



## New Book.

Double Harness (Drawloom) Weaving  
Loom requirements  
How to modify existing looms  
Design techniques  
Examples

Publication Date – July 2014

Price \$34.95

Order from: The Woolgatherers Ltd.

<http://www.woolgatherers.com>



### **When A Single Harness Simply Isn't Enough**

Double Harness Techniques  
to  
Produce Complex Patterning  
by

**Sara von Tresckow**

Double harness weaving techniques are ancient and beautiful. A weaver is able to place carefully crafted patterns anywhere on the surface of a textile in ways not always possible with loom controlled patterns on multi-shaft looms. Double harness techniques can be executed on both simple looms and elaborate drawlooms. Double harness weaving opens up many possibilities to form a wide array of creative structures and unique textiles. The purpose of this book is to fill a void. There has never been a comprehensive work in English that included several types of double harness looms and their operation. Rather than a collection of projects and patterns, this book is meant as a guide to either acquiring a drawloom or modifying an existing loom to do double harness patterns when desired. The section on designing is meant to provide weavers with tools to create interesting textiles on their own.

Sara von Tresckow has been weaving since the late 1970's, first in Germany, and since 1990 in Wisconsin. Her venture into drawloom weaving began in 2003. She and her husband Hans are owners of The Woolgatherers, Fond du Lac, Wisconsin - a complete fiber shop for spinners, weavers and fiber artists.

Sara teaches and weaves using the shop as a studio. Hans builds small looms, repairs spinning wheels and creates spinning stools well known for their comfortable nature.

# Contents

FORWARD	7
Basic Terms	9
Drafting Conventions	10
Introduction	12
Double Harness Weaving	12
What is a harness?	12
Requirements for Double Harness Techniques	14
I. WEAVING AND PATTERN GENERATION	17
Color and Weave Patterning	17
Pickup Patterns	17
Tapestry – Pictorial Patterning	18
Knotted Pile – Pattern by Pixel	18
Loom Controlled Pattern - Multiple shafts/ Treadles or Dobby	19
Basic Weave Structures	19
Jacquard Looms (Single Thread Control)	21
Patterning with More Than a Single Harness	22
II. DOUBLE HARNESS PATTERNING – WHAT IS IT?	23
How is Pattern Created?	23
Can I Weave Curves?	23
What About Pattern Placement?	24
III. HISTORY OF DOUBLE HARNESS WEAVING	26
Development of European Drawloom	26
Drawlooms of Today	29
IV. MECHANICS OF DOUBLE HARNESS TECHNIQUES	30
Pattern Forming Devices	30
Damask Pulleys	30
Pattern Rods Within the Warp	30
Pattern Heddle Rods (Half Heddles)	31
True Pattern Shafts	31
Individually Weighted Harness Cords	32
The Double Harness Shed	32
Neutral Shafts	35
V. DOUBLE HARNESS DEVICES - HOW THEY FUNCTION	37
Pickup/Sword	37
Half Heddles	37
Single Unit Draw System	37
Pattern Shaft Draw System	38
Combination Draw Looms	39
Enhanced Drawloom Types	39
Single Unit Drawloom	39
Pattern Shaft Drawloom	40
VI. CREATING A DOUBLE HARNESS LOOM	42
Choosing and Configuring a Drawloom	42
Hardware (Small Pieces) for Double Harness Weaving	45
Long Eye Heddles	45
Shaft Sticks	46
Weaving Sword	47
Pickup Stick	47
Pattern Heddles	47
Lingos (Pattern Shaft Weights)	48
Pattern Shed Weighted Bars	49
Hardware Needs by Device Type	51
Pickup and Weaving Sword	51

Inserted Warp Rods or Half Heddle Rods and Sword	52
Single Unit Draw Attachment	53
Pattern Shaft Draw Attachment	54
Installing the Double Harness Loom	55
Warping and Adjusting the Drawloom.	55
Building a Double Harness Loom using Damask Pulleys	61
Building a Pattern Shaft Drawloom	65
Building and Warping a Single Unit Drawloom	74
VII. DESIGNING FOR DOUBLE-HARNESS WEAVING	83
Decisions, Decisions	83
What does a Draft Look Like?	83
Weaving Software for Double Harness Weaving	83
How to Represent Designs for Double Harness Patterns	85
The X-Shaft	86
Drafts for Supplemental Weft Patterns	87
Designing for Supplemental Weft Fabrics	88
Creating Float Designs	89
Damask and Opphämta on One Warp	91
Designing for Damasks	93
Block Designs for Drall Weaves with More than Three Blocks	93
Configuring Pattern Shafts	94
Allover Pattern Without Floats	96
Design on Selected Areas	96
Non-repeating Designs	96
And What about the Ground Structure?	97
Other Structure Ideas	102
Beiderwand (Tied Weaves)	102
Doubleweave	102
VIII. MISCELLANEOUS	105
Color and Weave and Double Harness	105
Sett	105
Materials	106
Selvages	107
Keeping Your Place in the Pattern	109
Loom Waste Ideas	109
IX. CONCLUSION	110
Sources	112
Bibliography	115
INDEX	119

