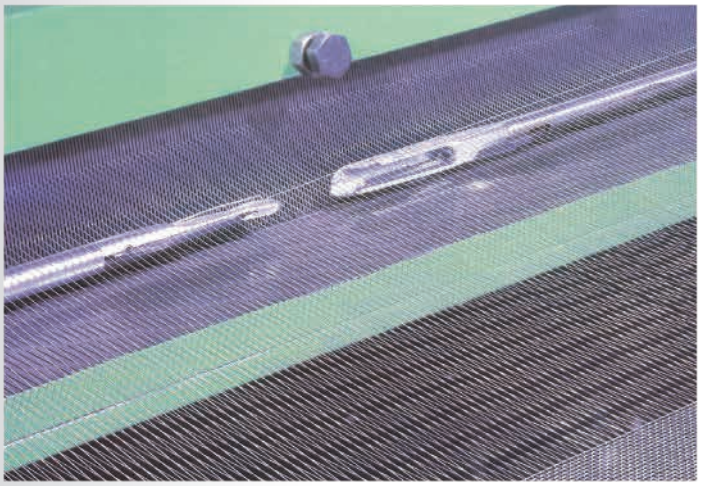
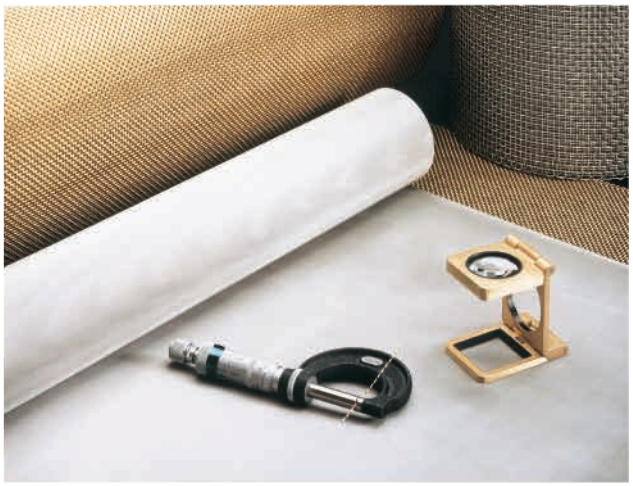
Locker

WOVEN WIRECLOTH AND FILTERS

The Wire Mesh Experts since 1878

OVER 130 YEARS EXPERIENCE IN WEAVING TECHNOLOGY





With over 130 years experience Locker Wire Weavers Ltd is one of Europe's leading manufacturers and suppliers of woven wire mesh, filters and screening products. Established in 1878 the quality, workmanship and spirit of innovation which defined the 'Locker' brand then still holds true today.

This depth of experience is important when planning for the future and we have a continuous programme of development exploring new weave types, methods and materials to ensure that the highest manufacturing standards and product performance are achieved for our customers.

Locker Wire Weavers is a service orientated business and for this reason extensive stocks of finished specifications are held in a wide variety of metals to ensure a rapid and reliable ex stock delivery service for both domestic and international customers.

Full support to fabricate and install our woven wire mesh

Experienced engineering staff based at our Warrington Design and Technical Centre are also available to offer advice and guidance in the selection of the most appropriate material for given applications.

All our wire mesh is manufactured in accordance with International Standards. Locker is an accredited ISO 9001:2008 organisation and is committed to the provision of quality products.

INFINITE RANGE OF APPLICATIONS

Woven wirecloth has a seemingly infinite range of applications. In the domestic environment it is used in many applications for example; tea strainers, flour sieves, coffee filters, fireguards and fly screens. It is incorporated into many domestic appliances, in filters for motor cars, and is used in the manufacturing processes for floor coverings, chipboard, hardboard and other building materials. In the industrial environment it has countless applications. As a precision woven product the ability to maintain accuracy of aperture size offers enormous scope for the use of wirecloth as a filtration and screening medium for a variety of particle/fluid/gas separation cleaning and sizing applications. Wirecloth has wide ranging characteristics, and dependant on the configuration of wire thickness in relation to aperture size, can vary in texture from being as fine, soft and flexible as silk to being as rigid and durable as steel plate. Many of the properties of wirecloth are not available using alternative metal media (such as expanded and perforated metals) or synthetic meshes.

Wirecloth offers many benefits including:

- widest range of filtration, from over 6 inch aperture down to 1 micron nominal
- high open area/flow rate
- closely controlled, accurate apertures
- smooth surface; screening surface has no sharp edges, burrs or acute angles
- very high temperature tolerance (variable according to metal selected)
- usable under high pressure
- flexible - ideal for forming rigid concave/convex shapes
- control of chemical/acid/corrosion resistance using different metals
- special aperture requirements can be met without high tooling costs
- high durability
- self supporting
- suitable as support for less rigid media
- stable under tension
- weaving process uses no punching or piercing operations that create stress induced weaknesses
- point contact only on screened product allows freer screening and reduced blinding

In addition to applications in filtration and separation equipment, woven wirecloth is widely used for reinforcement and strengthening, ventilation screening, radio and micro-wave screening, screen printing, transportation belts, speaker grilles, plastic extrusion, optical lens manufacture, catalysts, precious metal recovery, flame, heat and light diffusion, vacuum forming, spark protection, security screens, battery manufacture, and many many more.
There can be few industries where wirecloth does not have a part to play, and with the Company's wide experience there are few industries that Locker have not supplied.

EXTENSIVE STOCKS OF STANDARD & NON STANDARD SPECIFICATIONS

Specifications Listed by Mesh No

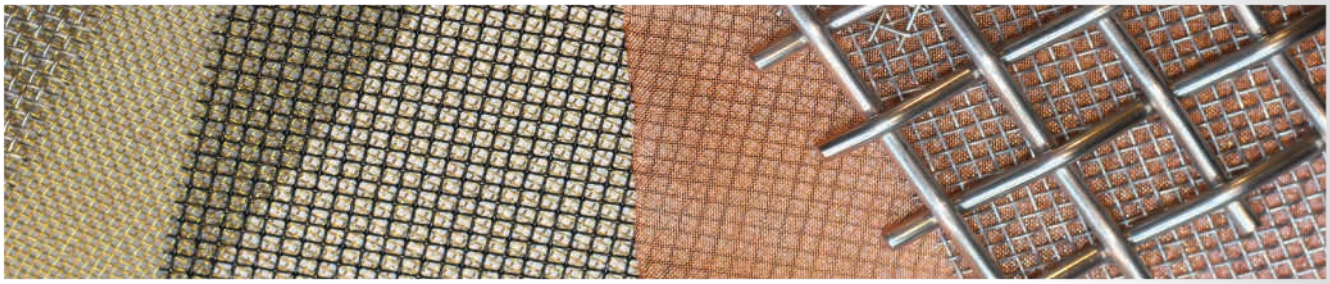
Mesh No	Aperture (mm)	Diameter (mm)	Open Area %	Weight Kg/M²
2	11.1	1.6	76.4	2.54
2	10.7	2	71	3.98
2.5	8.91	1.25	76.9	1.94
3	6.867	1.6	65.8	3.82
3	6.467	2	58.3	5.96
4	5.45	0.9	73.7	1.61
4	5.1	1.25	64.5	3.11
4	4.75	1.6	56	5.09
5	4.08	1	64.5	2.48
5	3.48	1.6	46.9	6.36
6	3.333	0.9	62	2.41
6	2.983	1.25	49.7	4.66
8	2.465	0.71	60.3	2
8	2.275	0.9	51.3	3.22
10	1.98	0.56	60.8	1.56
12	1.667	0.45	62	1.21
12	1.557	0.56	54.1	1.87
14	1.414	0.4	60.8	1.11
14	1.364	0.45	56.5	1.41
16	1.273	0.315	64.3	0.79
16	1.233	0.355	60.3	1
16	1.188	0.4	56	1.27
16	1.138	0.45	51.3	1.61
18	1.056	0.355	56	1.13
18	1.011	0.4	51.3	1.43
20	0.99	0.28	60.8	0.78
20	0.915	0.355	51.9	1.25
20	0.82	0.45	41.7	2.01
22	0.8	0.355	48	1.38
24	0.703	0.355	44.2	1.5
28	0.552	0.355	37	1.75
30	0.623	0.224	54.1	0.75
30	0.567	0.28	44.8	1.17

Mesh No	Aperture (mm)	Diameter (mm)	Open Area %	Weight Kg/M²
34	0.497	0.25	44.3	1.06
36	0.456	0.25	41.7	1.12
40	0.411	0.224	41.9	1
50	0.308	0.2	36.8	0.99
60	0.263	0.16	38.7	0.76
70	0.203	0.16	31.3	0.89
80	0.193	0.125	36.8	0.62
80	0.178	0.14	31.3	0.78
84	0.212	0.09	49.4	0.34
100	0.154	0.1	36.8	0.5
100	0.142	0.112	31.3	0.62
120	0.122	0.09	33	0.48
120	0.149	0.063	49.4	0.24
140	0.11	0.071	37	0.35
140	0.101	0.08	31.3	0.45
150	0.106	0.063	39.4	0.3
165	0.104	0.05	45.6	0.2
180	0.091	0.05	41.7	0.22
200	0.087	0.04	46.9	0.16
200	0.077	0.05	36.8	0.25
200	0.071	0.056	31.3	0.31
230	0.074	0.036	45.4	0.15
250	0.066	0.036	41.7	0.16
250	0.062	0.04	36.8	0.2
270	0.058	0.036	38.1	0.17
270	0.054	0.04	33	0.21
300	0.055	0.03	41.7	0.13
300	0.049	0.036	33	0.19
325	0.048	0.03	38	0.15
325	0.042	0.036	29.1	0.21
350	0.043	0.03	34.4	0.16
400	0.039	0.025	36.8	0.12
400	0.034	0.03	27.8	0.18

Experienced engineering staff based at our Design and Technical Centre are also available to offer advice and guidance in the selection of the most appropriate material for given applications.

Weights per unit area are shown for stainless steel wirecloth.
To calculate weights per unit area for other metals multiply the figures shown above by the following factors:

Plain steel	1.006	Nickel	1.141
Brass	1.094	Copper	1.149
Phosphor Bronze	1.131		



Popular Specifications

Woven wirecloth has traditionally been designated by a mesh number (or mesh count) representing the number of wires per linear inch. Although current national and international standards have deleted mesh counts in favour of designation by aperture size and wire diameter alone, the accompanying chart retains mesh count and wire diameter as a means of measurement to facilitate easy identification of mesh specifications.
The table on the left sets out the more popular standard specifications. These are normally held in stock or available on short delivery.

Other Standard Specifications

In addition to the listed specifications, all the specifications contained in ISO 4783 can be supplied. However, the less popular of these meshes and non-standard specifications may be subject to minimum order quantities. We also maintain a comprehensive stock of Dutch weaves (see table below) and as suppliers to the USA, we are able to supply market grade wirecloth, mill grade screen cloth and industrial hardware cloth.

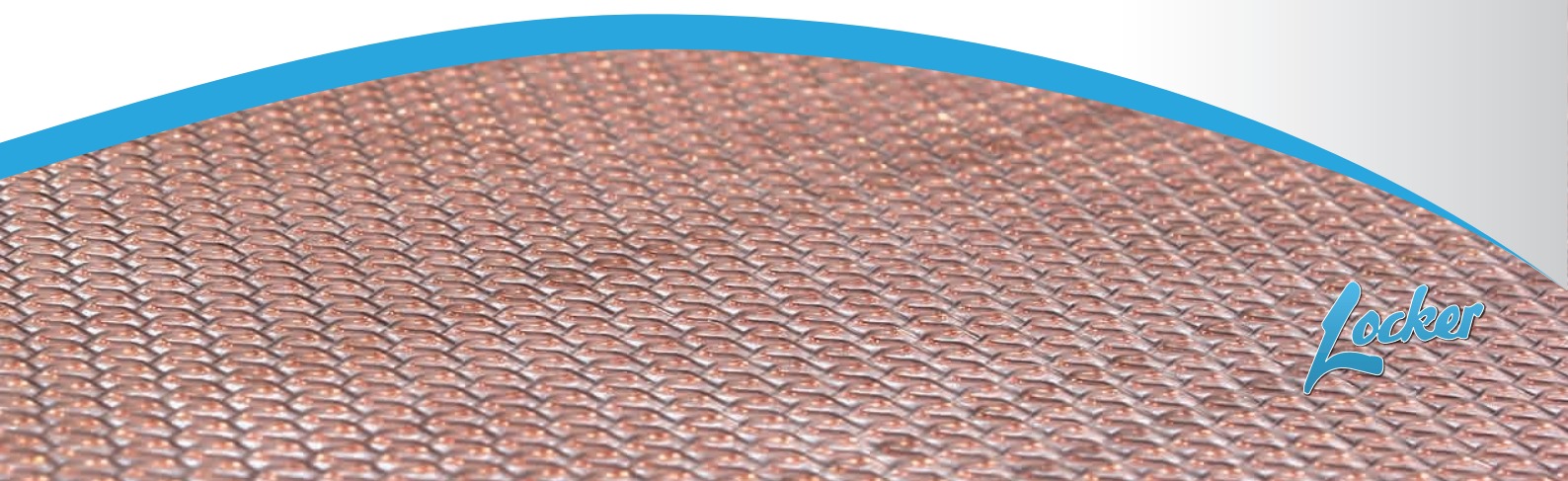
Non Standard Specifications

In theory there is an infinite number of combinations of aperture size, wire diameter and types of weave that can be produced. If you have a particular application that requires a critical combination of aperture and wire size to achieve a specific product, particle retention or free open area, Locker are always happy to assist in the development of new meshes to suit particular applications.

Quality

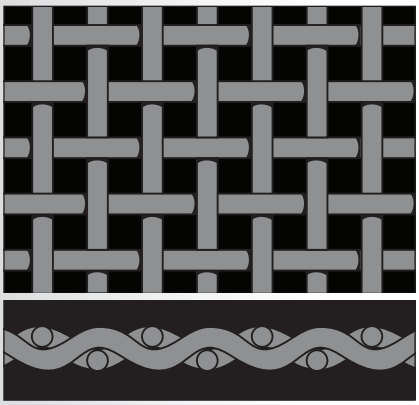
Locker is certified to ISO 9001:2008 with all technical and testing requirements conforming to ISO 9044, the international wirecloth standard. These standards certify that the materials and procedures used in the production of our wirecloth are carefully controlled and inspected to ensure that the highest levels of quality are maintained.

Weave Type	Nominal Mesh Count per inch		Wire Diameter		Particle Retention	Thickness	Weight for Stainless Steel
	warp	weft	warp mm	weft mm	micron	mm	kg/m2
PDW	24	110	0.355	0.250	120	0.710	2.70
PDW	50	250	0.140	0.112	60	0.315	1.00
DTW	165	800	0.068	0.050	25	0.170	0.71
DTW	165	1400	0.068	0.040	17	0.147	0.72
PDW= Plain Dutch Weave; DTV = Dutch Twill Weave							

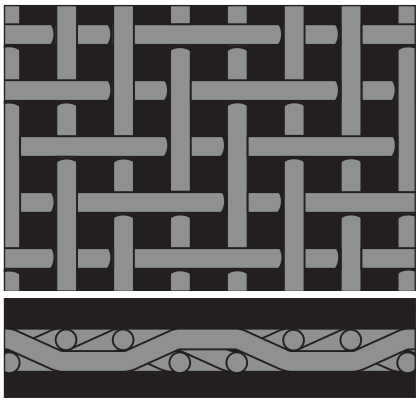


ALL TYPES OF WIRECLOTH USING ANY WEAVABLE METAL

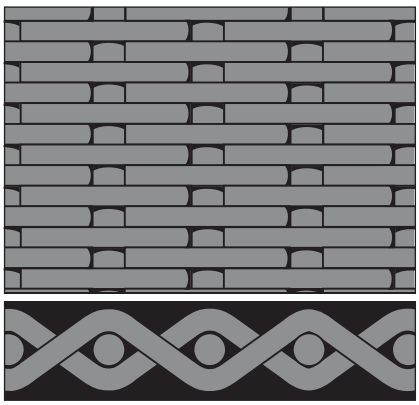
Locker supply all types of wirecloth. The most commonly used weaves are shown below:



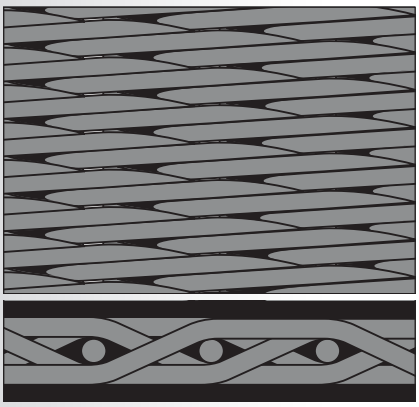
Plain Weave: is used for the majority of wirecloth woven by Locker. Each warp wire crosses alternately above and below every weft wire and vice versa. Warp and weft wires are normally of the same diameter. Used for the majority of commercial applications and for filtration where a high flow rate is required.



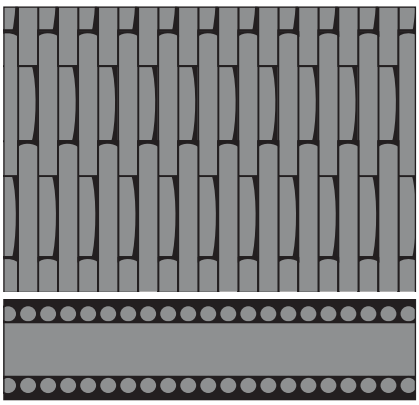
Twill Weave: Each weft wire passes alternately above and below every successive pair of warp wires and vice versa. This weave permits a heavier wire diameter to be used than would be possible in a plain weave with similar mesh count.



Plain Dutch Weave: Woven as a plain weave, but with the warp wires of greater diameter than the weft wires. The weft wires are woven tightly together producing a strong cloth whilst allowing a good flow rate.



Dutch Twill Weave: Similar to Plain Dutch Weave, but effectively has a double layer of weft wires woven in twill pattern. This cloth is "light tight", has a very smooth surface, is strong, but has a restricted flow rate. Also referred to as Micromesh and is used for critical filtration applications often under high pressure.



Reverse Dutch Weave: Normally woven as a plain weave, but in reverse manner to Plain Dutch Weave the weft wires are of greater diameter than the warp wires, and consequently the warp mesh count is greater than the weft mesh count. This cloth is extremely strong, is easily cleaned and has a high flow rate. Also known as Robusta.

Multiplex Weave: A Twill Weave cloth but with multiple wires making up warp and weft. A strong cloth with a relatively high number of openings per unit area, and considerable flexibility. In certain constructions it can produce capillary action.

Metals

Locker can weave wirecloth using any weavable metal.

Material Type	Standard EN	Standard AISI	Steel Designation	Max Temp °C
Plain Mild Steel	1.001	1052	Fe	450
Austenitic Stainless Steel	1.4301	304	X5CrNi 18-10	500
Austenitic Stainless Steel	1.4307	304L	X2CrNi 18-9	500
Austenitic Stainless Steel	1.4401	316	X5CrNiMo 17-12-2	500
Austenitic Stainless Steel	1.4404	316 L	X2CrNiMo 17-12-2	500
Austenitic Stainless Steel	1.4541	321	X6CrNiTi 18-10	700
High Alloy Austenitic Steel	1.4539	904L	X1CrNiMoCuN25205	500
Heat Resistant Stainless Steel	1.4841	314	X15CrNiSi 2520	1200
Heat Resistant Stainless Steel	1.4845	310	X12CrNi 25-21	1200
Ferritic Stainless Steel	1.4016	430	X6Cr 17	850
Nickel Alloy	2.4858	NA 16	NiCr 21	850
Nickel Alloy	2.4816	NA 14	Ni Cr 15 Fe	1050
Nickel Alloy	2.436	NA 13	Ni Cr 30 Fe	400
Copper	2.006	C101	E-Cu	150
Brass	2.0321		CuZn 37	200
Brass	2.025	CZ 106	CuZn 30	200
Bronze		PB 102	Cu	200
Aluminium Alloy	3.355	5056 A	AlMg 5	180

The majority of popular meshes are held in Stainless Steel 304 or 316 quality but many of these meshes are also stocked in Plain Mild Steel, Galvanized Steel, Monel and Non Ferrous Metals.

Locker can weave wirecloth using any weavable metal and regularly weave in; Stainless Steel (304, 316, 321, 430 and 904 grades), Plain Mild Steel, Galvanized Steel, Brass, Copper, Phosphor Bronze. Aluminium, Nickel, Monel, Inconel, Incoloy, Hastelloy and Molybdenum.

In addition the company has experience of weaving precious metals and can supply wirecloth Galvanized or Tinned after weaving.

MORE THAN SIMPLY WEAVERS OF WOVEN WIRECLOTH

Locker has a wide variety of skills, capability and equipment for the manufacture of finished components, filters and screens in many forms.

Fabricated Filters

Locker manufacture purpose-made filters, pressings and filter elements to customers' specifications. Facilities include welding, soft soldering, brazing, spot welding and press forming, and the production of filters incorporating turned or shaped metal components.

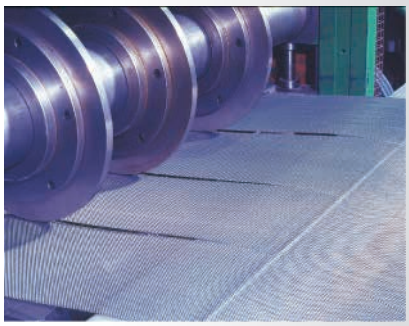
Extruder screens, disc packs and spinneret filters

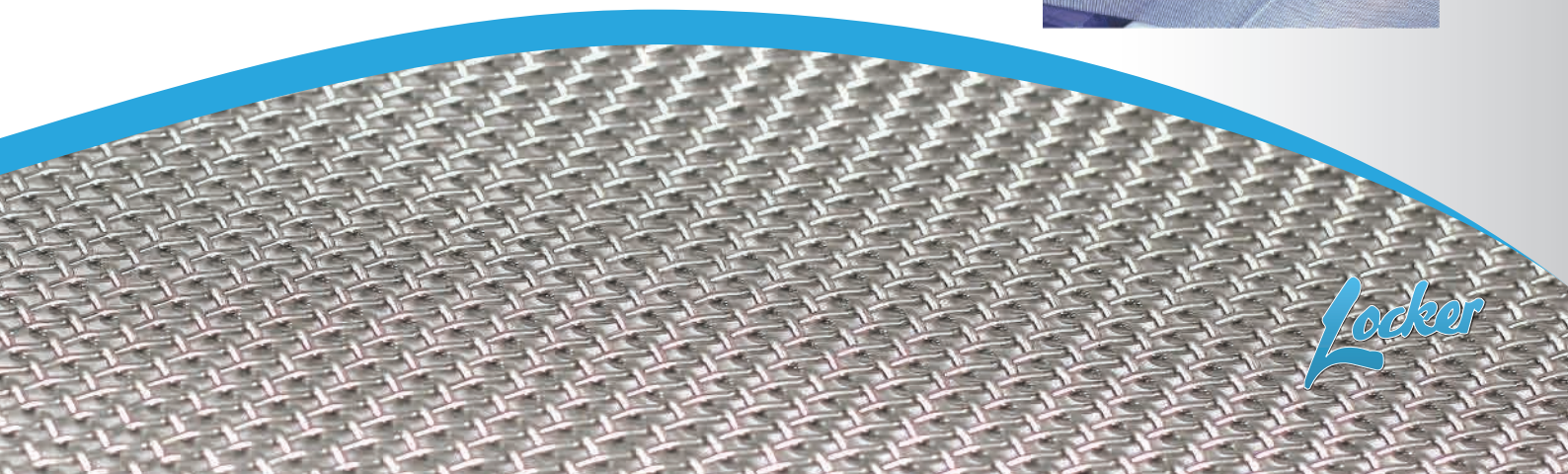
Other facilities include the high speed cutting of plain discs and washers, together with a variety of shaped screens. These can be supplied as separate components or combined in varying meshes, spot welded together or bound with aluminium, stainless steel or copper rims to form multi-layer screen packs and spinneret filters. This range of products is supplied extensively for use in the manufacture and reprocessing of plastic and rubber products and to the synthetic fibre industry.

Multi-layer tubular screens for extrusion equipment and high tensile stainless steel meshbands for use in automatic screen changers are also available.

Other finishing services available include:

- Slit to width rolls
- Cut pieces
- Fine blanking
- Annealing
- Degreasing
- Ultra sonic cleaning
- Calendering
- Air plasma cutting
- Laser cutting of complex shapes





OVER 130 YEARS OF WEAVING TECHNOLOGY

INFINITE RANGE OF APPLICATIONS

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MORE THAN SIMPLY WEAVERS OF WOVEN WIRECLOTH

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