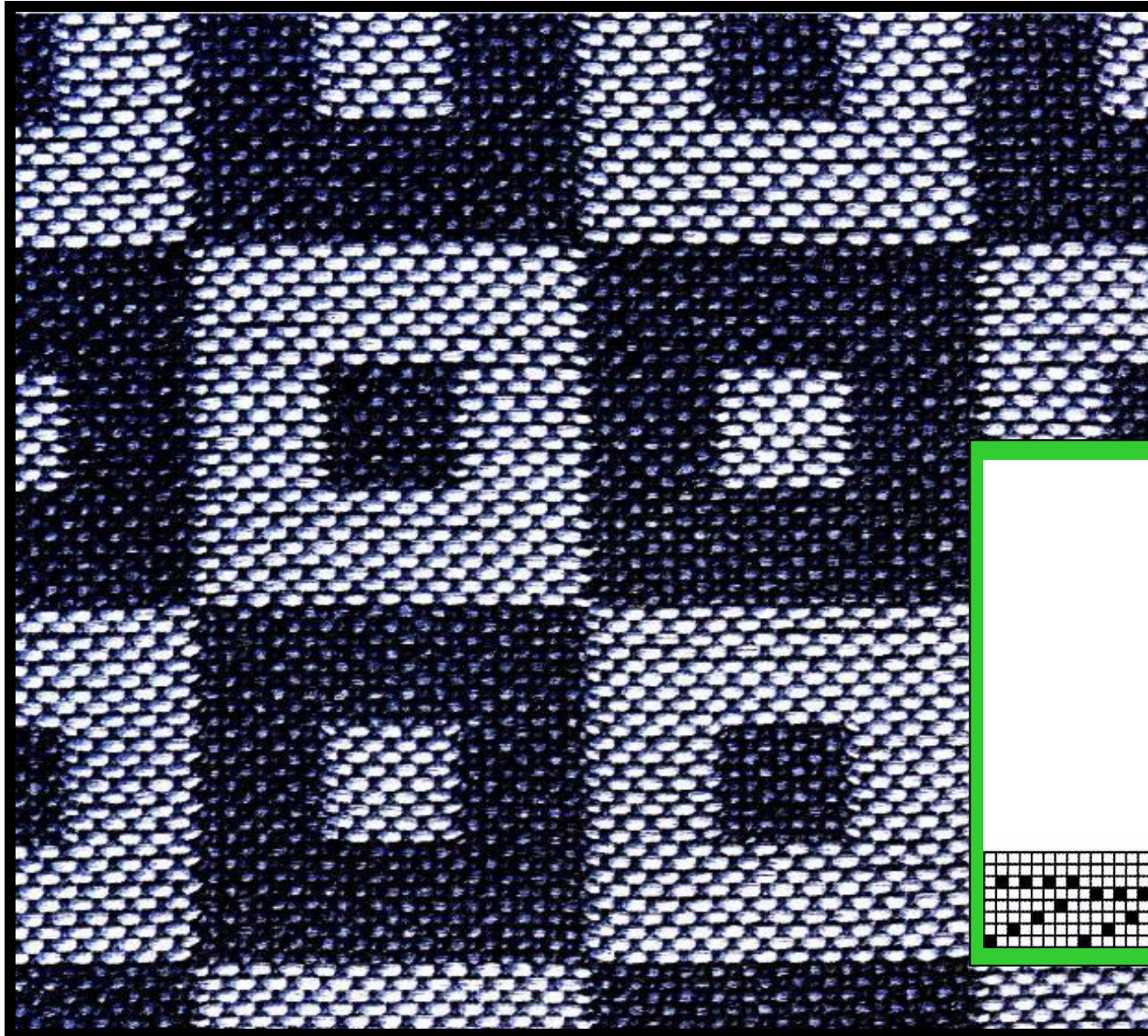
A. KIRIKANGAD

Koekirikangas sideniitega



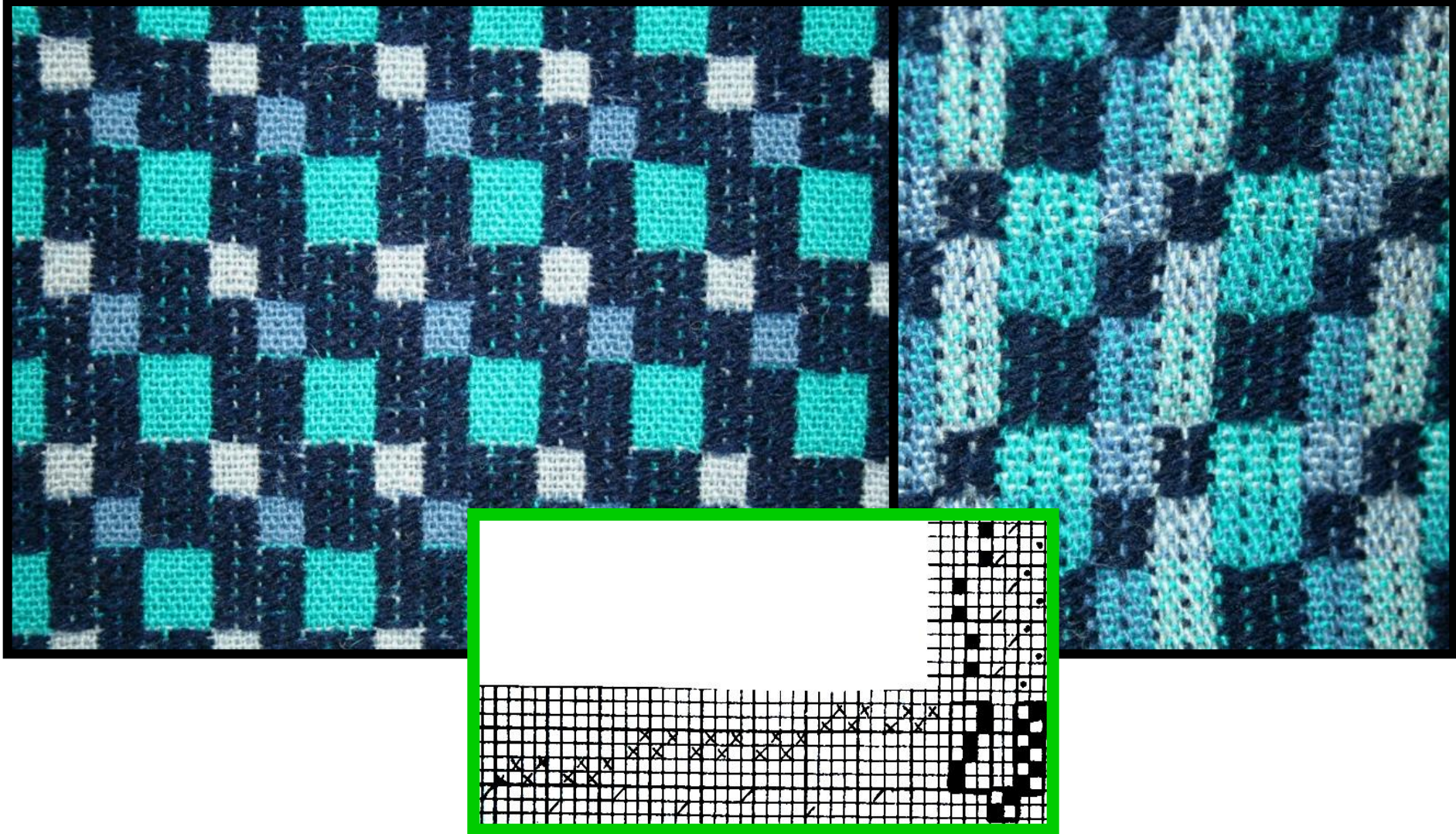
A. KIRIKANGAS

Täiskoekirikangas



A. KIRIKANGAD

Topeltkirikangas



A. **KIRIKANGAD** **Lõimkirikangas**



A. KIRIKANGAD

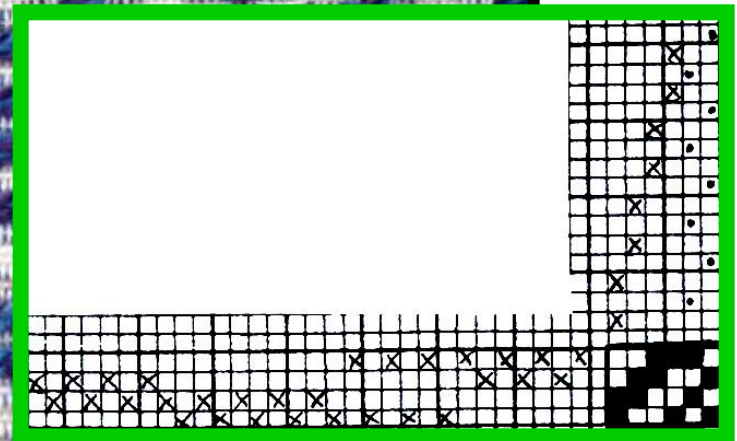
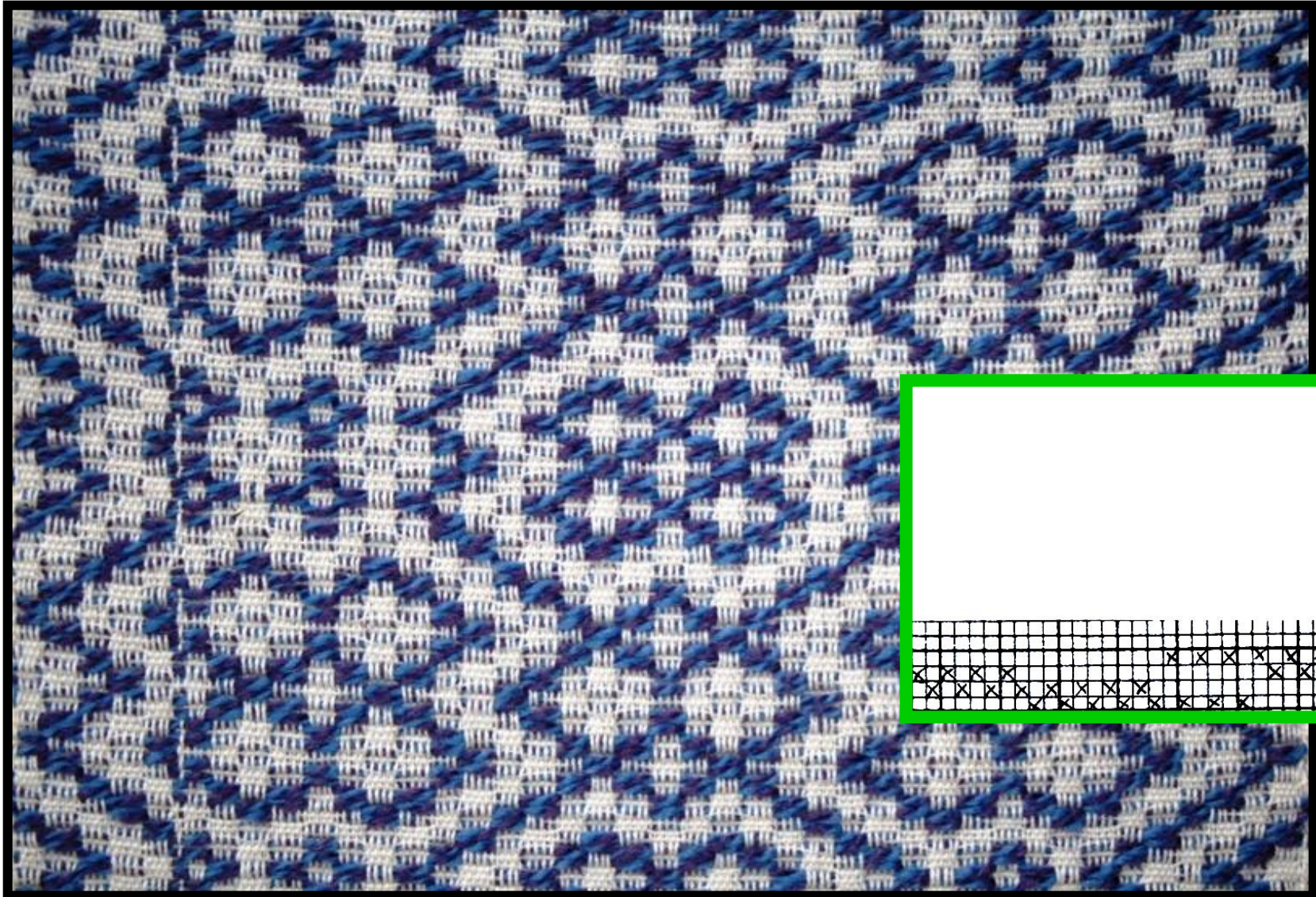


Ühendatud lõim-
ja koekirikangas

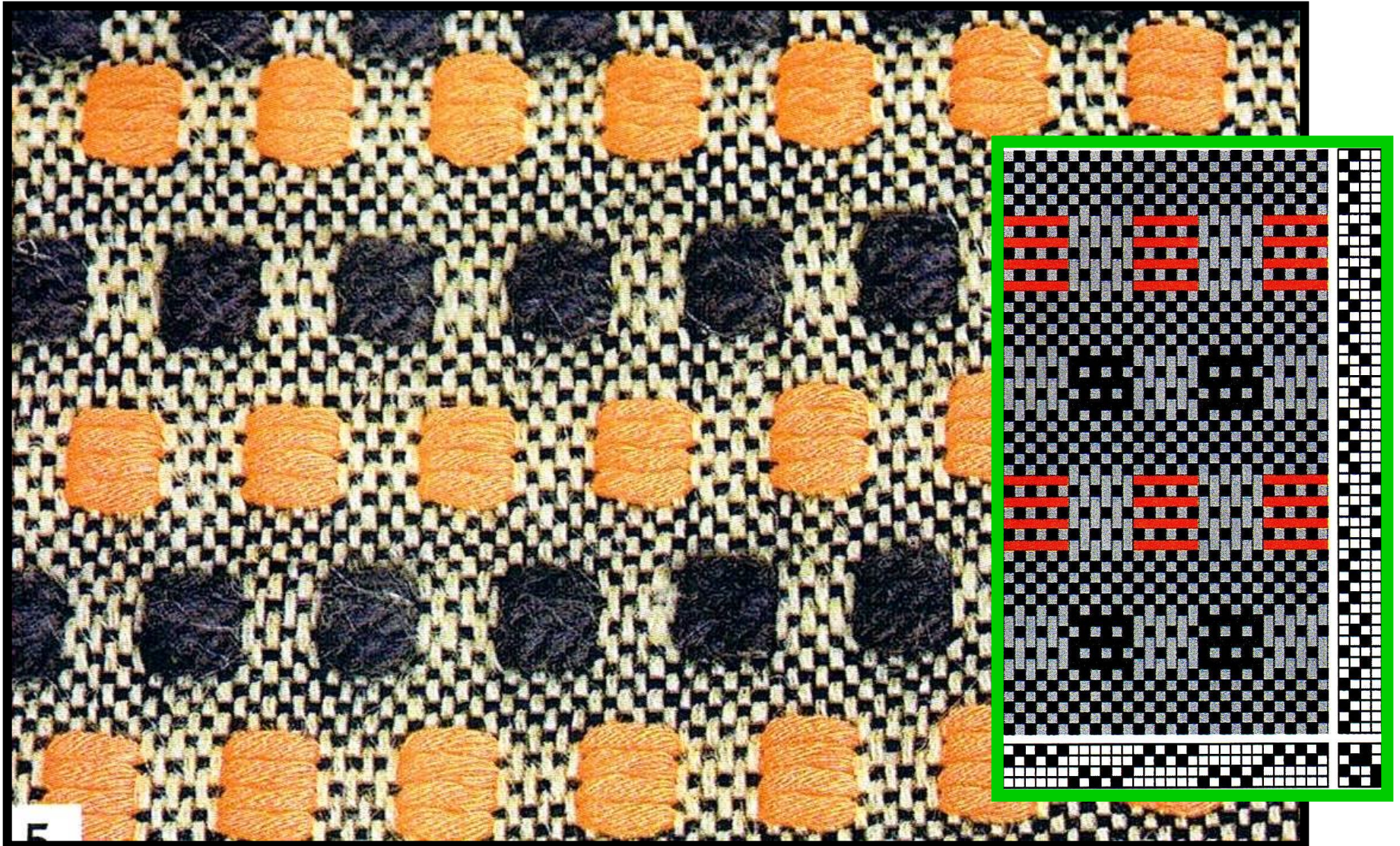


A. KIRIKANGAD

Daaladrell

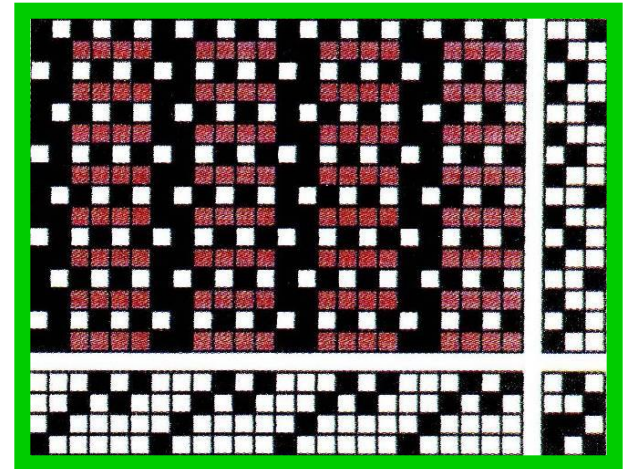
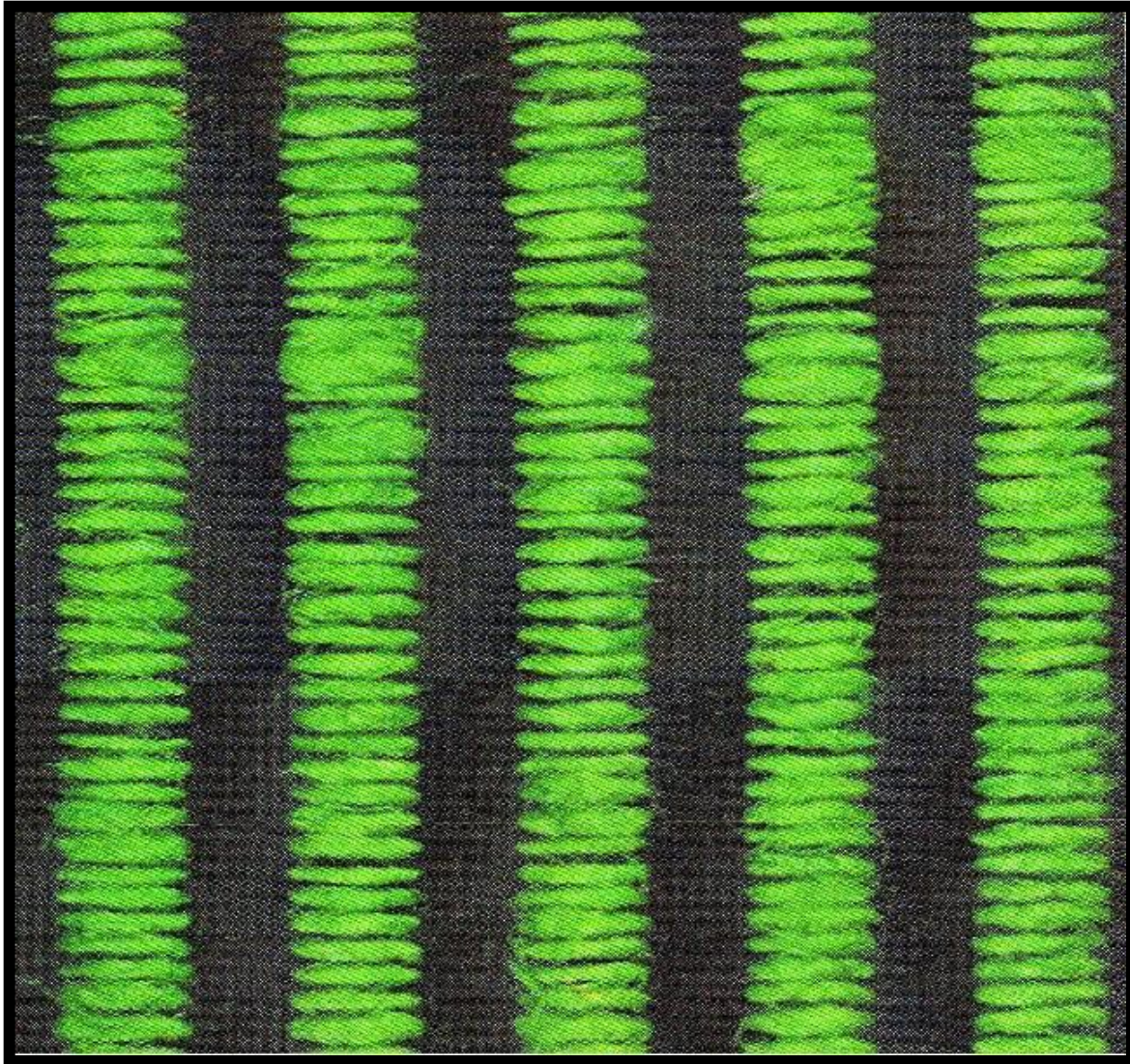


A. KIRIKANGAD Raanu

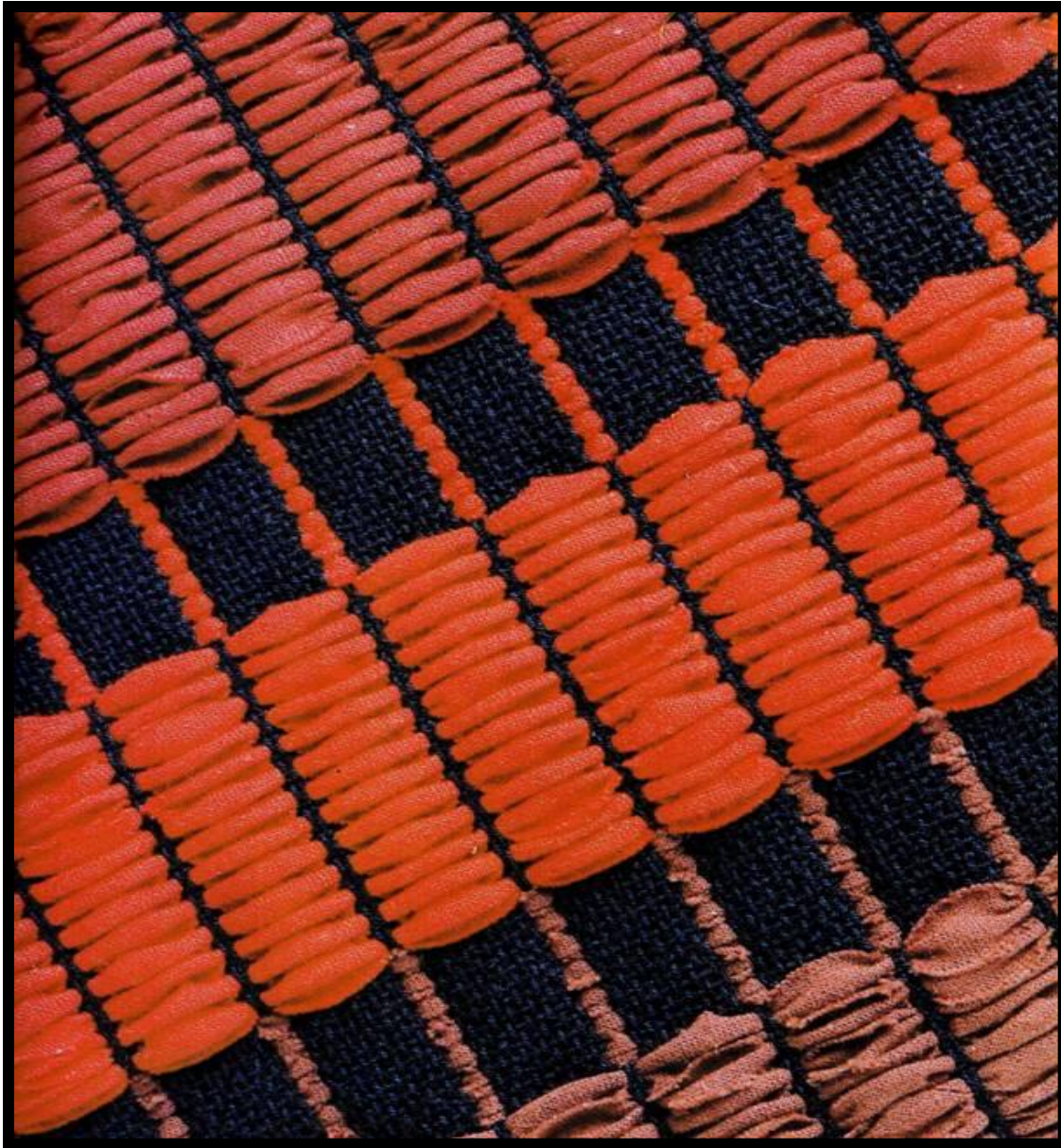


A. KIRIKANGAD

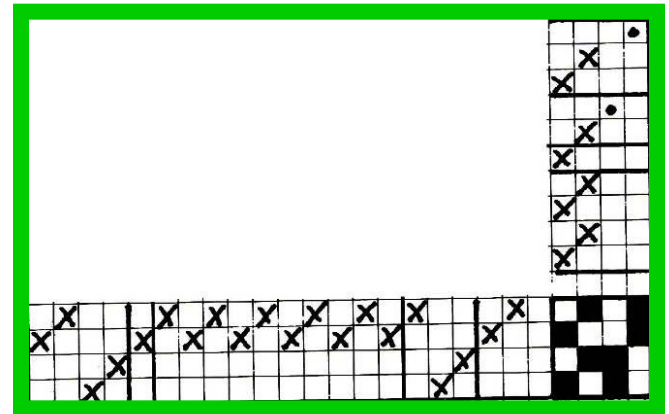
Vaguraanu



A. KIRIKANGAD

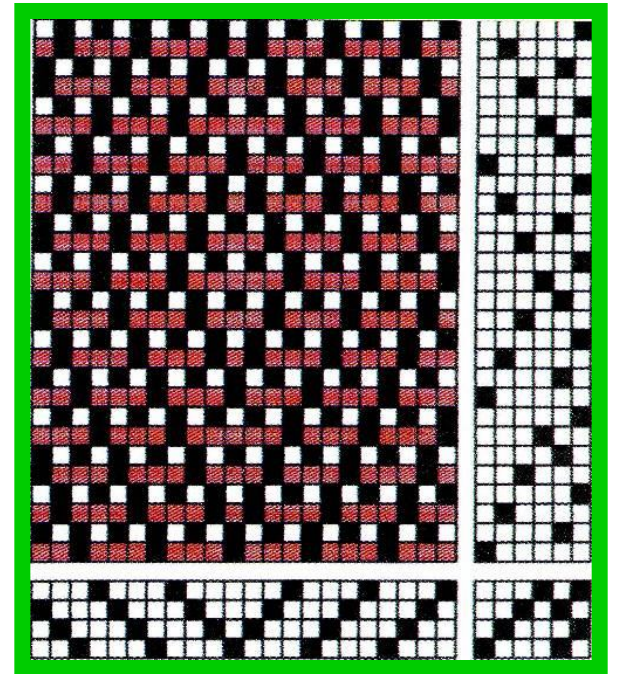
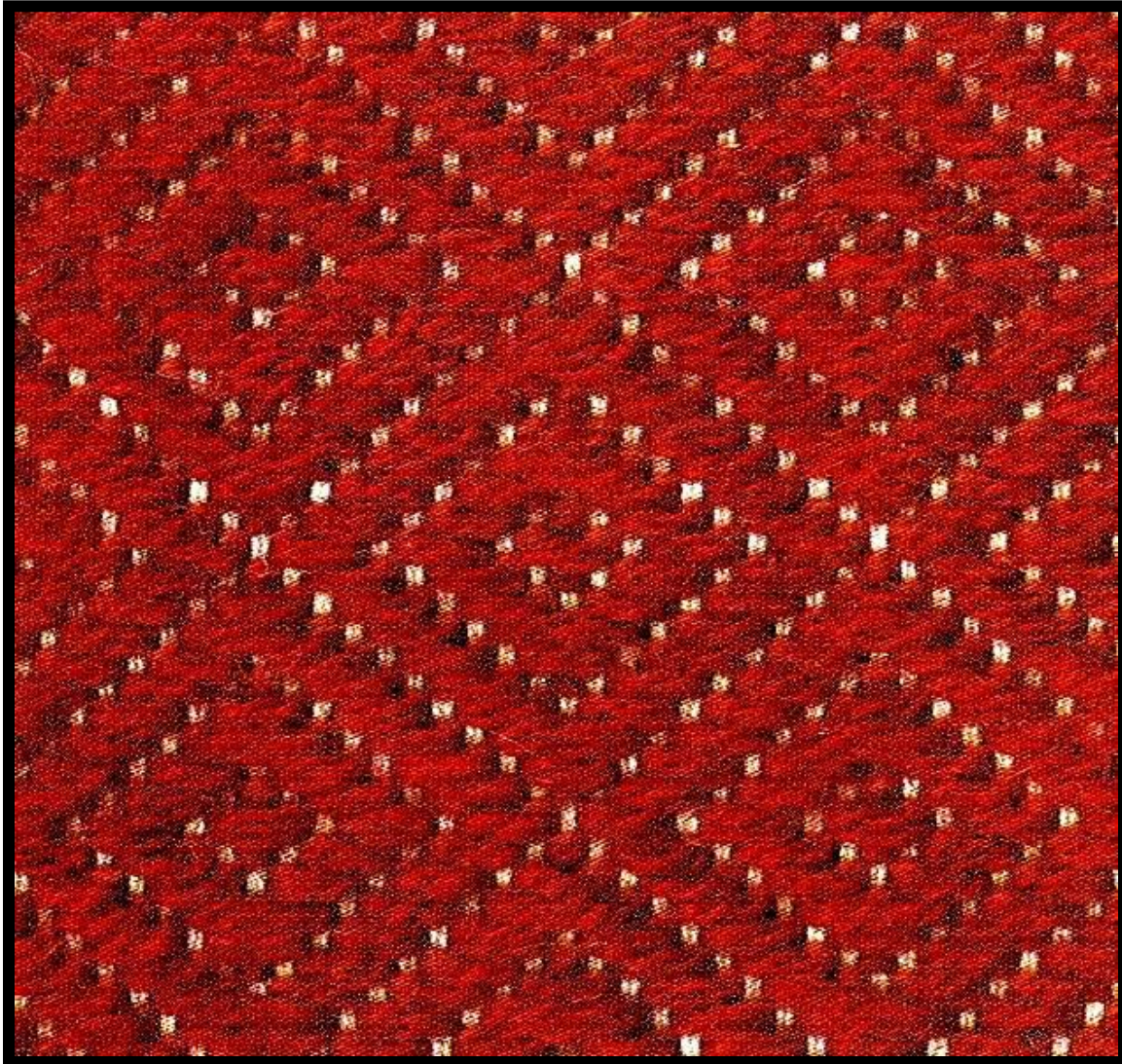


Vaguraanu



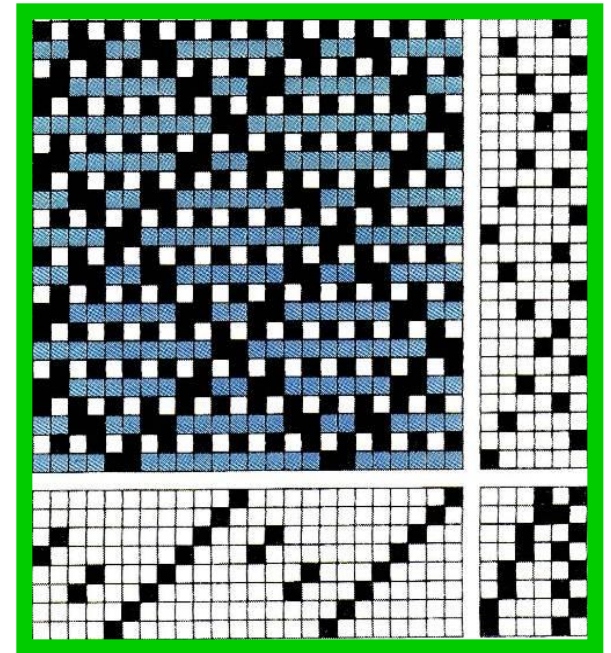
A. KIRIKANGAD

Rõngasraanu



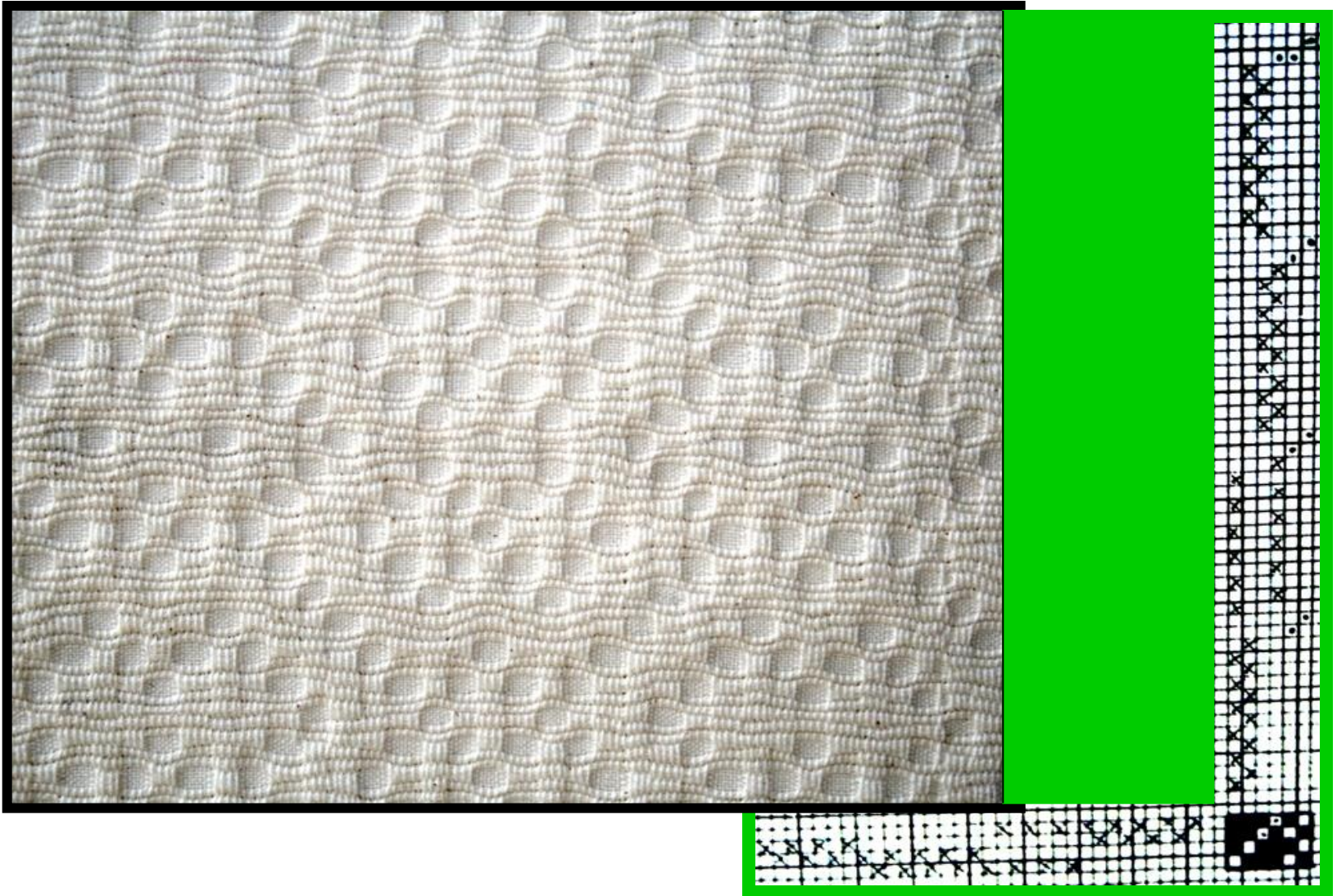
A. KIRIKANGAD

Silmaline raanu



A. KIRIKANGAD

Pitsikangas





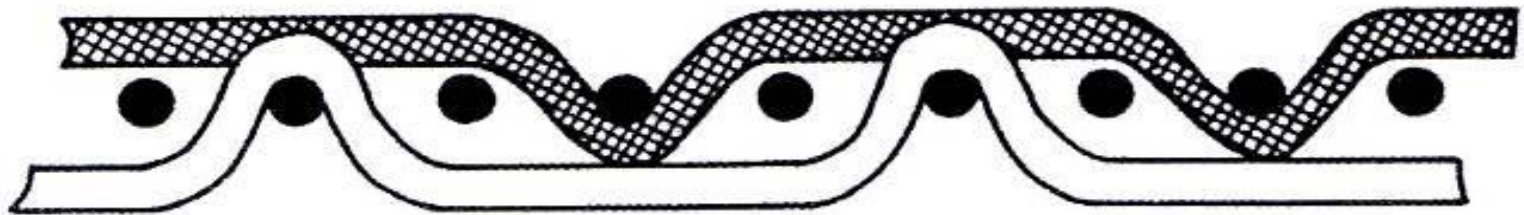
KANGATEHNIKAD

**II Lisalõngasüsteemidega
kangad**

B. KÕVENDKANGAD

B. KÕVENDKANGAD

* Aluskoega kõvendkangas.



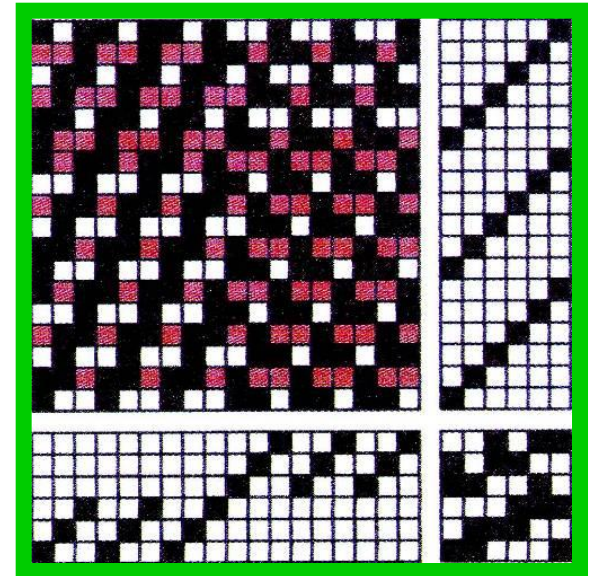
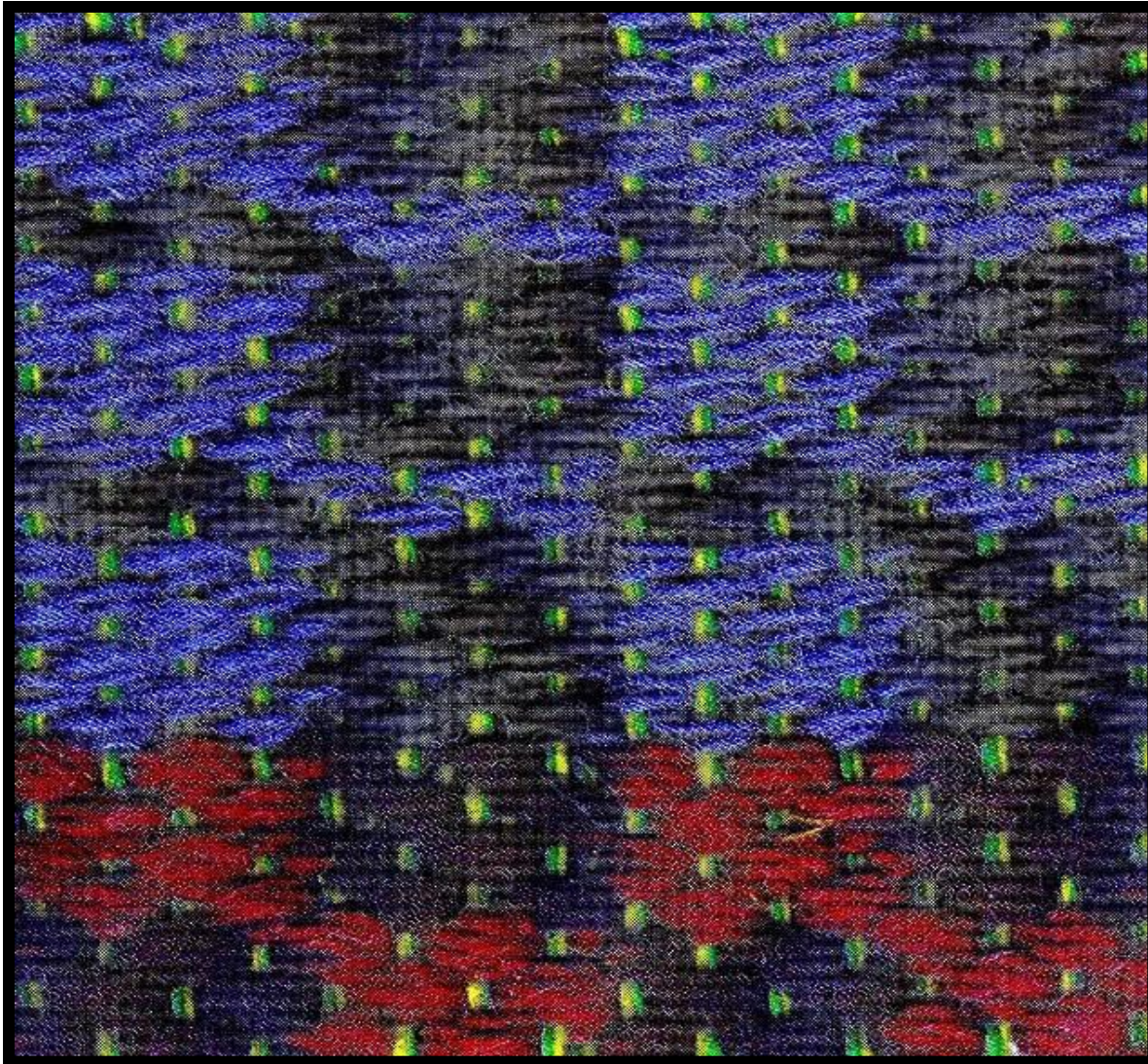
* Aluskoega kõvendatud kirjaline kangas.



* Aluslõimega kõvendkangas.

B. KÕVENDKANGAD

Aluskoega kõvendatud kirjaline kangas



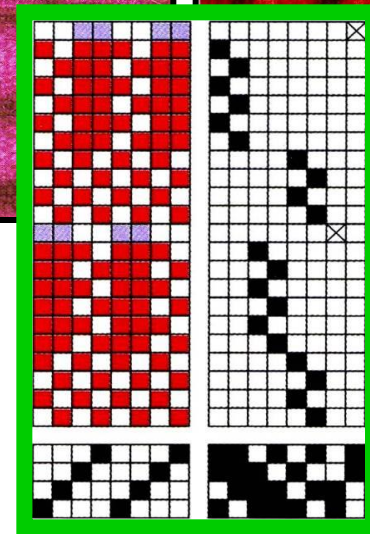
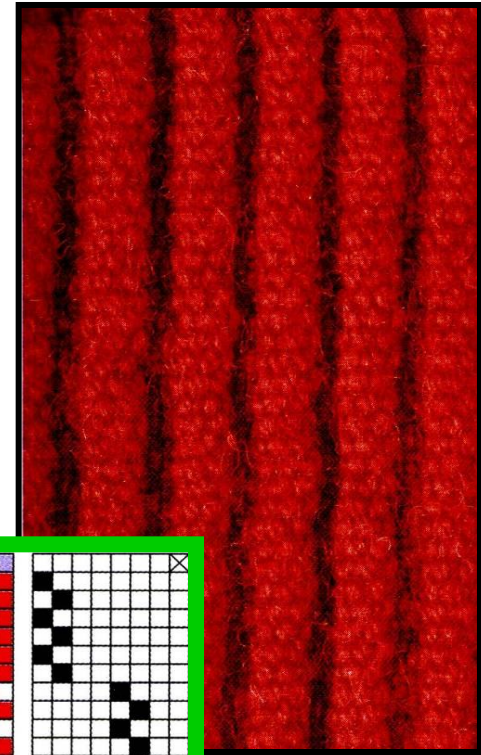
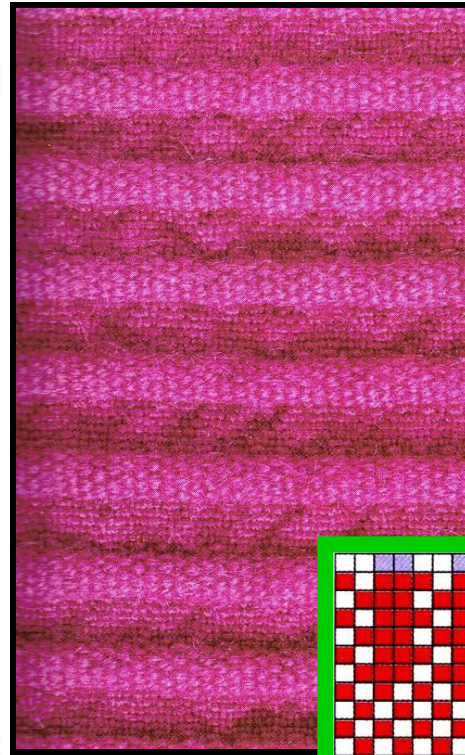


KANGATEHNIKAD

**II Lisalõngasüsteemidega
kangad**

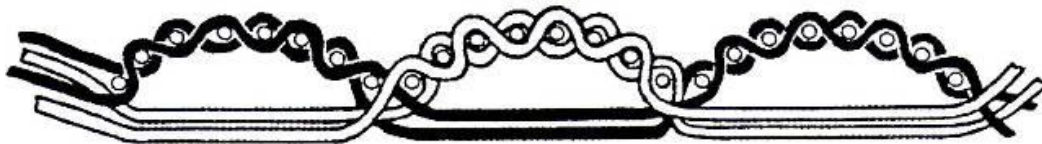
C. VAGUKANGAD

C. VAGUKANGAD



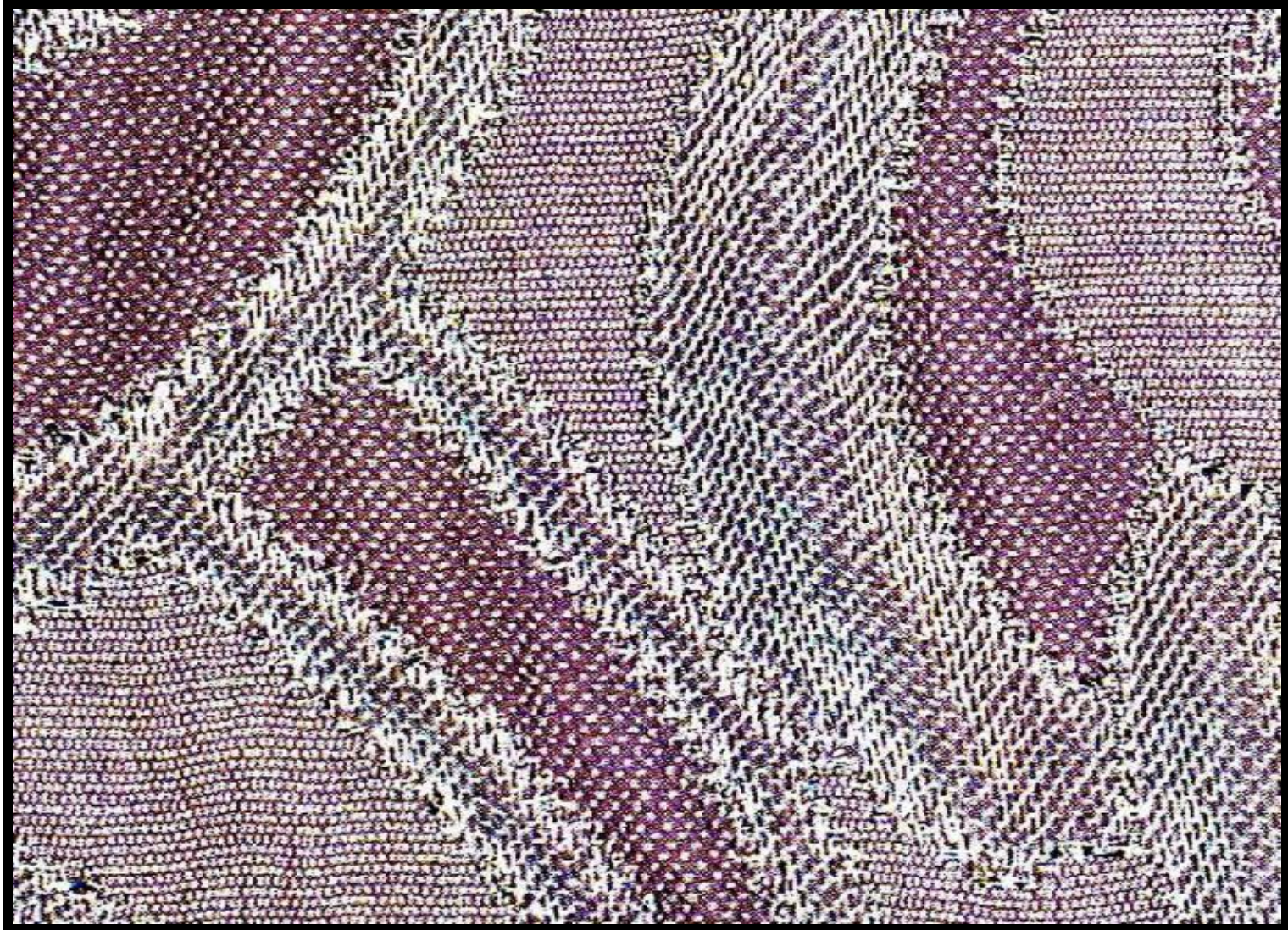
C. VAGUKANGAD

Kord



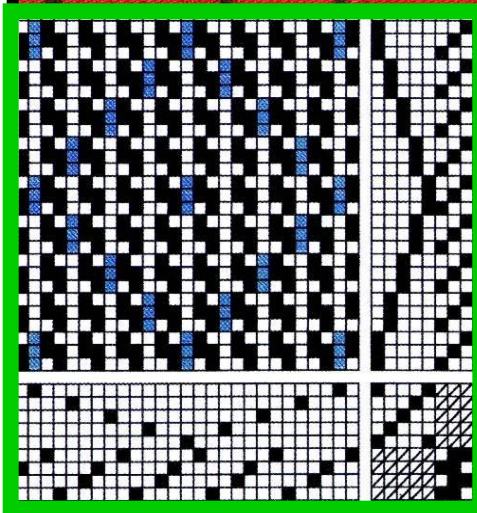
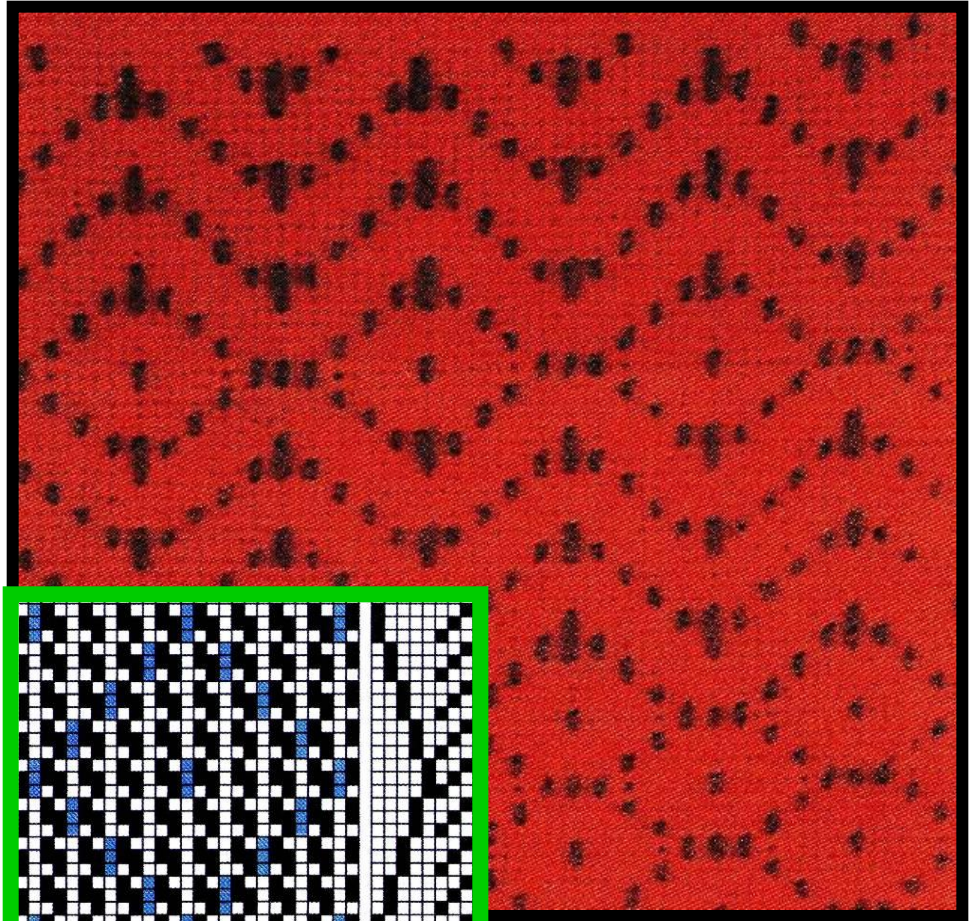
C. VAGUKANGAD

Klokee



C. VAGUKANGAD

Pikee





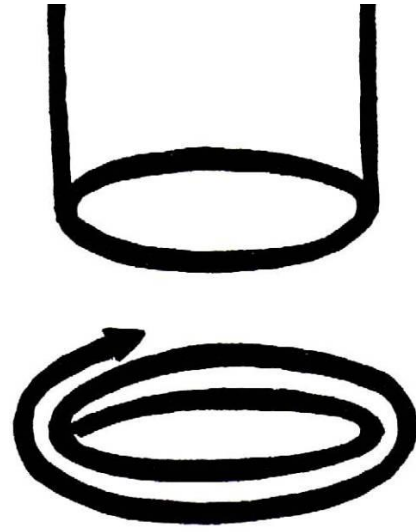
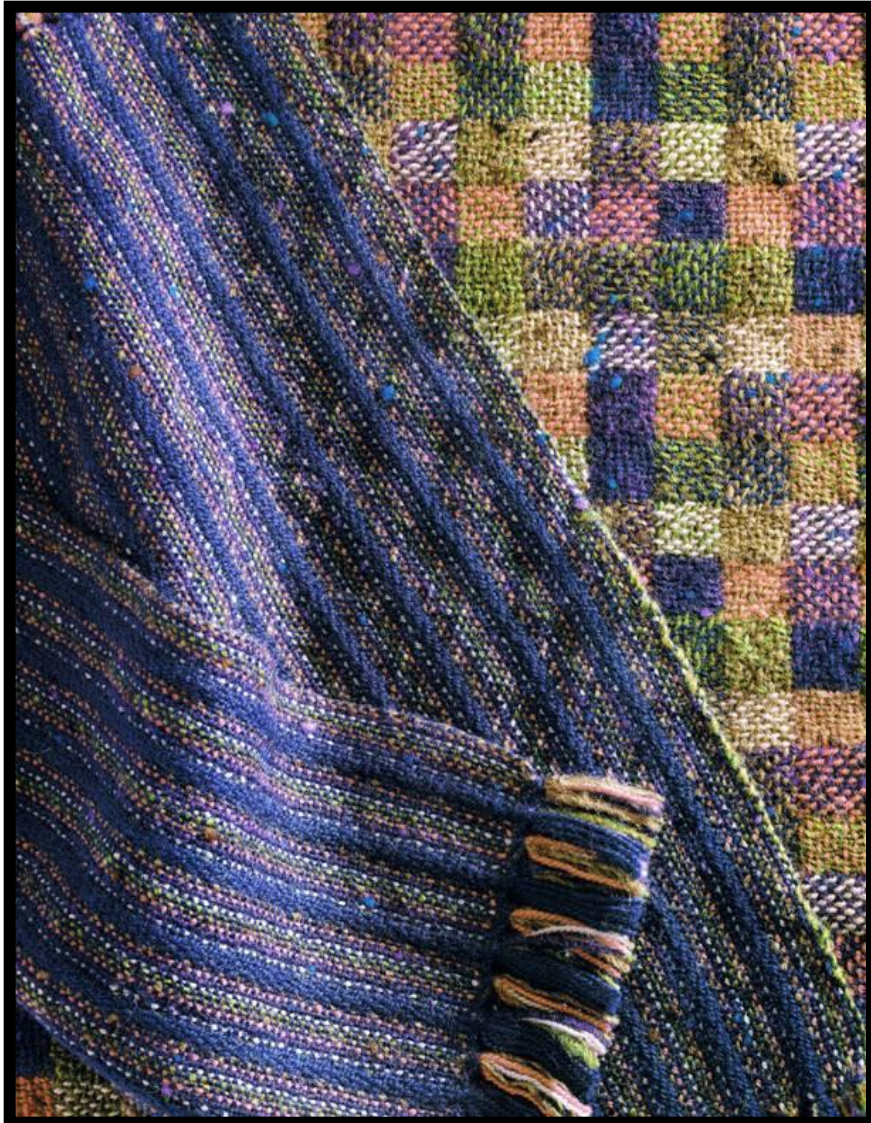
KANGATEHNIKAD

**II Lisalõngasüsteemidega
kangad**

D. TOPELTKANGAD

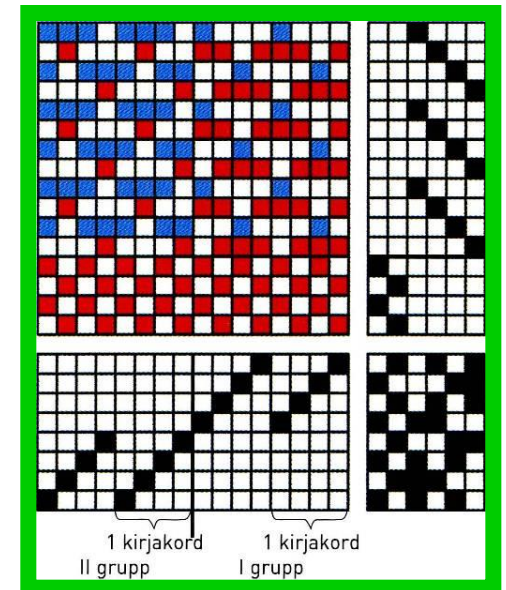
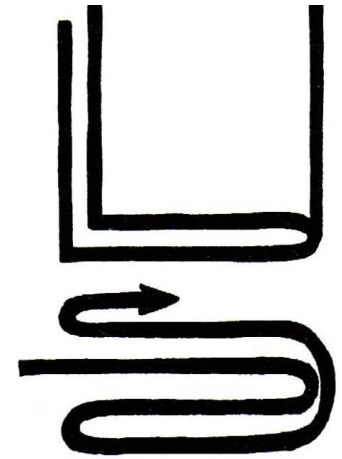
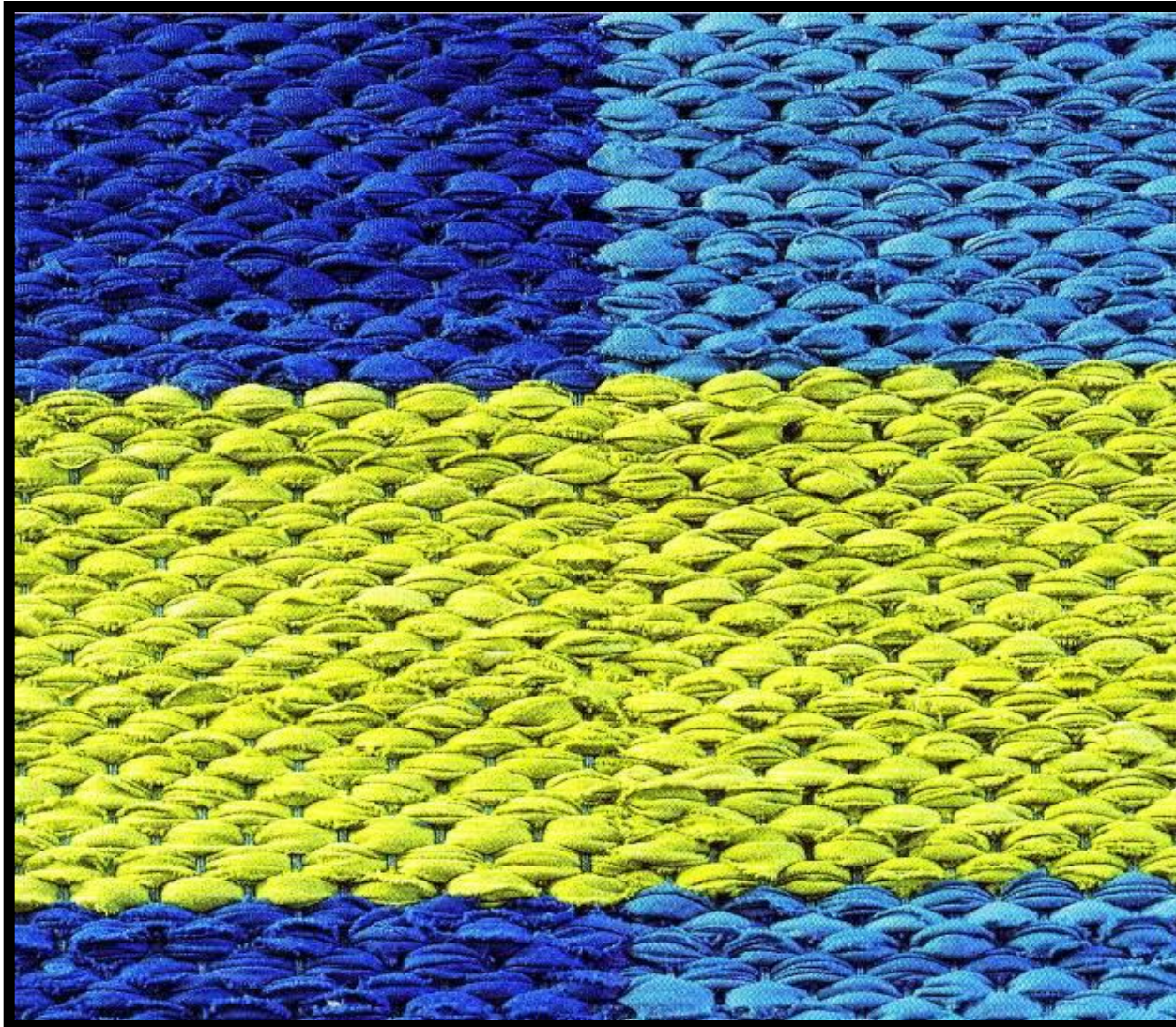
D. TOPELTKANGAD

Õõskangas e. kotikangas



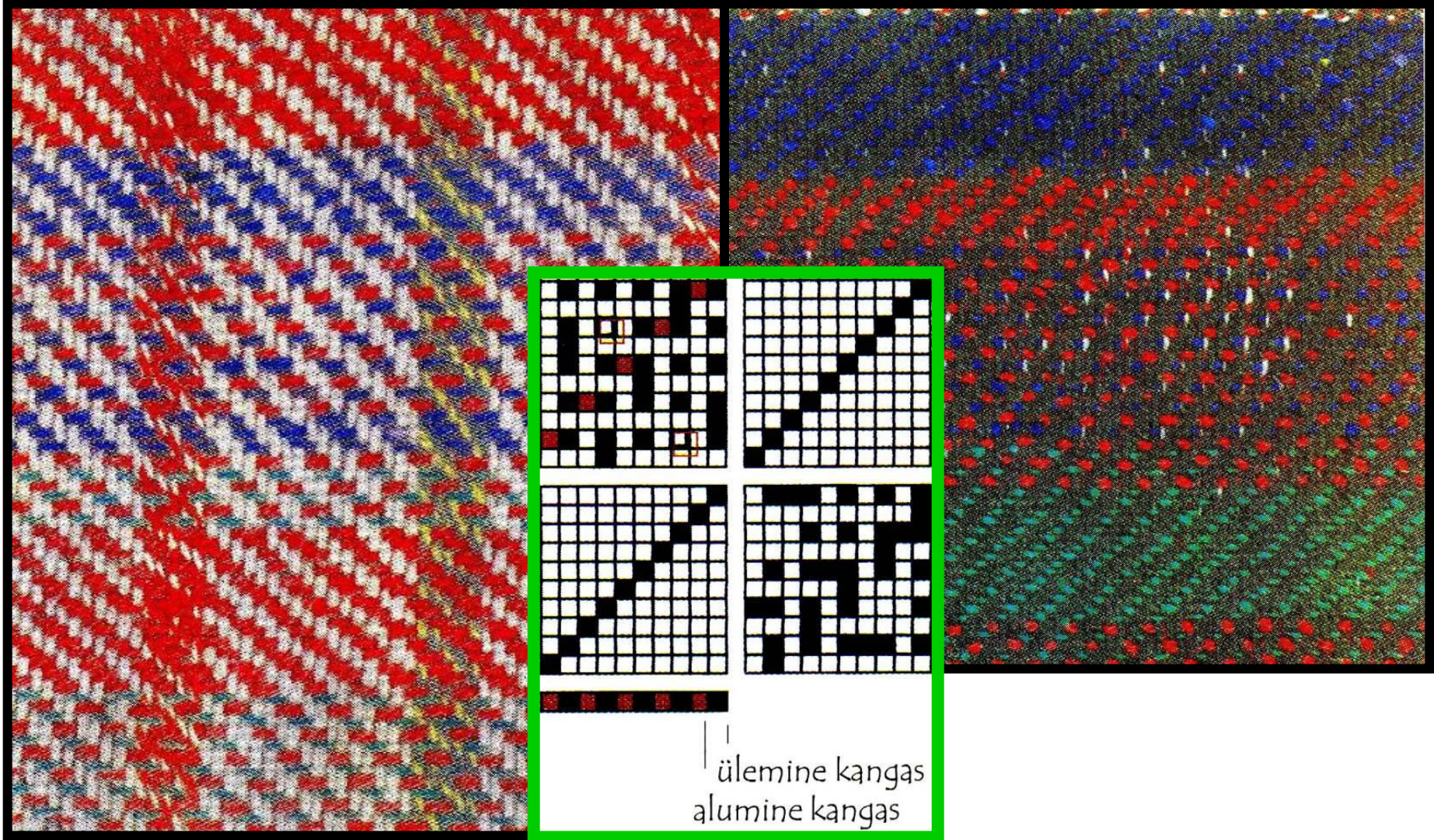
D. TOPELT KANGAS

Topeltlai kangas



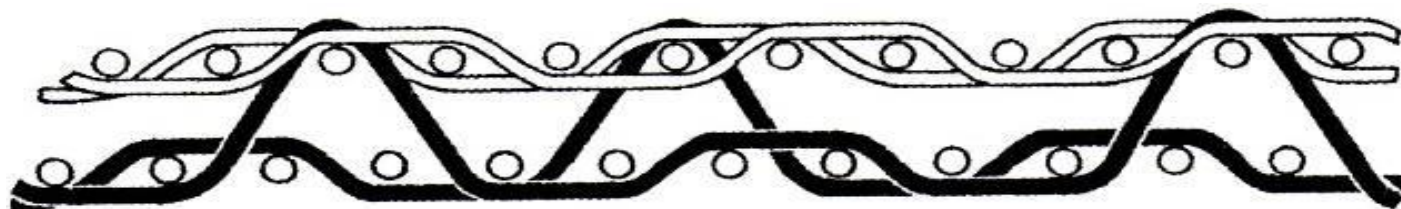
D. TOPELTKANGAD

Voodriga kangas e. seotud topeltkangas

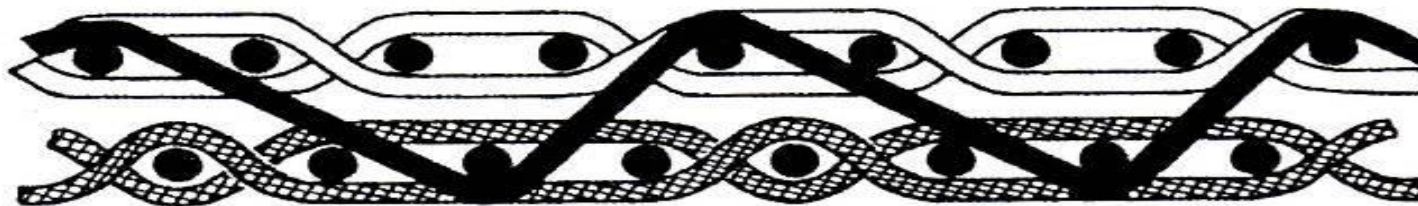


D. TOPELTKANGAD

Voodriga kangas e. seotud topeltkangas



Alumise kanga lõim kinnitub ülemises kangas.

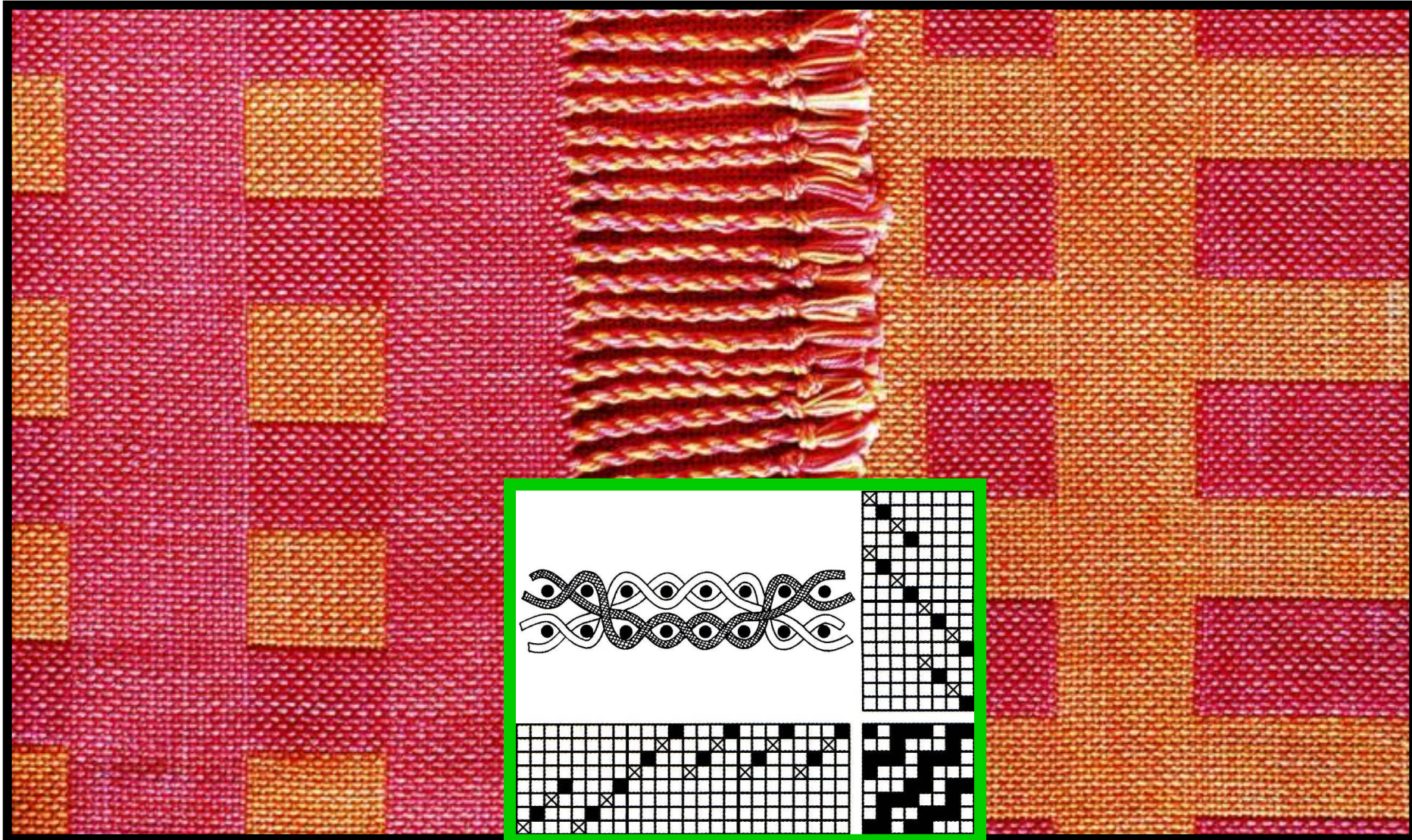


Ühe lisalõimega ühendatud kangad.



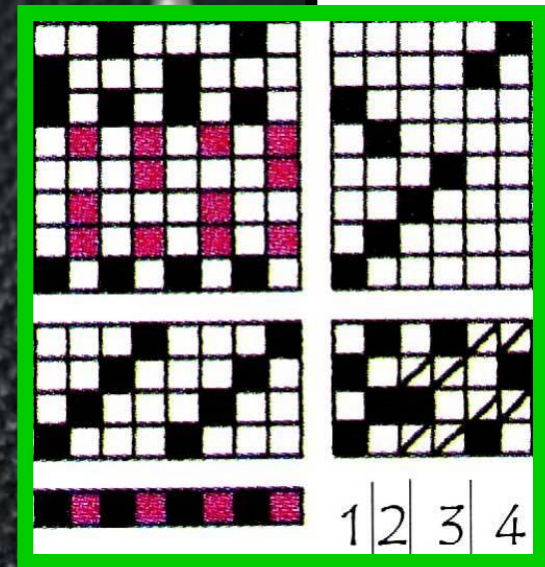
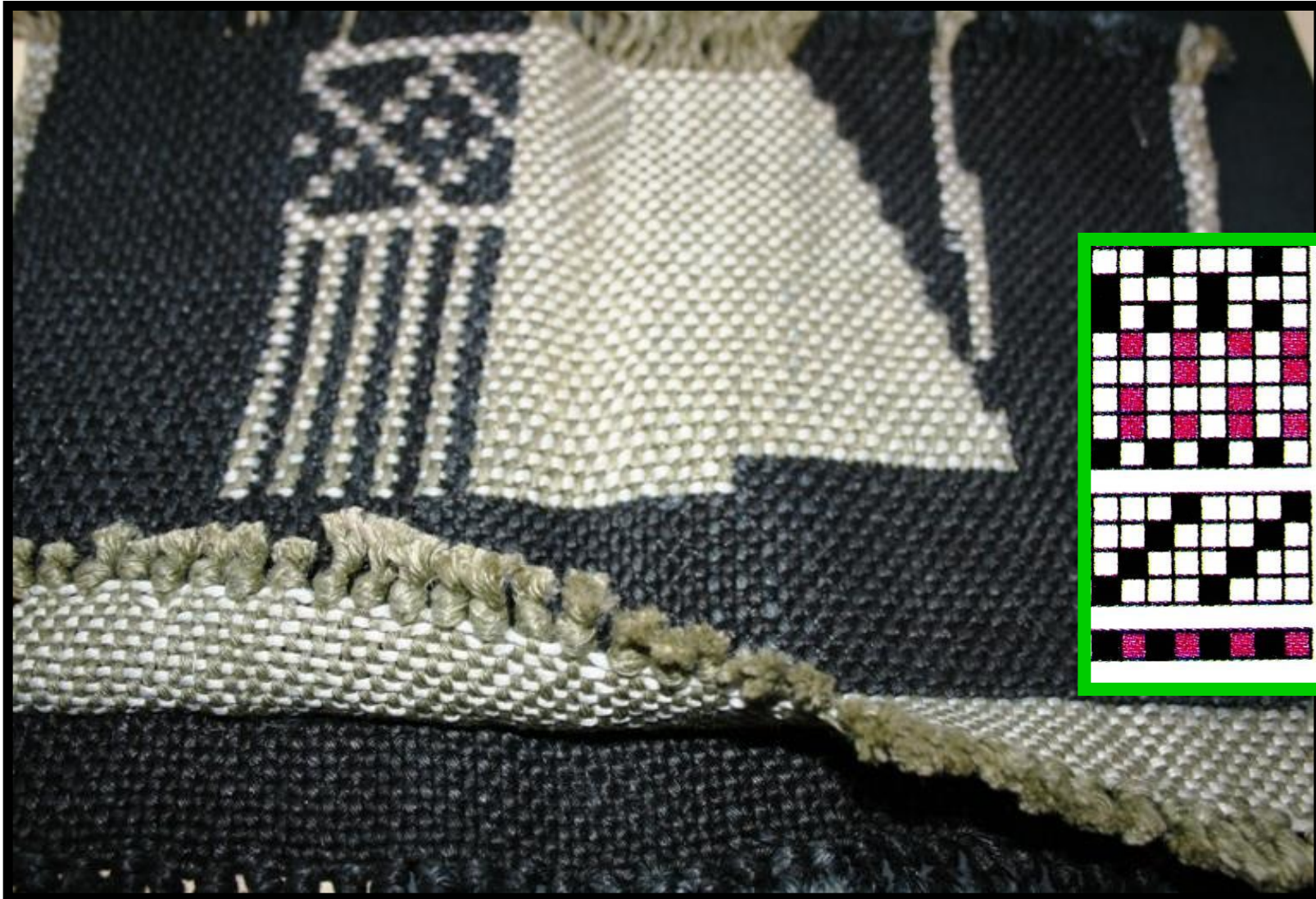
D. TOPELTKANGAD

Topeltdrell



D. TOPELTKANGAD

Laastukangas

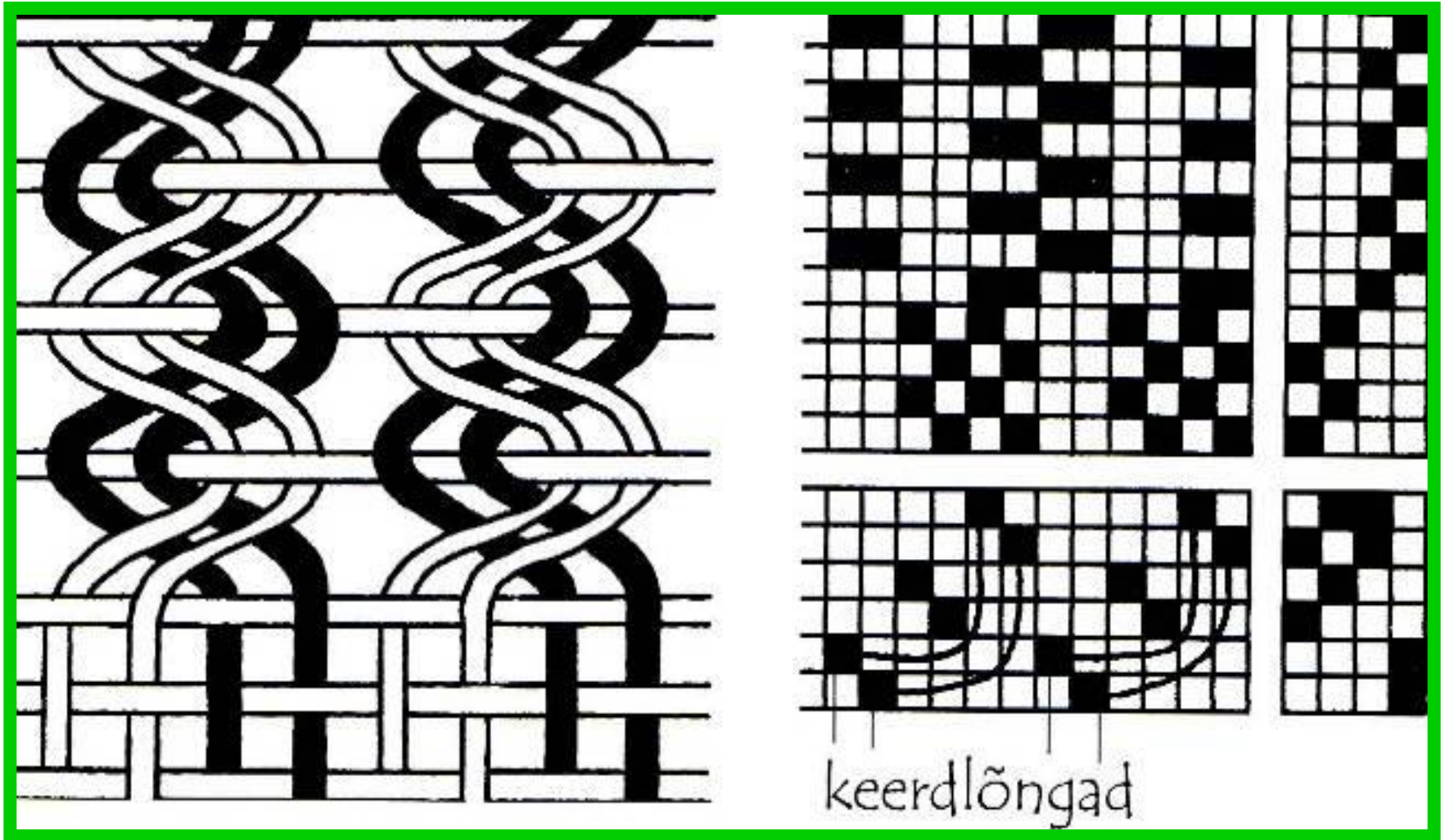




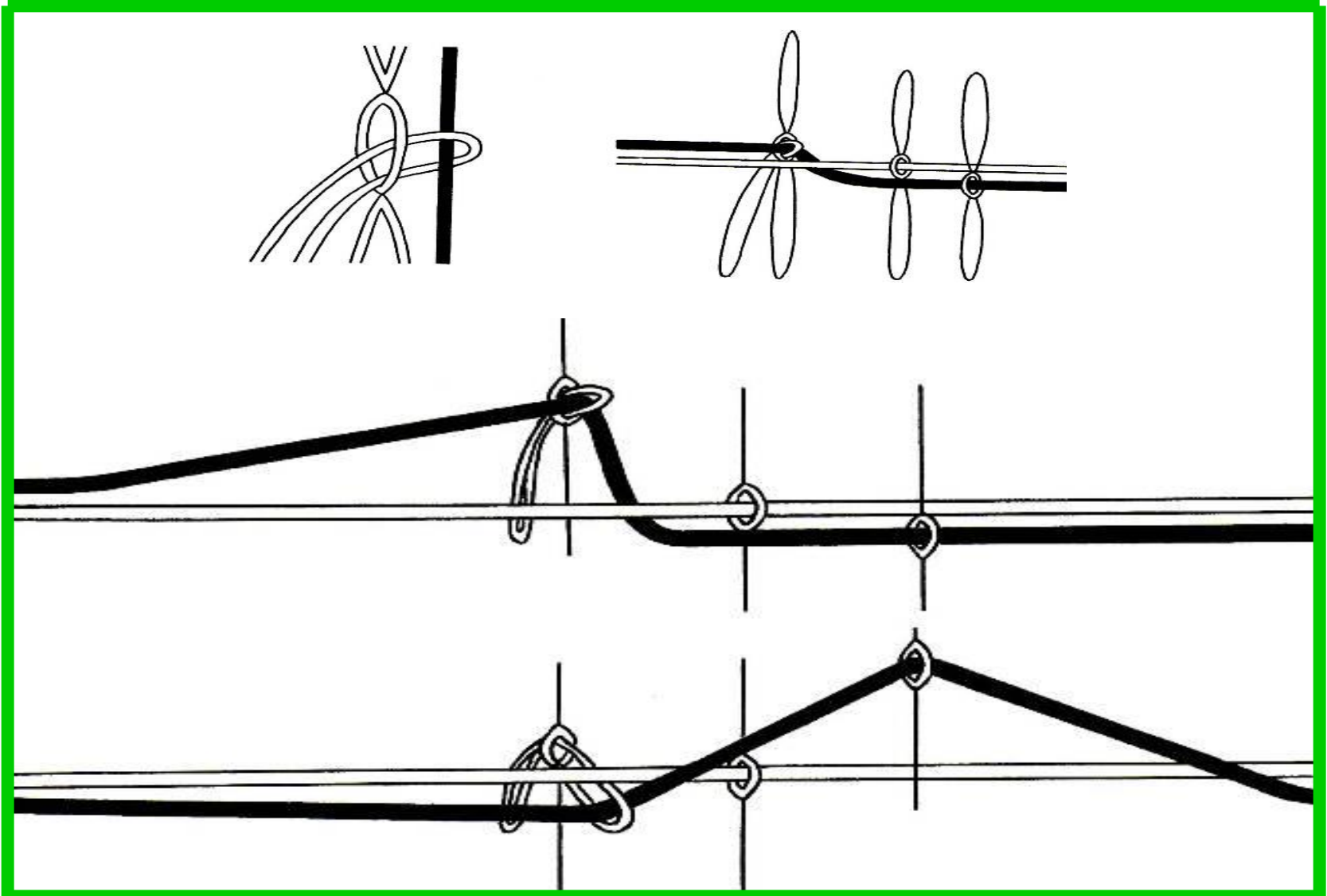
KANGATEHNIKAD

III Fileekangad

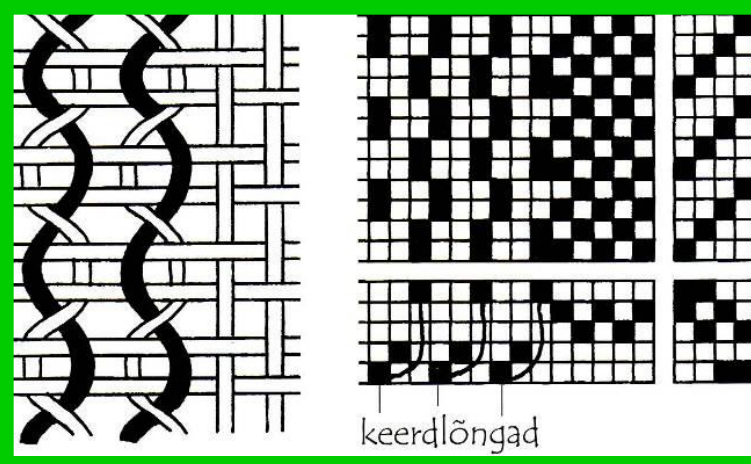
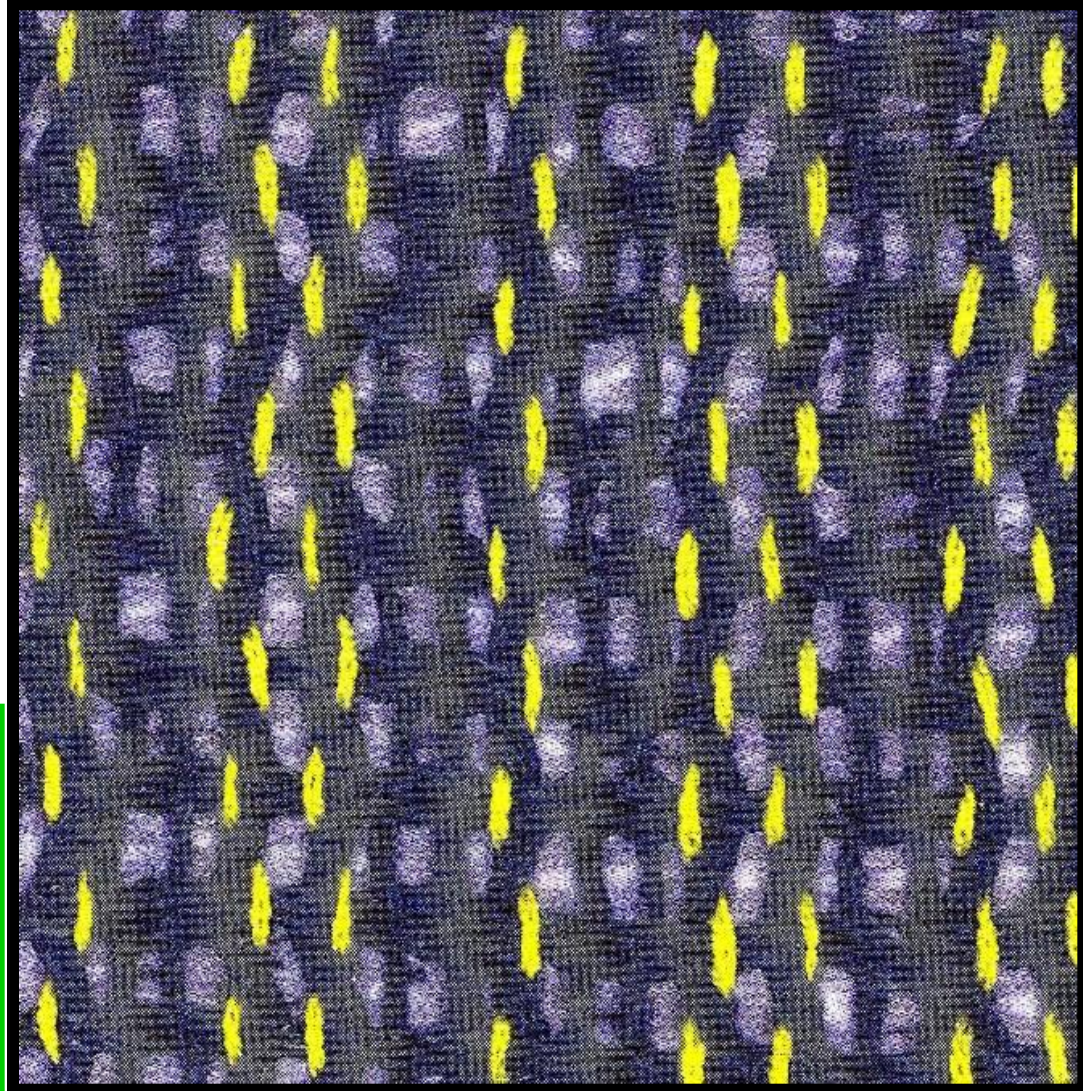
III Fileekangad



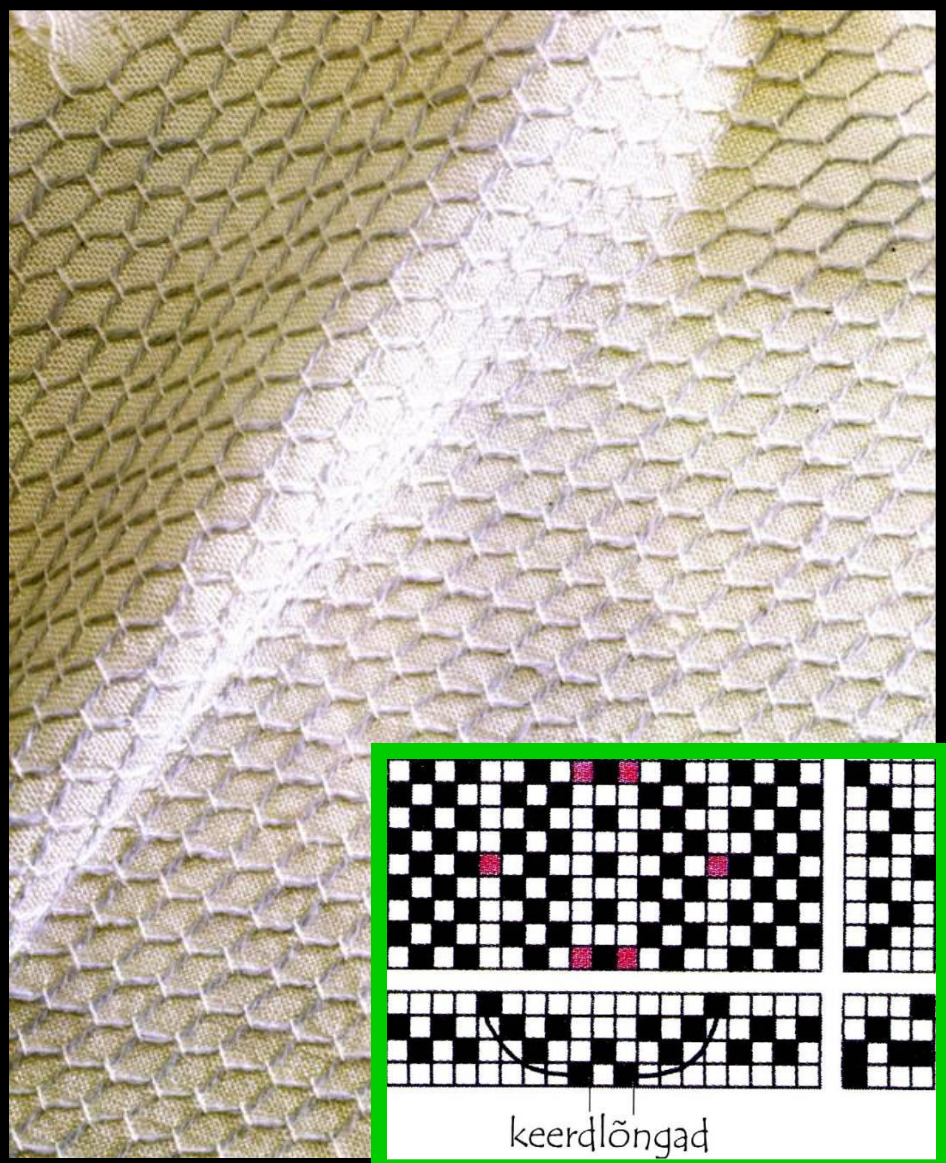
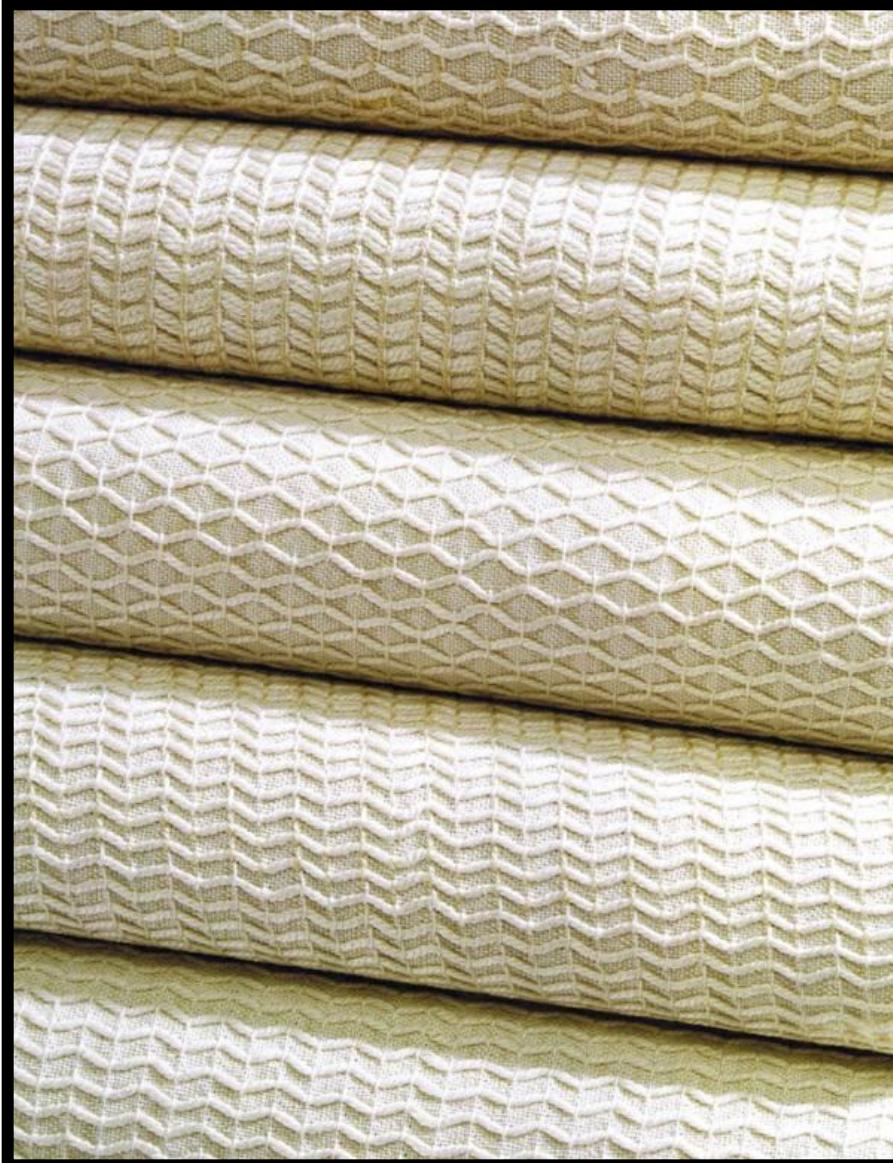
III Fileekangad



III Fileekangad



III Fileekangad



keerdlöngad

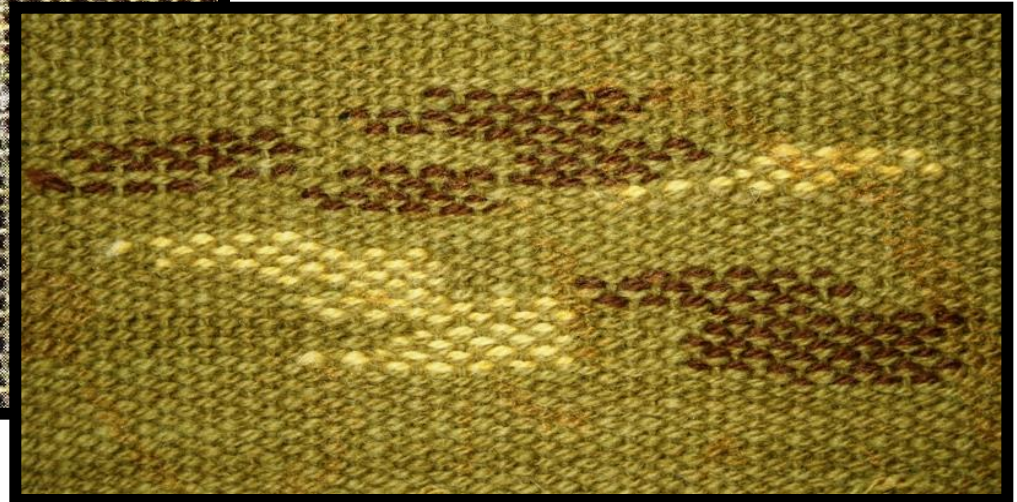
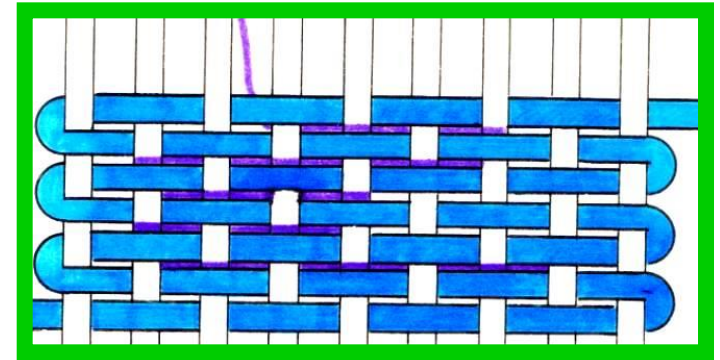
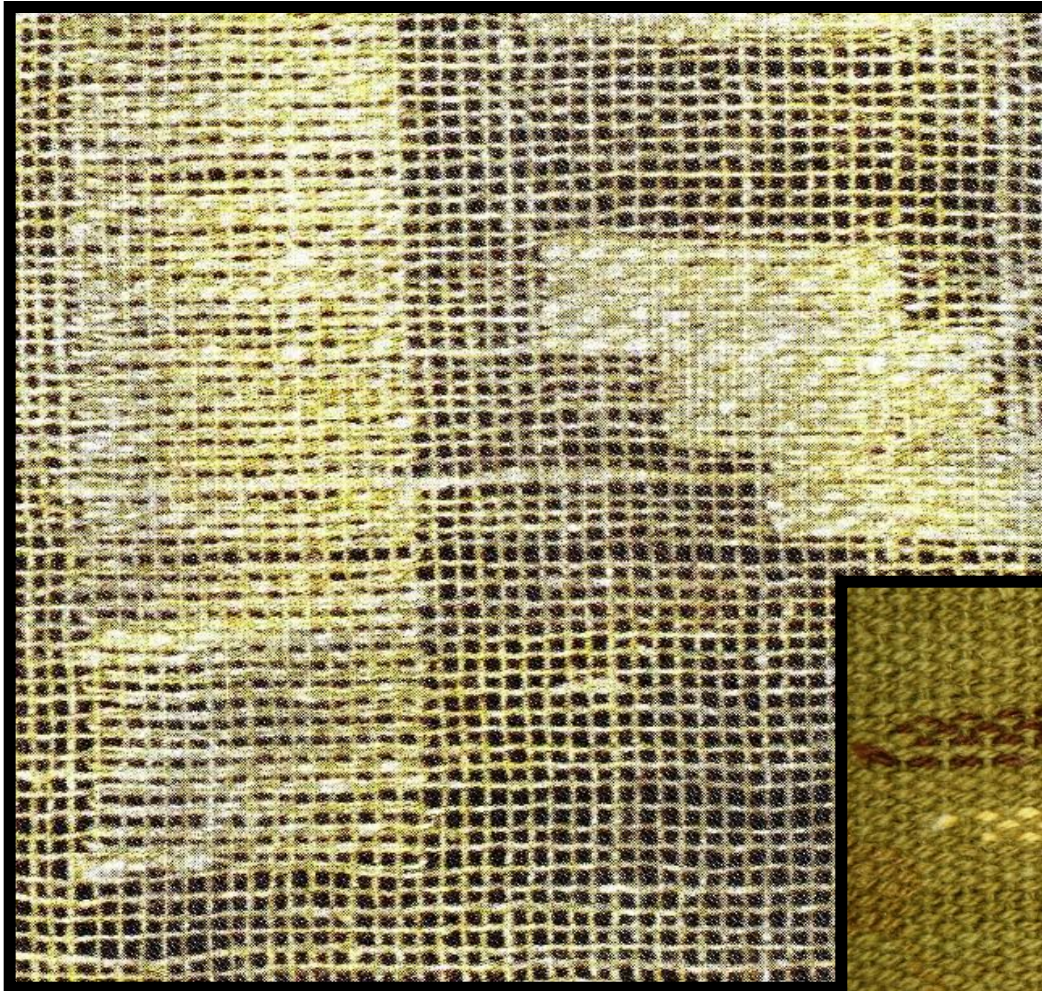


KANGATEHNIKAD

IV Põimkangad

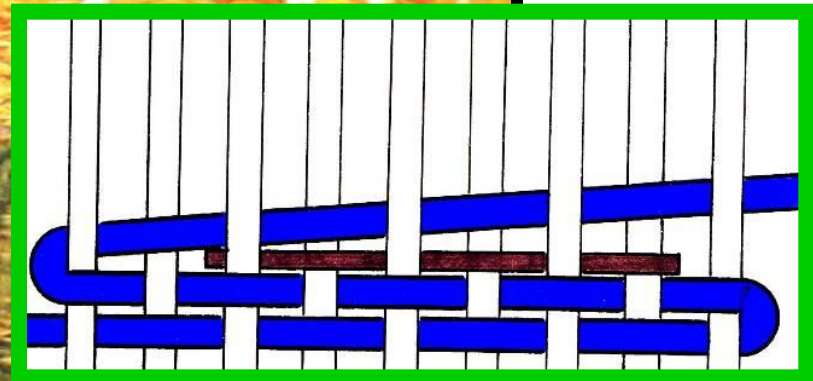
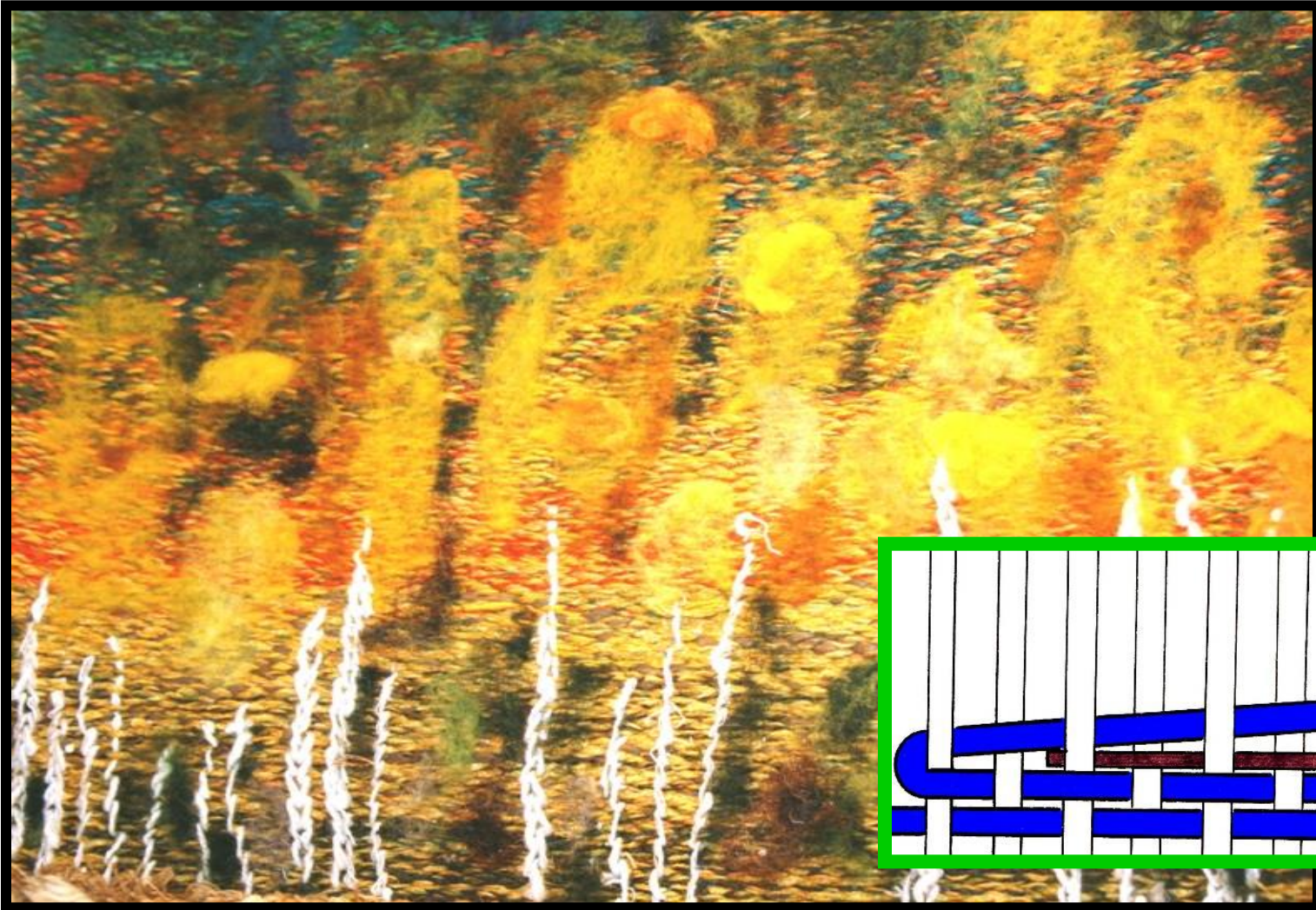
III Põimkangad

Kaaspõime



III Põimkangad

Villpõime



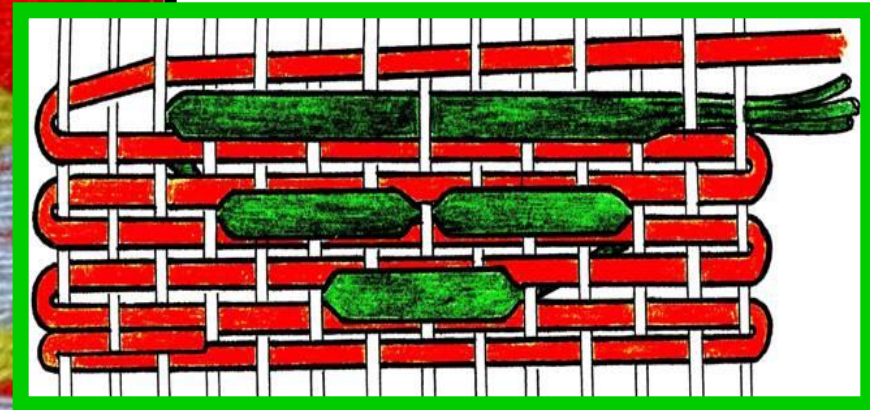
III Põimkangad

Korjatud põime



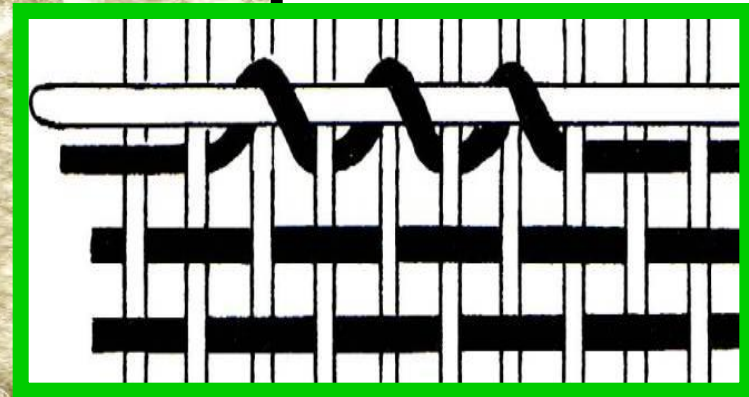
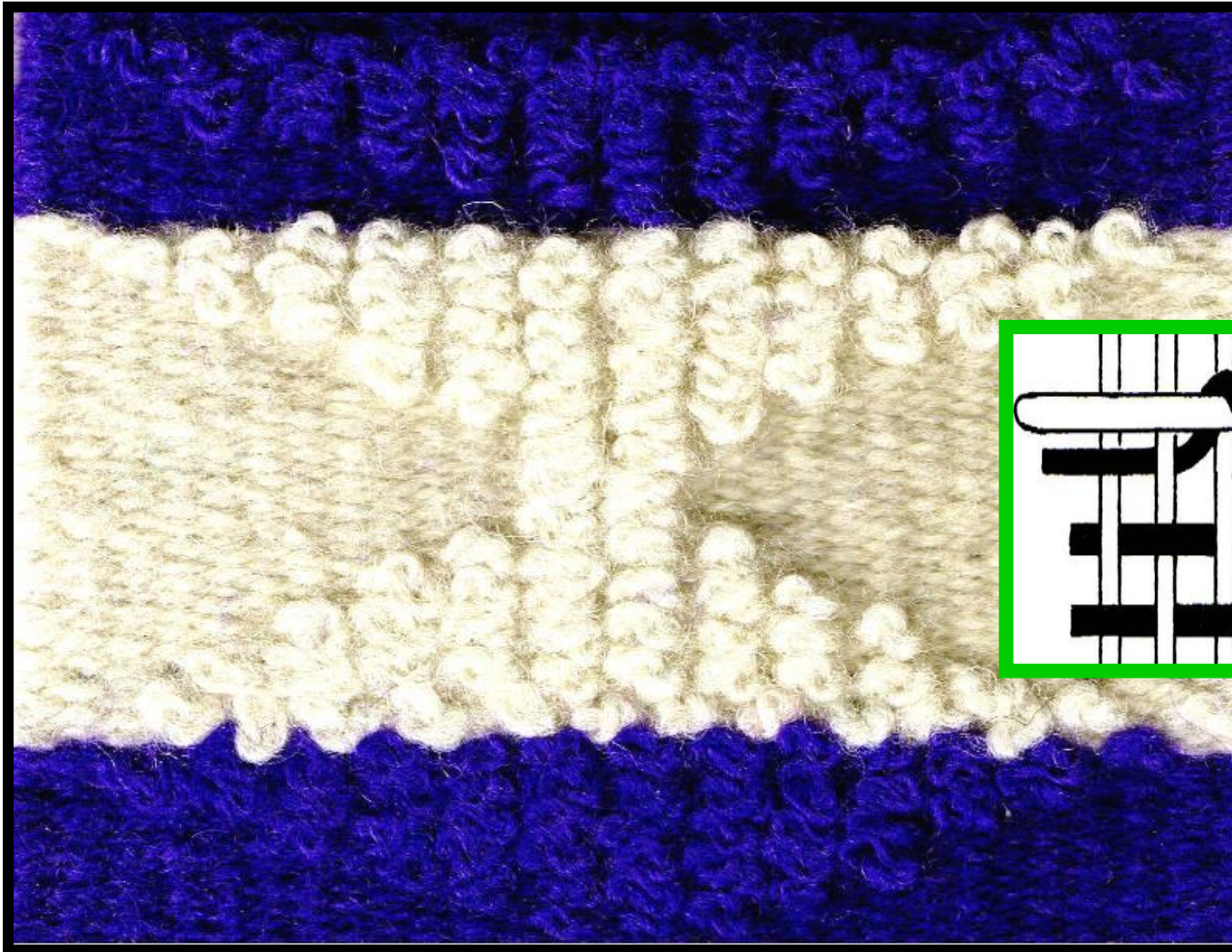
III Põimkangad

Naastpõime



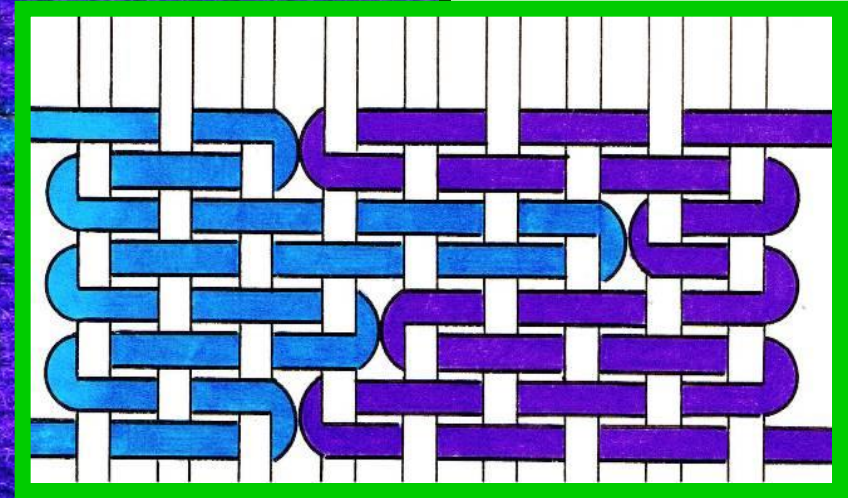
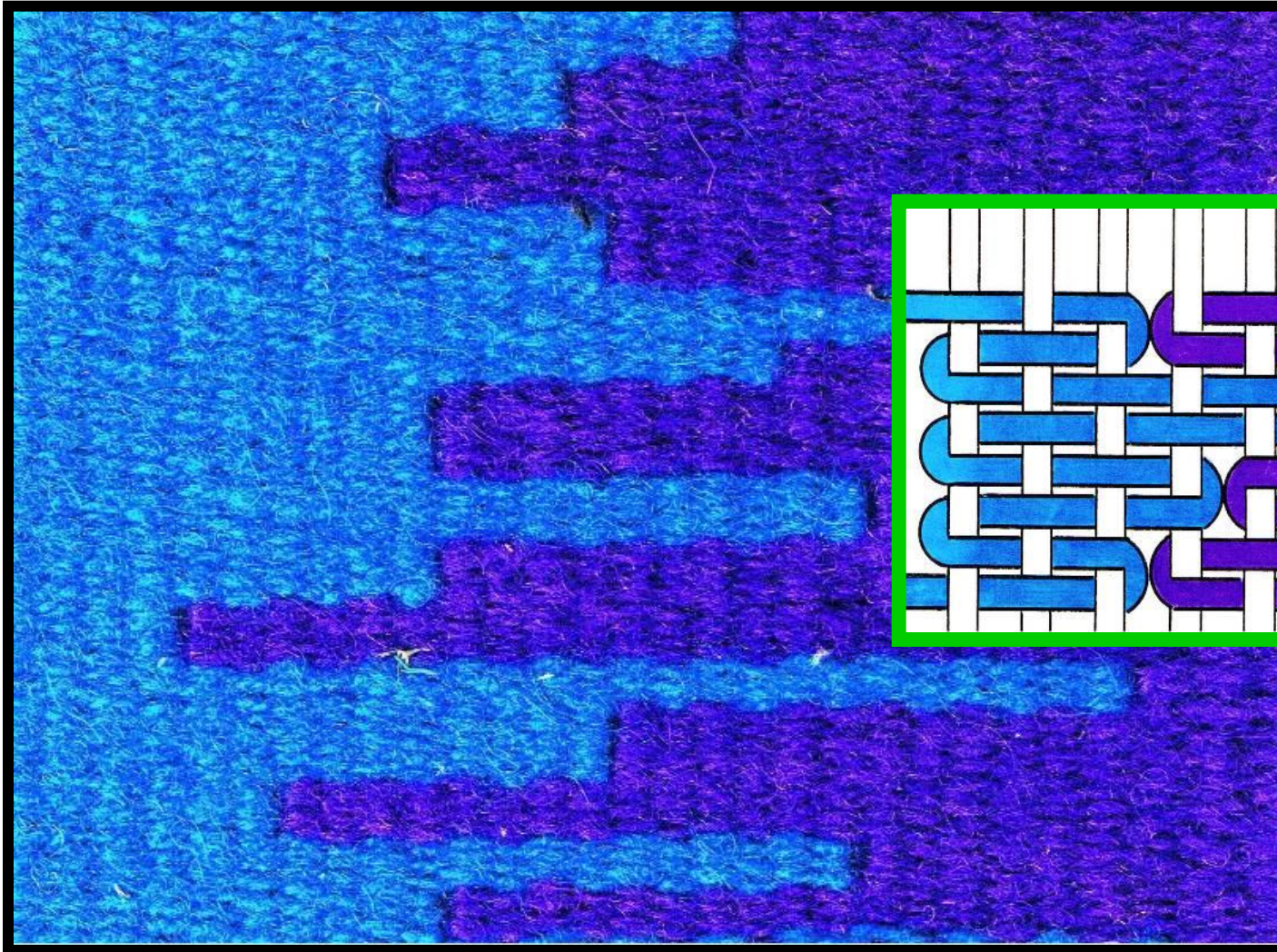
III Põimkangad

Pärtpõime



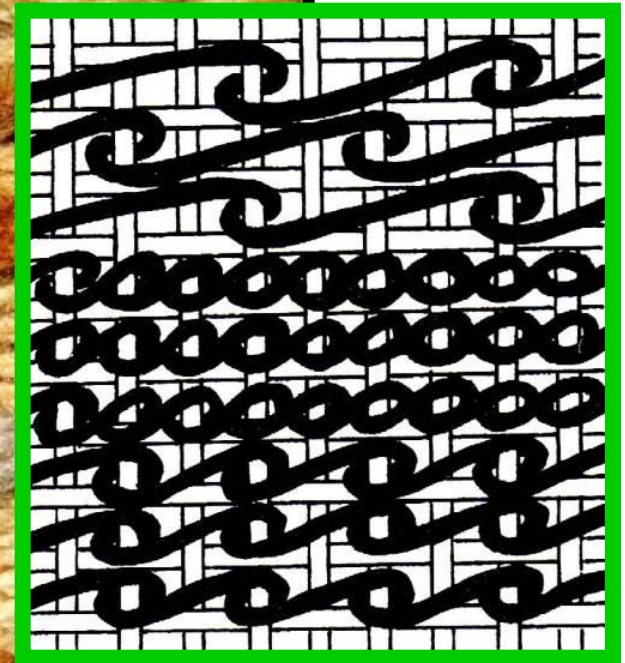
III Põimkangad

Pindpõime



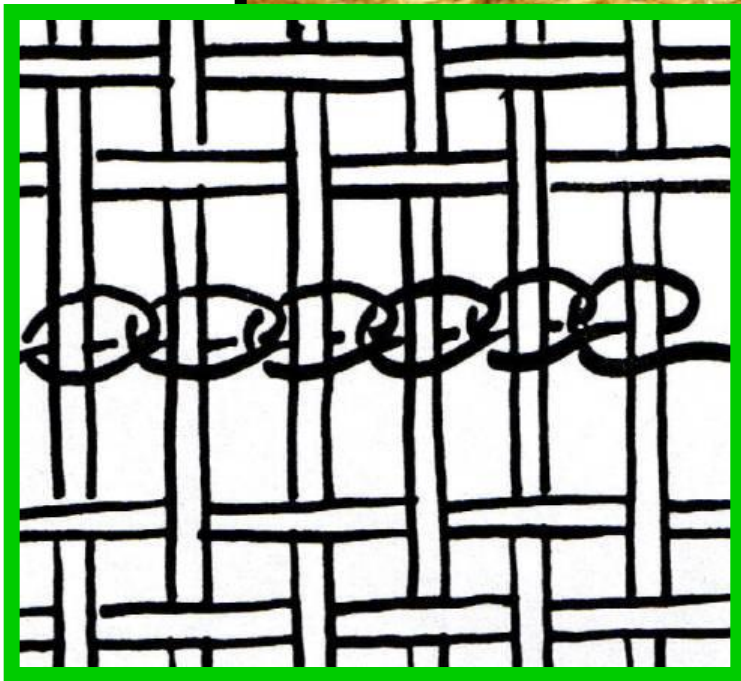
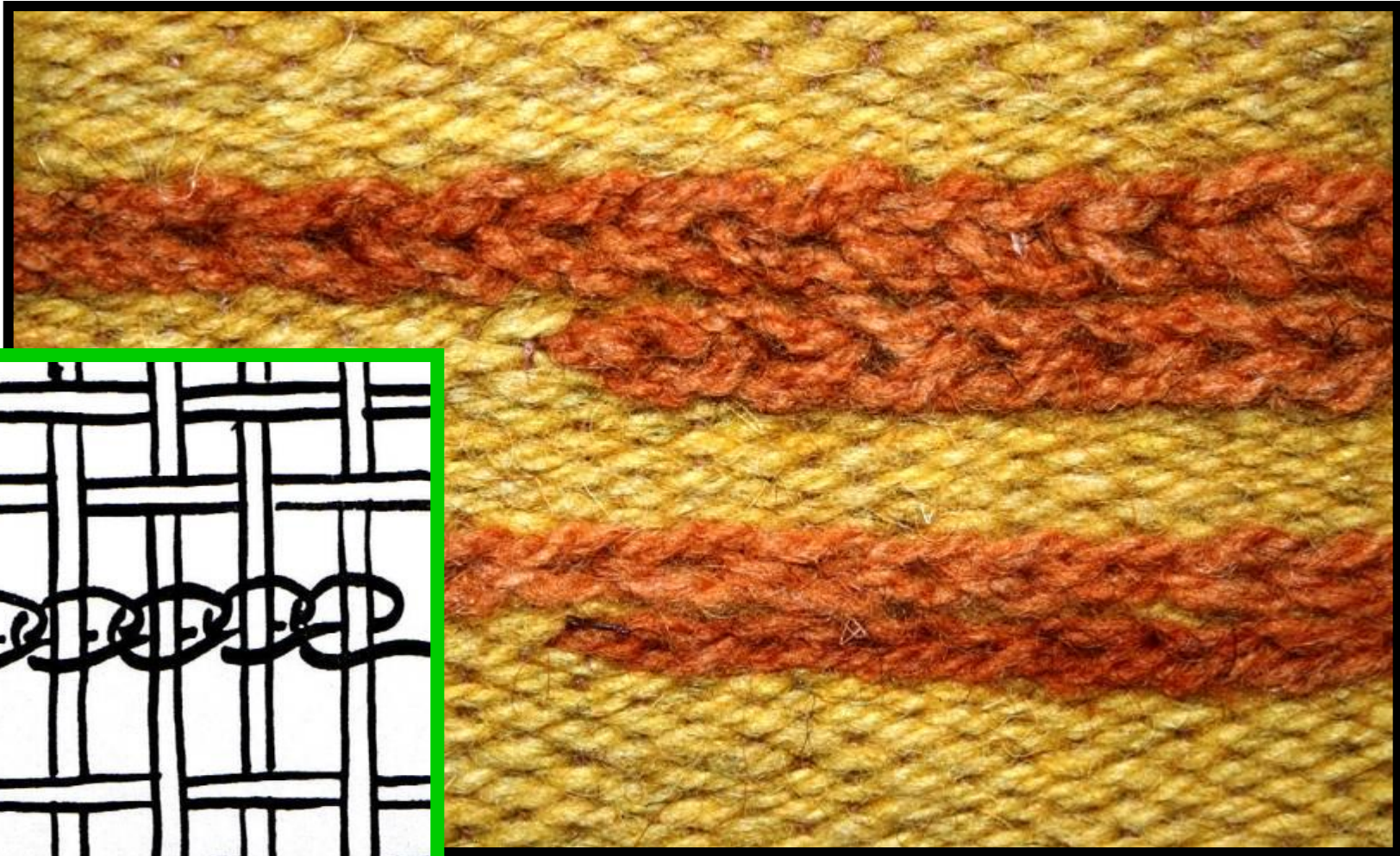
III Põimkangad

Keerdpõime



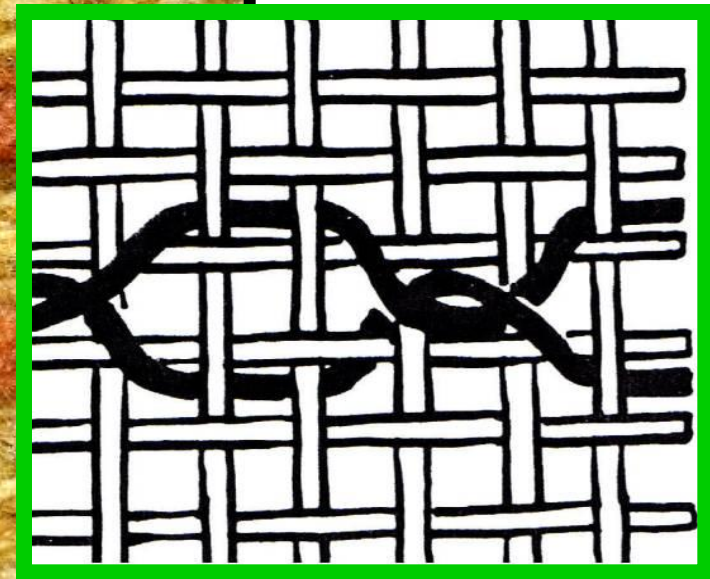
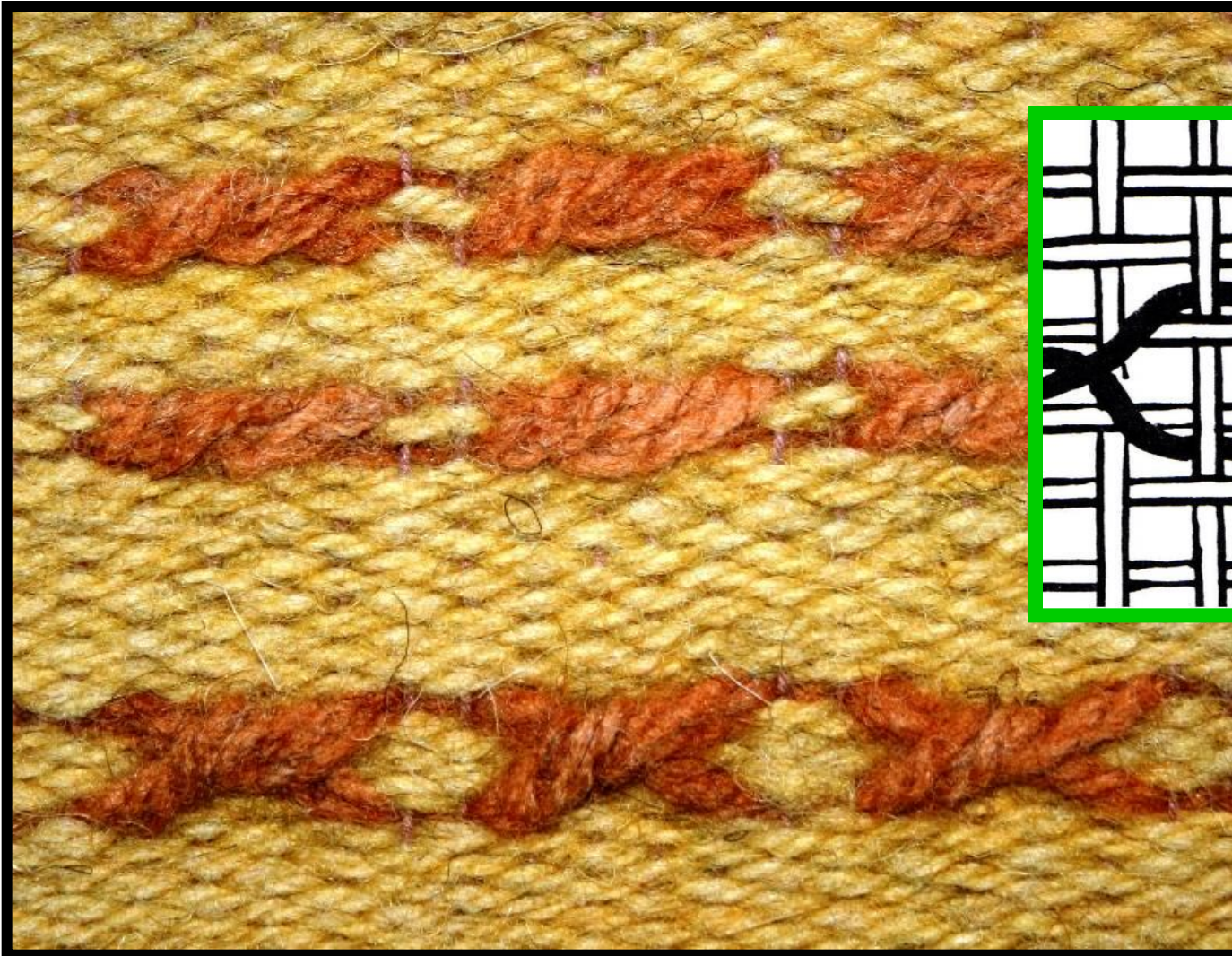
III Põimkangad

Ahelpõime



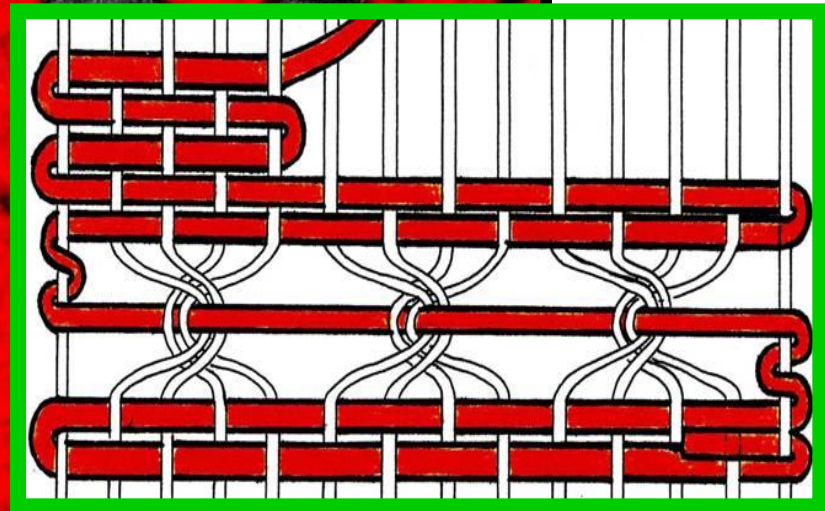
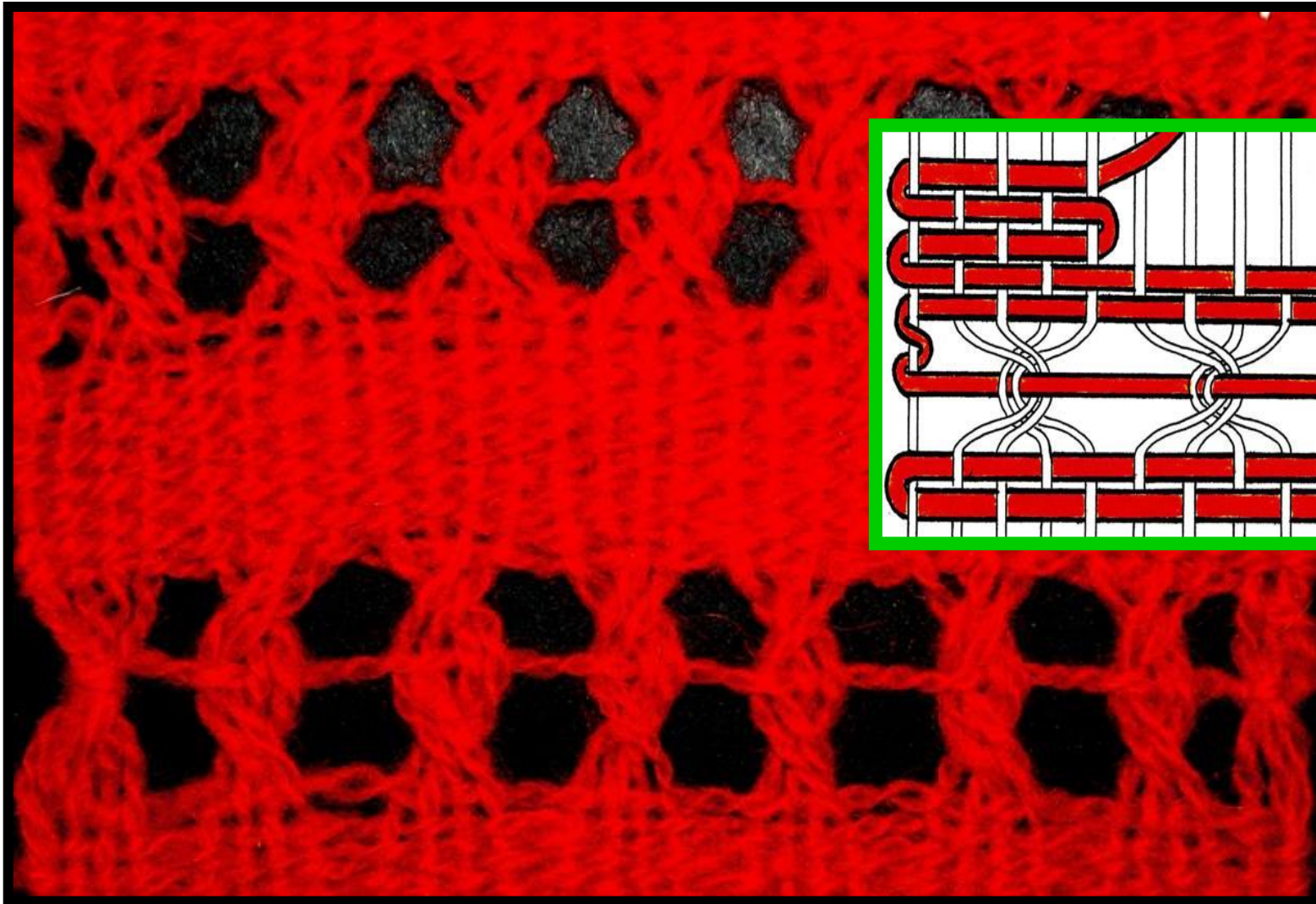
III Põimkangad

Ristpõime



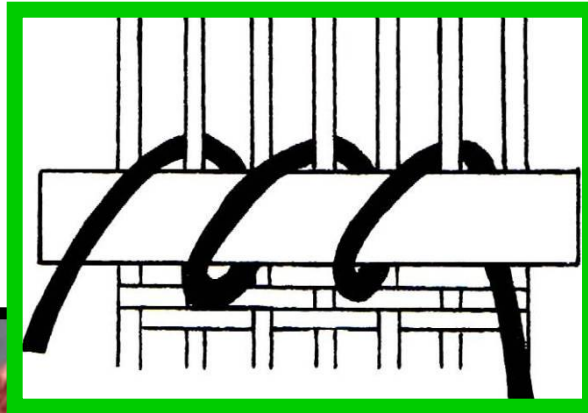
III Põimkangad

Pilupõime



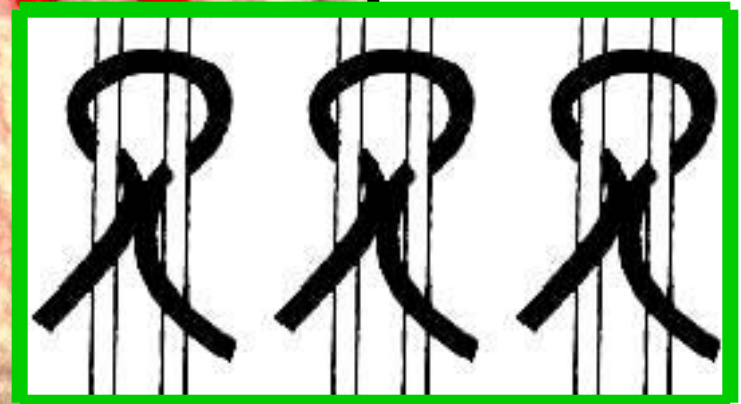
III Põimkangad

Narmaspõime



III Põimkangad

Rüü



III Põimkangad

Flossa

