ORNAMENTATION OF THE
“HARVARD” WEAVE OF CLOTH.

It is a common practice to ornament shirtings or
dress goods interlaced with the harvard, or 2 up 2
down principle of weave, otherwise also called the 4-
harness even sided, or the fancy cassimere twill.

The ornamentation usually takes the form of a
figured stripe, with the additional variation which may
be obtained by the introduction of colored threads in
their multifarious combinations. Many neat patterns
are produced by placing two threads of dark color
along with a color of a more delicate shade, or of white.
The dark colored threads are placed on either the first
and third or the second and fourth harness, and give
a neat line effect, which is so easily produced
along with the harvard weave, and plays a prominent
part in many of our best designs.

The constant search for new styles cause the de-
signers to wander from the trodden path of ornament-
ing the weave by additional fancy stripe effects, and
to commence tampering with the ground weave itself.

Fig. 1 is a style of weave requiring 12 harnesses,
presenting an interlacing of threads which may be con-
sidered a suitable substitute for the ordinary harvard.
The fact that this design is built up by combining three
kinds of four-end twill (12, 31, and 128) renders the
structure similar to the harvard, with reference to
interlacing of texture. The repeat of the weave is
12 warp-threads and 12 picks.

The design also shows an equal amount of warp and
filling on the surface.

This design, if used for the ground weave of a
cloth, does not allow of much extra figuring in the
common make of dobby loom (i.e., 16 shafts capacity)
although the additional four shafts may be used to
advantage; again colored stripes may be introduced,
and for a fact very good results can be obtained in
this way.

It must be mentioned here that Fig. 1 is really a
twelve-end diagonal in broken order, and that it is
possible to produce some good effects by arranging
stripes of the regular diagonal, alternating with the
broken effect. The design can be increased in size by
using, for example, the following drawing-in draft:
1-2-3-4-5-6-7-8-9-10-11-12, 5-6-7-8-9-10-11-12, 1-2-
3-4, 9-10-11-12, 1-2-3-4-5-6-7-8; using one repeat of
weave Fig. 1 for harness chain, which will result in
weave Fig. 2. Repeat of weave, 35 warp-threads
and 12 picks.

Designs, Figs. 1 and 2, cover the cloth very regu-
larly, and show the same proportion of warp and fill-
ing, no matter from what point they are viewed.

These figured weaves may be combined with stripes
of harvard, although such a design would require 
sixteen harnesses in its execution in the loom. When the
designs are intended to produce stripes, they do not
require to show the same degree of regularity in the
weave, because the stripe helps to conceal the irreg-
ularities which appear in the direction of the filling,
whereas in the warp direction the stripe effect is only
increased in this way.

Fig. 3 is a twelve harness weave, which may be
applied along with a four harness twill stripe in the
manner described. Repeat of weave, 12 warp-threads
and 36 picks.

This weave would present no unsatisfactory
features if woven as an all-over figure upon a cloth
the warp of which was composed of dark color with
white stripes introduced. Forty threads indigo and
eight threads of white would give a good effect, or the
white stripes may be inserted in smaller quantities and
in a more irregular order.

Manufacturers need not be confined to the mild
substitute for the 2 up 2 down twill already illustrated,
but may branch out in bolder lines, as cloths of this
description are pleasing to a number of buyers, and
some novelty, or suitable striking feature, carries a
good influence into a range of patterns.

Weave Fig. 4 is a step in the direction indicated,
and although it is built partly on the lines of the pre-
ceding designs, it is further ornamented by placing a
bar at right angles to the tapered twill.

It may be noted that the designs have been built
upon a 3 up 1 down 4-harness twill basis, which is a
convenient guide in forming the design when repeating
on twelve threads, and would be an equally suitable
basis on which to form designs repeating on sixteen
threads. This twill also ensures that there shall be
exactly two intersections for four threads as in the
harvard weave, unless the line of twill is broken up
when working in the figure. The design shown in Fig.
4 is rather cramped in appearance, but may be im-
proved by employing sixteen threads to the repeat and
allowing a greater amount of ground to surround the
figured portion. Repeat of weave, 12 warp-threads
and 12 picks.

Fig. 5 is a further departure from the harvard twill,
but might reasonably be employed on a similar cloth.
This design is particularly well bound, the longest float
is four threads or picks in extent, and although it is
not worked up on a four harness basis, the threads and
intersections are in a similar ratio to each other. Repeat
of weave, 12 warp-threads and 18 picks.

Cross type in all five weaves shows the foundation
spots of each weave.

DIRECTIONS FOR NOVELTY EFFECTS.

Eighty threads and picks per inch, with 22’s counts
of warp and filling, will give a cloth suitable for a
medium dress goods fabric, and the designs given
would produce very good results in a cloth of this
description. Shot effects might be produced in these
weaves, and some color combinations would be very
effective. White grounds with single threads of dark
color, indigo, red, black, etc., introduced every sixth
or twelfth thread, or dark grounds with single white,
or contrasting colored threads, and dark filling will
give a still further variety.