

## Clothed With Love ~ “Linen of Light”

*These are they which follow the Lamb whithersoever He goeth. These were redeemed from among men, being the first fruits unto God and to the Lamb." Revelation 14:4. The vision of the prophet pictures them as standing on Mount Zion, girt for holy service, clothed in white linen, which is the righteousness of the saints. But all who follow the Lamb in heaven must first have followed Him on earth, not fretfully or capriciously, but in trustful, loving, willing obedience, as the flock follows the shepherd. {AA 591.1}*

*In the language of flowers, the word 'flax' means 'benefactor.'*

<http://youtu.be/4eUaZz0sYGU>

Listen to ReBUILDing the Living Stones Tabernacle ~ Parts 8 & 9:

<http://nitzamoshe.podbean.com/category/shaysh-linen/>

Making Linen From Flax

<http://youtu.be/ZeCXLiwWqKw>

Dress reform is an important part of God's plan to keep us healthy and happy. God is very detailed because he loves us! The Lord continues to teach us step by step to keep us safe and healthy. I pray that you will be blessed as you learn about God's plan for you.

Melinda



**Linen – The Preferred Fabric for Clothing of Healing, Healthy Living  
and Well Being**

## ELECTRONIC PROPERTIES

**At the electronic cellular level, flax cells are highly complementary with human cells;** producing a benevolent effect on the human organism. The human cell is capable of completely dissolving a flax cell. It is interesting that flax thread appears to be the only natural material utilized for internal sutures in a surgical setting.

Scientists have discovered that **linen fibers reflect light.** The light energy aspect of living organisms has been measured by many individuals within the Scientific community. Nobel prize winning Dr. Otto Heinrich Warburg identified signature frequency numbers of the average human at 70-90. All results with numbers less than 50 were identified as the signature frequency of chronic disease. Any number less than 15 was identified with those having a diagnosed incurable condition such as cancer.

The measurement of linen fabric measures **5,000 signature frequencies.** How do other fabrics compare? Plant fibers like cotton and hemp are not a healing fiber when measuring its signature energy output. Standard bleached and colored cotton measures 40 units of energy. The good news is that Organic unbleached cotton measures 100 units of energy which is a 'normal' but not a healing fiber. The silk fabric measures 10 units of energy which would fail to support health in the human body. Could it be a low number because of its origin? Silk is produced from an 'unclean' insect. Could silk be also use of so many chemicals that it is an unhealthy fabric. Rayon measures at 15 signature frequency. Polyester, acrylic, spandex, lycra, viscose and nylon measure zero and do not reflect light. Pure wool measures 5000 units of energy. For any individual desiring to be well the best recommendation from the instructions of the Holy Scriptures is to wear linen.

The Biblical warning of wearing wool and linen together proved in scientific studies to be accurate: the energy of these two fabrics put together (wool sweater on top of a linen outfit) collapsed the electrical field as well as wearing of black colored fabric. Where the two textiles measure 5,000 signature frequencies, when put together, these cancelled each other and brought measurable weakness and in some tests even pain to the human body.



## HISTORICAL USE

Since the earliest times, flax has been known to have **healing properties.** Recent studies out of Japan and posted from the linen textile manufacturers confirm this truth. In the Latin language, the word **flax means "being most useful"** and the Holy Scriptures certainly emphasized this material over all other fabrics for the Holy attire. The original Hebrew language gives the attire of Adam and Eve as a linen robe of light (Genesis 3:21). In establishing the protocols 'statutes' of health, the prophet Moses received

specific instructions. Cleansing a ‘leper’ meaning those ‘incurable’ gave only three distinct fabrics of attire: wool or linen or leather (Leviticus 13:47-48). It was emphasized as forbidden to wear linen and wool together (Leviticus 19:19 and Deuteronomy 22:11)

Historically the beautiful white linen attire of the Hebrew people was with Almighty God’s specific instructions, the decisions as given in the instructions ‘Torah’ as ordinances (Exodus 39:1-31). What special qualities were in this linen material that would restore life? Comprising a multitude of household items, flax possesses truly **exceptional hygienic properties** that heighten its value in consumer products and explains its widespread popularity.

Flax is an annual of the family Linaceae. There are over 200 varieties of flax plants that, depending on the regional conditions and climate. Flax blooms in clusters of **bluish, navy-blue**, and, more seldom, violet, rosy and white flowers that open up at dawn and close and fall at around noon when heat sets in. Each flower blooms for a few hours. Bees collect close to fifteen kg of honey from one hectare of flax field. Researchers found that one will fall asleep faster, sleep deeper, and wake up in a better mood after sleeping in linen! No fabric outpaces linen in natural strength, luster and durability. Ancient healing secrets revealed in the Holy Scriptures instruct that this fabric is considered Holy attire and part of the sanctification path. Linen is an ideal fabric not only for attire but for your table at every meal as a ‘high energy’ tablecloth and napkin.

## **PHYSICAL PROPERTIES**

Flax fabric is **an excellent filter** protecting against chemical exposure, noise and dust. – Linen clothing **reduces solar gamma radiation** by almost half thereby protecting humans wearing linen. -Flax fiber retrieved from contaminated soil appears to be totally resistant to harmful radiation. – **Linen underwear heightens** positive emotions as well as possessing rare **bacteriological properties**. Resistant to fungus and bacteria, flax is found to be an effective barrier to some diseases. According to Japanese researchers, studies have shown that bed-ridden patients do not develop **bedsores** where linen bed sheets are used. Wearing linen clothes helps to decrease some **skin diseases** – from common rash to chronic eczemas. -Linen is highly “**hydroscopic**” **meaning it rapidly absorbs and gives up moisture**. Adsorbing water as quickly as a pond surface, before giving a feeling of being wet, linen cloth can absorb as much as 20% of its dry weight. This explains why linen cloth always feels fresh and cool.

Linen **does not cause allergic reactions** and is helpful in treating a number of allergic disorders. Linen is effective in dealing with inflammatory conditions, reducing fever, and providing a healthy air exchange. Some neurological ailments benefit from the use of linen clothing.

Linen cloth **does not accumulate static electricity** – even a small addition of flax fibers (up to 10%) to a cloth is enough to eliminate the static electricity effect.

Linen **possesses high air permeability and heat** – Heat conductivity of Linen is five times as high as wool and 19 times as that of silk . In hot weather those dressed in Linen clothing are found to show the skin temperature 3°-4°C below that of their silk or cotton-wearing friends. According to some studies, a person wearing linen clothes perspires 1.5 times less than when dressed in cotton clothes and twice less than when dressed in viscose clothes. **Meanwhile in cold weather linen is an ideal warmth-keeper.**

**Silica present in the flax fiber protects linen against rotting** – the preserved mummies of Egyptian Pharaohs were wrapped in the finest linen cloth. Linen rejects dirt and does not get a furry texture; linen and linen-containing articles are easily laundered in hot water, may be boiled and dried in the sun, besides they may be hot-ironed thereby ensuring maximum sterilization; Linen provides a sensation of gentle, natural relief. Linen's smooth surface and matte luster appears beautiful and feels pleasant to the touch. The more linen is washed, the softer and smoother it becomes.

## **TESTIMONIES**

When wearing 100% linen, many individuals have testified that their healing was rapid. Post injury or surgical pain was substantially reduced (without the use of prescription or over the counter drugs) when using linen bandages and wearing linen clothing.

This information which would be a little noticed matter except for this research which demonstrates why it was a necessary part of the path of faith. A most remarkable testimony was shared by a Karaite Jew: He testified of his linen tallit, (prayer shawl) that was precious to him. This prayer shawl was so familiar to him that it was similar to a well worn Holy Scriptures whose pages had become regularly touched with use. In questioning him as to why he still had it, he opened up to share a remarkable testimony. Thirteen years previously, his wife was in labor and delivered an infant that failed to breathe. Calling the emergency 911 team, they waited gripped with the inevitable loss of an infant in 'stillbirth.' Grief stricken, he grabbed his prayer shawl and held his daughter in his arms for an agonizing 30 minutes. He recited the prayers of faith while waiting for the team to arrive. Unbelievably, according to his account, when the paramedics arrived, and had not yet touched the infant, there was a dramatic color change for the infant and breathing had resumed! He testified that this special child has a brilliant mind and does well in school. This amazing miracle involved use of a specific linen tallit that would be 'swaddling.' Did this linen prayer shawl contribute to the healing of this infant–demonstrating the benefits of obedience to the specific divine requirements for linen for religious ceremonies as revealed above as recorded in the Holy Scriptures? Testimonies from many individuals confirm that this Biblical clothing protocol brought healing their bodies.

The Holy Scriptures prescribes the wearing of linen or wool (separately of course) for those that are ill and 'incurable' in Leviticus 13. Linen is an ideal fabric not only for attire but for your table at every meal as a 'high energy' tablecloth and napkin.

In summary, if you wear black clothing, standard cotton clothing, rayon, polyester and nylon stockings, these will hinder your health by discharging and extinguishing one's electrical field light. When put into nature law depletion, there will be darkness. The human body will struggle with 9 areas of opened windows within the human body vulnerable for attack. The areas of windows in the 'nerve bundle' regions of the human body 'leak' subtle energy fields with the reserves of mineral charges. The dead battery effect would drain until the cellular function would be termed useless. If you have good flax next to wool or other man made 'fake' fibers, the energy signature will 'discharge' and one will suffer the consequences. This is the law of nature principle. What is at a higher level will come down to the average of the lower amount unless shielded. If you use cotton, rayon, these are not as strengthening to your body and may serve to keep your health 'average' with the typical western illnesses. If you want optimum health and healing and a strengthened immune system, you can choose to follow the instructions of the Holy Scriptures in getting your holy wardrobe knowing that you have the highest blessings available. Bless the LORD for this new knowledge and seek HIS ways.

### **BIBLICAL REFERENCES TO LINEN**

“And to her was granted that she should be arrayed in fine linen, clean and bright: For fine linen is the righteousness of Saints”- Revelation 19:8

The description of the Tabernacle, which formed the central point of worship for the tribes of Israel, the historical record tells us that the curtains were of fine linen. The use of linen was to have holy garments for the priests of the nation for glory and for beauty (Exodus 28:2). On Yom Kippur the High Priest alone entered the Holy of Holies, to make atonement for his house and for the people (Lev. 16); on that occasion he wore white linen garments. Aaron, the high priest, entered the holy place, he put on a holy linen coat and girde, and upon his head was a linen cap, This shows the unique place held by linen in the history of ancient times, and the reverence accorded it is further demonstrated in the New Testament, which states that when the Revelation of things to come was vouchsafed to John, the seven angels, who held in their hands the past and future of mankind, were clothed in pure and white linen; and a final quotation from the same Book of Revelation actions informs us that the garments of those chosen for eternal life and happiness will be of fine linen. The use of linen for priestly vestments was not confined to the ancient Israelites, during the birth of the Messiah, we know that linen was a common fabric used by the people and the Temple because of its purity.

What prophecy has been of flax relating to the true Messiah? “A bruised reed shall he not break and the smoking flax shall he not quench: he shall bring forth judgment unto truth.” – Isaiah 42:3 and Matthew 12:20. These are prophecies that would identify the Messiah to be a light to the Gentiles (Isaiah 42:6).

**The above article was written by Dr. Heidi Yellen and she and her husband will be publishing further material on fabric research and should any desire to receive updates or are interested in purchasing the book they are writing about linen apparel, please feel free to contact her:**

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**You can view the above article:**

<http://www.fabrics-store.com/blog/2009/05/20/linen-the-preferred-fabric-for-clothing-of-healing-healthy-living-and-well-being/>



## Story of flax



**Flax linen** was chosen and used by Kings and Egyptian Pharaohs for thousands of years, for its ability to **cool**, its **softness, durability** and **strength**.

Flax linen is made from fibres of the flax plant. (*Linum usitatissimum* - see left picture)

The plant grows to about one metre in height and is ready for harvest after flowering.

After **blue flowers** appear, the flax plant can be pulled out from the ground before seeds are formed to obtain the finest fibers for flax linen. For coarser flax fibers used for ship ropes and sails, the plant is harvested much later.



After **harvesting**, the plant is laid out on the field for **dew-retting** where the morning dew will cause the molds to separate the fibers from the woody core. This process can take a few months to occur and is known to produce the best flax fibers.

Water retting in ponds and streams will result in faster separation of fibers but may result in poorer quality, discoloration and smell.

After **retting**, the flax is **dried, broken, scutched** and **combed** to remove the fibers completely from the plant. There are two kinds of resulting flax fibers: **Flax Tow** (short fibers) and **Flax Line** (long fibers). The best flax linen is made from Flax Line. There is the final process of **spinning** to produce the desired threading.



From the **threading**, **flax linen** is produced and will usually be sent for **bleaching** before **coloring** through the use of dyes. These linen can finally be used for the production of **flax linen products** like bed linen and clothes.

From our **research and experiments**, we have identified the traditional method of bleaching which is done by putting out the flax linen in the sun for more than two months (depending on sun intensity and availability). We believe **sun bleaching** retains the natural properties of flax linen much better than chemicals do. Bleaching by chemicals happens in days rather than months and is commercially more viable. (See right picture for sun bleached comparison)



Flax linen has been in the shadow of cotton for many decades now due to the latter's ease of processing, elasticity and lower cost. We aim to excite the world with the beauty and benefits of wearing flax linen.

### Some information about Flax

- the best quality flax fibers comes from Europe
- it is cooler on the skin compared to cotton due to the superior ability to absorb and evaporate (moisture wicking effect).
- it has good heat conducting properties which may help improve fecundity and fertility of men through the increased production of sperm which is sensitive to heat
- wearing of flax linen underwear has been documented in ancient texts (e.g. Kings and High Priests wear linen underwear)
- it has very low electrostatic accumulation potential (static electricity)
- repeated washing of flax linen makes it softer
- it is also used in the production of money, ropes, sails, car seat stuffing, paint canvas, cigarette paper etc.
- flax seeds are used to produce flax seed\linseed oils which contains omega acids commonly consumed as supplements.



### Flax Linen Websites:

<http://www.roughlinen.com/> beautiful quality seamless homemade sheets- made in USA.

<http://www.cuddledown.com/category/bedding/linen.do> bedding

<http://www.sofiaslinen.com> bedding

<http://www.linoto.com/Linen-Sheets-Set-Linoto-com-p/lst.htm> bedding

<http://www.libecohomestores.com> luxury linen products Belgium linen

<http://www.pleasantpads.com> Pleasant Pads (feminine hygiene)

<https://remnantremedy.net/why-100-flax-linen-sheets.html> robes nightgowns sheets

<http://www.rawganique.com/hemp-flax-linens-sheets-organic.htm> bedding, robes

<http://linendreams.com> robes, pj's

<http://www.flaxdesigns.com>

<https://www.gidgetsclothing.com> clothing

<http://www.flaxgirl.com> clothing

<http://www.softsurroundingsoutlet.com> clothing

<http://www.cool-organic-clothing.com> information

<http://www.studiosuits.com> for men

<https://fulstudiotextile.com> European linen by the yard

<http://www.ulsterlinen.com> linen by the yard



<http://www.fabrics-store.com> linen by the yard  
<http://www.picknatural.com> organic linen by the yard  
<http://www.linentablecloth.com> tablecloth  
<http://www.armaniintl.com>  
<http://hearts-desires.com> vintage linens

<http://linenwash.net/> gentle cleaner for washing linen



## How to Care for Fine Linen Washing - Drying - Ironing - Stains

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First let me say that linen cared for properly will have a long and elegant life. It launders beautifully getting softer with each wash. It has strong fibers that can be woven into an extremely lightweight fabric yet it remains durable. Linen is a fabric that has been produced since antiquity. For generations people have laundered their own linens. Some of the methods and products have been passed on to me from customers and some methods have come from references. So I pass on this information to you only as an aid and with the disclaimer that we are not responsible for undesirable results. The following recommendations are for our products only; other manufacturers have different care recommendations for their products especially linen draperies where dry cleaning is recommended.

### Washing

Linen can be either hand washed or machine-washed on the gentle cycle. Either way your linens will become softer, more absorbent and acquire a beautiful sheen. Place handkerchiefs and smaller items or delicate and embroidered linens in a lingerie bag. Use a gentle detergent or soap when laundering linens. Some products such as Ivory Snow, Woolite, or Forever New for Linens are good. If you are using soap it is best if you have soft water. Hard water and soap can make your linens dull and dingy. Cool to warm water is recommended for white linens. Wash ecru and colored linens in cool water. Always treat stains as soon as possible. Stains that have been allowed to dry are more resistant to removal and may even be impossible to remove at a later date. See stain guide below. Use oxygen-type bleaches for white linen. Chlorine bleaches can cause yellowing. Products that contain optical whiteners such as Fabric Brightener by RIT can bring back new life to old linens. Whether hand or machine washing, it is best to rinse the linens thoroughly to remove all soap, detergent and residual soil. This will help avoid the formation of "age spots" on the fabric.

### Drying

Linen can be laid out flat to dry in the sun, which will help kill bacteria. Linen fibers are naturally resistant to bacteria. You can dry them wrapped in a terry towel. They can be put in a dryer Small items can be smoothed out on a clean flat surface such as a mirror or Formica counter. This is a great way to "press" a handkerchief when traveling. Whichever method you choose to dry your linens make sure they are removed from the dryer or brought in fairly damp.

### Ironing

**Always iron linen that has not been allowed to completely dry.** It is just about impossible to iron even if you sprinkle or try and use a steam iron. If you are unable to iron your linens within a day or two let them dry and rewet your linens and let them sit for several hours or overnight to thoroughly saturate the fibers. You can also store damp linen in a plastic bag in the refrigerator for a few days. This will retard the growth of mildew. Damask cloths are

best ironed on the reverse then the right side to bring out the sheen. Fancy embroidered linens are best ironed on the backside with a towel between the linen and the ironing board. Dark linens are also best ironed on the wrong side.

### **Stains**

Speed is the surest way to prevent a potential stain. But in the event you do have a stain to deal with here some methods that may be helpful. Red wine - pour sparkling water and rub. Blood - rinse immediately in cold water. Wax from candles - put linen in the freezer scrape off the majority of the wax and sandwich the wax between two paper towels and iron the residue. Colored candle wax may leave a stain. Grease stains can be rubbed with ammonia. Ink - soak in milk or rub the spot with a soap and ammonia mixture. Fruit, tea and coffee - rub with white vinegar and ammonia.

## **How to Wash White Linens Without Bleach**

### **Intructions**

1. GET A 3% SOLUTION OF PEROXIDE. This is the type of peroxide that is sold in your grocery store or pharmacy.
2. ADD 1 CUP OF PEROXIDE TO YOUR WASH. Just pour it in the way you would normally use bleach.
3. RUN YOUR WASHING MACHINE. Use whatever machine cycle is recommended on the labels of the clothing/linens you are washing.



## **LINEN SPOT: Health Benefits of Wearing Linen**



According to research studies I found online (although I wasn't able to find the original source/data), linen has been scientifically proven to have healing properties. For example, linen is exclusively used in operating rooms and it is the only natural material utilized for internal sutures in a surgical setting. When wearing 100% linen, many individuals have testified that their healing was rapid. Post injury or surgical pain was substantially reduced (without the use of prescription or over the counter drugs) when using linen Bandages and wearing linen clothing.

I've also heard of cancer patients being wrapped in linen as a treatment

therapy. Since linen has the highest energy vibration of any natural fabric, this makes perfect sense. When your body is surrounded by linen fabric, you may notice its uplifting effect.

At the electronic cellular level, flax cells are highly complementary with human cells - producing a benevolent effect on the human organism. The human cell is capable of completely dissolving a flax cell. Scientists have discovered that linen fibers reflect light. The light energy aspect of living organisms has been measured by many individuals within the scientific community.

Nobel prize winning Dr. Otto Heinrich Warburg identified signature frequency numbers of the average human at 70-90. All results with numbers less than 50 were identified as the signature frequency of chronic disease. Any number less than a 15 frequency was identified with those having been diagnosed with a life-threatening illness, such as cancer. The signature frequency measurement of linen fabric measures 5,000!

How do other fabrics compare? Plant fibers like cotton and hemp are not healing materials when measuring their signature energy output. Standard bleached and colored cotton measures only 40 units of energy. Organic, unbleached cotton measures 100 units of energy, which is considered normal, but not a healing fiber. Silk fabric only measures 10 units of energy, which would fail to support health in the human body. Rayon measures at a 15 signature frequency. Polyester, acrylic, spandex, lycra, viscose and nylon measure *zero*. Pure wool measures 5,000 units of energy - same as linen, but I find wool irritating to my sensitive skin - like a Brillo Pad on me, unfortunately.

For any individual desiring to regain and maintain health, the best recommendation - dating all the way back to The Bible itself - is to wear linen. The Biblical warning of wearing wool and linen together was also proven in scientific studies to be accurate: the energy of these two fabrics worn together (e.g., a wool sweater on top of a linen outfit) collapsed the electrical field. While the two textiles both measure 5,000 signature frequencies individually, when put together, they cancelled each other out, and - in some cases - brought measurable weakness and even pain to the human body. Additional health benefits of wearing linen apparel:

- Flax fabric is an excellent filter protecting against chemical exposure, noise and dust.
- Linen clothing reduces solar gamma radiation by almost half thereby protecting humans wearing linen.
- Flax fiber retrieved from contaminated soil appears to be totally resistant to harmful radiation.
- Linen underwear heightens positive emotions as well as possessing rare bacteriological properties.
- Resistant to fungus and bacteria, flax is found to be an effective barrier to some diseases.
- According to Japanese researchers, studies have shown that bed-ridden patients do not develop bedsores where linen bed sheets are used.
- Wearing linen clothes helps to decrease some skin diseases - from common rashes to chronic eczemas.
- Linen is highly "hygroscopic" - meaning it rapidly absorbs and gives up moisture. Absorbing water as quickly as a pond surface, before giving a feeling of being wet, linen cloth can absorb as much as 20% of its dry weight. This explains why linen cloth always feels fresh and cool.
- Linen is not known to cause allergic reactions and is helpful in treating a number of allergic disorders.
- Linen is effective in dealing with inflammatory conditions, reducing fever, and providing a healthy air exchange. Some neurological ailments benefit from the use of linen clothing.
- Linen cloth does not accumulate static electricity - even a small addition of flax fibers (up to 10%) to a cloth is enough to eliminate the static electricity effect.
- Linen possesses high air permeability and heat. The heat conductivity of linen is 5 times higher than wool and 19 times than silk. In hot weather, those dressed in linen clothing are found to have a lower skin temperature than others wearing silk or cotton garments. According to some studies, a person wearing linen clothes perspires 1.5 times less than when dressed in cotton clothes, and twice less than when dressed in viscose clothes. Meanwhile, in cold weather, linen works in reverse, proving ideal for retaining warmth.
- Silica present in the flax fiber protects linen against rotting. The preserved mummies of Egyptian Pharaohs were wrapped in the finest linen cloth. Linen resists dirt and doesn't develop a furry

texture. Linen can be laundered in hot water - it can even withstand high temperatures when ironing and can even withstand boiling.

Above article taken from: <http://www.spotonstyle.com/linenspot--healthbenefits.html>

## **SOME PROPERTIES OF LINEN to be Considered in Linen SHEETS**

While researching linen, I found myriads of Scriptural and Scientific reasons Linen is so wonderful. For the purpose of those in need as described above, following are just a few reasons why linen is beneficial:

~ According to Japanese medical research studies, bed-ridden patients do **NOT** develop bedsores when linen bed sheets are used.

~ The flax cell is highly compatible with the human cell. In fact, a microscopic cross sectional view of a flax stem looks much like an eye with an iris and pupil appearance. Because of its compatibility, the human body can completely dissolve the flax cell making it suitable for the purpose of being used as *natural* internal sutures during surgery.

~ It is also used in bandage dressings and woven into bandages because of its hygroscopic, air permeability and aseptic properties. For these same reasons linen sheets, underwear and clothing aid those suffering from yeast infections.

~ These properties help make a patient feel fresh and cool; yet, helps keep them warmer or cooler as it is an adaptogen to the present temperature needed. Menopausal women enjoy linen for these same reasons during times of hot flashes.

~ Probably due to its 5,000 signature frequency and ability to reduce static in the body, Linen is known for helping to reduce fatigue and lift spirits.

~ Some studies indicate that the body may be protected from damaging electromagnetic frequencies especially when near electronic

appliances, computers, Wi-Fi, cell phones, etc.. Much research is being done and tools being produced to protect and shield the body's cells from the disturbance of "bad" frequencies for the body. In contrast, "good" frequencies that help repair the resonance state in the body's cells include SHeMeN (essential oils), laser light therapy, linen, raw fruits and vegetables and color therapy.

~ The studies on the color white and the reflection of light in linen is known to increase the body's frequency energy adding more life and energy to those wearing and using linen. In contrast, those wearing or around black lose energy and life.

These properties are probably why YHWH commanded the Cohen to wear linen so as to not sweat and become electrocuted while handling the ark of the covenant.

*And it shall come to pass, that when they enter in at the gates of the inner court,*

*they shall be **clothed with linen garments;***

*and no wool shall come upon them, whiles they minister in the gates of the inner court,*

*and within.* They shall have linen bonnets upon their heads, and

shall have linen breeches upon their loins;

they shall **not gird themselves with any thing that causeth SWEAT.**

Ezekiel 44:17 - 18

Additionally, these properties may be why the Cohen were instructed to use linen or wool or leather to enclose a plague for 7 days and watch for spreading infection. For this reason, many Believers use SHeMeN (essential oils) and wrap with linen bandages when remedying their health (Leviticus 13).

In regards to using linen, one of the most common remarks received by those who wear it is that they feel more energy and "charged" especially when they sleep on linen sheets. Users report that they sleep and feel

better and feel more secure and refreshed from just lying down and being covered by linen.

(Above article taken from [www.remnantready.net](http://www.remnantready.net) )



## Linen

(1.) Heb., pishet, pishtah, denotes "flax," of which linen is made (Isa. 19:9); wrought flax, i.e., "linen cloth", Lev. 13:47, 48, 52, 59; Deut. 22:11. Flax was early cultivated in Egypt (Ex. 9:31), and also in Israel (Josh. 2:6; Hos. 2:9). Various articles were made of it: garments (2 Sam. 6:14), girdles (Jer. 13:1), ropes and thread (Ezek. 40:3), napkins (Luke 24:12; John 20:7), turbans (Ezek. 44:18), and lamp-wicks (Isa. 42:3).

(2.) Heb. buts, "whiteness;" rendered "fine linen" in 1 Chr. 4:21; 15:27; 2 Chr. 2:14; 3:14; Esther 1:6; 8:15, and "white linen" 2 Chr. 5:12. It is not certain whether this word means cotton or linen.

(3.) Heb. bad; rendered "linen" Ex. 28:42; 39:28; Lev. 6:10; 16:4, 23, 32; 1 Sam. 2:18; 2 Sam. 6:14, etc. It is uniformly used of the sacred vestments worn by the priests. The word is from a root signifying "separation."

(4.) Heb. shesh; rendered "fine linen" Ex. 25:4; 26:1, 31, 36, etc. In Prov. 31:22 it is rendered in Authorized Version "silk," and in Revised Version "fine linen." The word denotes Egyptian linen of peculiar whiteness and fineness (byssus). The finest Indian linen, the finest now made, has in an inch one hundred threads of warp and eighty-four of woof; while the Egyptian had sometimes one hundred and forty in the warp and sixty-four in the woof. This was the usual dress of the Egyptian priest. Pharaoh arrayed Joseph in a dress of linen (Gen. 41:42).

(5.) Heb. 'etun. Prov. 7:16, "fine linen of Egypt;" in Revised Version, "the yarn of Egypt."

(6.) Heb. sadin. Prov. 31:24, "fine linen;" in Revised Version, "linen garments" (Judg. 14:12, 13; Isa. 3:23). From this Hebrew word is probably derived the Greek word sindon, rendered "linen" in Mark 14:51, 52; 15:46; Matt. 27:59. The word "linen" is used as an emblem of moral purity (Rev. 15:6). In Luke 16:19 it is mentioned as a mark of luxury

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Easton, Matthew George. M.A., D.D., "Biblical Meaning for 'Linen' Eastons Bible Dictionary".

[bible-history.com - Eastons](http://bible-history.com - Eastons); 1897.

## HISTORY OF IRISH LINEN



### What is Linen?

Linen is a yarn or fabric made from the cultivated flax plant, named *Linum usitatissimum*. This domesticated species is believed to have been developed during cultivation. It is a cellulosic plant fibre, or bast fibre, and it forms the fibrous bundles in the inner bark of the stems of the plant. The plant is an annual that grows to a height of about a metre and the fibres run the entire length of the stem and help hold it upright.

The fibre strands are normally released from the cellular and woody stem tissue by a process known as retting (controlled rotting). In Ireland this was traditionally done in water, rivers, ponds or retting dams.

The original flax to be used for its fibre was the wild, *Linum angustifolium*. This is not grown commercially, and is found in southwestern Europe, including Britain, to the Mediterranean, Madeira and the Canaries. It is considered by some experts to be a distinct species in its own right and the most likely progenitor of *Linum usitatissimum*; the cultivated flax. However, others consider it could have been *Linum bienne* Mill.

### General History

Flax was almost certainly one of the first plant fibres to be used for making textile materials. Many countries throughout the world can relate their association and history that is related to this fibre. Archaeological excavations of [ancient Swiss lake dwellings](#) have found evidence of the use of, *linum angustifolium* flax, for twines and nets around 8000 BC.

Better known is the extensive use of flax and linen in [ancient Egypt](#). Commercial scale production was taking place around 4000 BC to meet the heavy demands for clothing, sail cloth, furnishing fabrics and funerary fabrics.

Linen was probably first introduced to the British Isles by [Phoenician traders](#) around 900 BC. Some consider it to have been introduced by the [Romans](#). Whichever it was, it was



the Romans who established linen factories in Britain and Gaul to supply their colonial forces.

It is not considered to have come into general use in these islands until the [Middle Ages](#).

## **History of Irish Linen**

One must constantly remind oneself not to be too introspective when dealing with the history of the famous [brand](#). Much of the history of Irish linen has been determined by outside factors and influences. Everything from myth and fable to protectionism, war and political considerations, competition with cotton, technological advances, industrial espionage and more.

### **Early Times**

Early [myths](#) and legends which are outlined by [Wilkinson](#), 1858, indicate that the origins of flax-dressing is one of the economic arts which the Irish believed was attributed to supernatural teachings. Until the 19th century Irish peasants repeated the mythical story of its [introduction](#) into their island by the "dwellers on the Shlahna mountain", or Shliabh na Mann mountain (modern Slieve na Mann?). These talented peoples, who had the name *Mann*, are said to have been foreigners, from a distant land (could they have been from the [Isle of Man](#)?), who long ago settled on this mountain, and first instructed the natives in the art of the management of flax, and hemp.

If there is any truth in this we shall probably never know, but more conventional learning seems to believe flax was grown in [Ireland](#) as far back as 1000 BC. Evidence of curing flax has been found in bogs all over Ireland and has been dated to 2000 years ago. Linen production is detailed in the [Brehon Laws](#) and linen clothing and vestments are commonly referred to in early Christian times. The ancient Irish Brehon laws made it obligatory for farmers to learn and practise the cultivation of flax.

### **16th Century**

In [Tudor times](#) linen must have been in great abundance, because in 1536 [Henry VIII](#) wrote to the town of [Galway](#), that no man, woman, or child, do wear in their shirts or smocks, or any other garments, no [saffron](#), nor have any more cloth in their shirts or smocks, but 5 [standard ells](#) of that [country](#) cloth. (Ell = 1.143m = 45 inches).

Also, in Tudor times there is evidence that flax growing was on so vast a scale, maybe because of the overly long lengths of linen used in their shirts? That Parliament passed a law forbidding the retting of flax in rivers, to protect the fish life from the effluent. Which no doubt resulted from the deoxygenation of the water as a result of the retting process.

### **17th Century**

In the 1632 the Lord Deputy of Ireland, [Earl of Strafford](#), later followed by the the [Duke](#)

[of Ormonde](#), built up and encouraged the Irish linen industry. Mainly with a view to replacing the Irish woollen trade, which was competing with the English trade. Strafford imported high quality flaxseed, and Dutch equipment, and had new looms built. These he sold to farmers at cost price. He also brought over experts on the subject from Europe to advise the Irish.

There was however, resistance to the new methods and Strafford had to punish with fines those who continued to use the older traditional methods. This caused much misery and deprivation.



Ormonde continued this work, but enlisted the help of Parliament, and focussed more on protestant immigrants. Gradually, productivity improved, particularly in the North of Ireland. This formed a foundation for further improvements by the [Huguenot](#) immigrants

[King Charles II](#) assented to a series of Acts prohibiting the export of Irish wool, cattle, etc., to England or her colonies, and prohibiting the direct importation of several colonial products into Ireland.

Ireland directed the exports to France and Spain, and the woollen manufacture continued to increase.

The English trade was getting even more concerned because the Irish were getting rich, and competing strongly with their exports. They addressed their concerns to [King William](#), stating that the growth and increase of the woollen manufacture in Ireland had long been, and would be ever, looked upon with great jealousy by his English subjects, and praying him, by very strict laws, totally to prohibit and suppress the same. The Commons said likewise; and [William](#) answered comfortably I shall do all that in me lies to discourage the woollen manufacture in Ireland, and to encourage the linen manufacture there, and to promote the trade of England.

He was as good as his word, and encouraged the Irish Parliament to pass an Act, putting twenty per cent duty on broad, and ten per cent, on narrow cloths: But it did not satisfy the English parliament, where a perpetual law was made, prohibiting from the 20th of June, 1699, the exportation from Ireland of all goods made or mixed with wool, except to England and Wales, and with the license of the commissioners of the revenue; duties had been before laid on the importation into England equal to a prohibition, therefore this Act has operated as a total prohibition of the exportation.

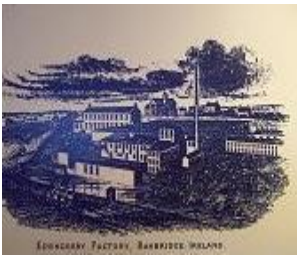
So, the [Westminster Parliament](#) prohibited the export of manufactured woollen goods from Ireland in 1699, although woollen yarn was still produced both for domestic use and for English manufacturers. The restrictions on the woollen trade increased the importance of the linen industry, particularly in Ulster. In 1696 a Bill went through the English parliament which encouraged the manufacturing of linen in Ireland.

## 18th Century

From the early 18th century, Irish linen was imported duty free to England and to British Plantations in America, and by the end of the 18th century; linen accounted for about half of Ireland's total exports. In the early 18th century much of the Irish linen went through the port of [Chester](#), this reached it's zenith in the mid 18th century, much of the trade moving to [Liverpool](#).

It is stated in the '[House of Lords](#)Journal Volume 17: 17 March 1704', Journal of the House of Lords: volume 17: 1701-1705, pp. 484-87.

*"The Committee also heard several of the Gentlemen of Ireland; who acquainted them, That the Application of the People in Ireland to the Linen Manufacture was not a Matter of Choice, but was pursuant to the Desires of the People of England, and to silence a malicious and groundless Calumny, of their affecting an Independence upon England: That all Trade in Ireland would in some Degree affect the Trade of England; but yet they hoped that would not be a sufficient Argument to induce England to debar them of all Trade: That it was impossible for them to hope that the Linen Manufacture would become National, unless the Encouragement was general, which must be by allowing them a Market: That, though they might import their Linen into England Customfree, yet the Profit was too little: That, considering the Freight, which must all be paid down to The West Indies by the Usage of Merchants, the Loss of Time, and Want of Stock, the Trade would not answer; the Charge before it could go from England exceeding the Prime Cost: That, as to the Objection of Collusion, their Ships went now with Provisions directly from Ireland; and that it was a Mistake in the Commissioners of the Customs to say, that Ships, which went with Provisions from Ireland to the Plantations, did use to touch in England; that they believe there could, not be One Instance given of their doing so; but it may be true, that English Ships do often touch in Ireland, for taking in Provisions." They said, "That the importing of Scottish Linen into Ireland is the greatest Prejudice to them that can be, and therefore so high a Duty is laid upon it in Ireland as amounts to a Prohibition; and in Revenge of that, the Scotts have forbidden the importing of Corn from Ireland into that Kingdom; and they are willing to agree to any farther Prohibition of Scottish Linen: And that they are willing to submit to any Regulation for preventing of Collusion, upon the granting such a Liberty to them; but they desire it may not be so restrained as to hinder the Manufacture from becoming universal."*



[Cambrai](#).

After Louis XIV of France revoked the [Edict of Nantes](#), in 1685, many of the [Huguenots](#) who had to flee the country settled in the British Isles. Amongst them was [Louis Crommelin](#), who was born, and brought up as a weaver of fine linen, in the town of

Although the linen industry was already established in [Ulster](#), Louis Crommelin found

scope for improvement in weaving, and his efforts were so successful that he was appointed by the Government to develop the industry over a much wider range than the area around [Lisburn](#). The direct result of his good work was the establishment, under statute, of the Board of Trustees of the Linen Manufacturers of Ireland in the year 1711. The Board of Trustees of the Linen Manufacturers for over 100 years (1711 to 1823) nurtured and controlled the Irish Linen Industry. The Board's legacy is the World-renowned standards and quality of Irish linen today.

For many hundreds of years up until the 18th century linen had had a very strong presence in clothing, furnishing fabrics and industrial fabrics, such as sail cloth. With the establishment of the cotton plantations in the Southern States of North America, and the influx of vast quantities of low cost cotton on the markets of Europe and North America. Linen's position came under threat.

This change was not only due to greatly increased supplies of cotton, but also the replacement of hand spinning by mechanical spinning. The development of spinning frames for flax lagged decades behind that of cotton. The linen industry suffered from the problem of a regular supply of yarn. [James Hargreaves](#) (also [Hargraves](#)) invented the [spinning Jenny](#) for cotton in 1767. The foundation of machine spinning of flax was laid by [John Kendrew](#) and [Thomas Porthouse](#) or Porteous, from [Darlington](#). In 1787 they developed a flax spinning process after seeing the the machine spinning of cotton in use in Lancashire, and [patented](#) it in 1788, with financial backing from [James Backhouse](#). Much work by John Kendrew and his associates resulted in a machine capable of spinning the notoriously difficult fibre without having to process it in a way which deprived it of valuable properties. The first machine was set up in Low Mill (sometimes called Lead Yard or Bishop's Mill) on the [River Skerne](#) at Darlington. They then each set up a mill of their own, Kendrew at Haughton-le-Skerne and Porthouse near [Coatham](#), both on the same river. They also granted permits, enabling others to build mills, including in northeast [Scotland](#).

[John Marshall](#) (1765-1845) of Leeds heard that two men from Darlington, John Kendrew, a glass-grinder, and Thomas Porthouse, a watchmaker, had registered a patent for a new [flax-spinning](#) machine. Marshall visited the men and purchased the right to make copies of their invention.

After taking on two partners, Samuel Fenton, a draper, and Ralph Dearlove, a linen merchant, Marshall leased Scotland Mill, at Adel near [Leeds](#). Early in 1788, Marshall, Fenton and Company, began spinning flax yarns. However, the machines did not perform well. Breakages frequently occurred and the yarn came out lumpy and hairy. Marshall thought the quality was no better than hand-spun, although the machines were quicker and cheaper. Although this was debateable at the time because the wages of female hand spinners were so low. Another perennial problem in the trade was that the manufacturers of woollen, linen, and cotton fabrics found it very difficult when the spinners were at the harvest, to keep the weavers in work. This problem increased after John Kay invented the flying shuttle in 1733. So it had been the objective for some years to develop a spinning

machine. Indeed in 1761 the [Royal Society of Arts](#) published the following advertisement:

*March 16th 1761: 'For the best invention of a machine that will spin six threads of wool, flax, hemp or cotton, at one time, and that will require but one person to work and attend it (cheapness and simplicity in the consideration will be considered part of its merit); for the best, fifty pounds; for the second best twenty-five pounds'*

Marshall had little technical experience, but he spent the next few years trying to improve its performance. He made little progress until he recruited [Matthew Murray](#) (1765-1826), to help him. At some point during these years of experimentation with Matthew Murray, Marshall refused to pay further royalties to Kendrew as he argued that his and Murray's machine was technically far removed from the Darlington prototype. Kendrew sued Marshall for £900, but in 1793 was awarded only £300. A broken man, Kendrew left Low Mill and died at Haughton in 1800.

At any rate by June 1790 Marshall and Murray had created an efficient [flax-spinning](#) machine that produced good quality yarn. However, it was slow and could not match cotton spinning, and it could only spin coarse yarns.

In Ireland most saw no advantage to be gained in installing costly machines, while finer yarns could be spun at a lower and more variable cost, and in sufficient quantities, by women in their homes.

## 19th Century

In May 1810 [Napoleon I](#), as part of a process known as the [Continental System](#), tried to stop English cotton fabrics entering the continent of Europe. He offered a reward of one million francs to any inventor who could devise the best machinery for the spinning of flax yarn. Within a matter of weeks [Philippe Henri de Girard](#) (1775-1845) patented in France flax spinning frames for both the dry and wet spinning methods. His inventions were also patented [in England on November 7th, 1814](#), by [Horace Hall](#), named as a merchant from Golden Square, Middlesex. Hall took out this patent after two of de Girard's partners, [Lanthois and Cachard](#), sold him the designs of de Girard's machines for [£25,000](#). These ideas were then taken up by [Robert Busk](#), of Hunslet, Leeds. However, this venture was unsuccessful. His inventions did not receive the reward and were not suitably recognised in his native France, and he moved to Vienna at the invitation of the Austrians in 1815 and set up a flax mill at [Hirtenberg](#). He later went to Poland and set up a mill at a village which received the name of [Girardow](#). However he never found success and his inventions never really proved to be a commercially advantageous. Although, after his death, his work was recognised and his descendants were rewarded with a small pension by the French Emperor.

After adaptations linen spinning in the [British Isles](#) did not really become a commercial success until [James Kay](#) (1774-1857) developed successful wet spinning process for flax, in 1824, supposedly [based on Arkwrights](#) 1769 spinning frame. [Kay was born at](#)

[Edgefold Farm near Entwisle](#), Lancashire. He became successful spinner with mills at Preston, Penny Bridge and Pendleton, and died at Turton Tower, Turton, Lancashire, in February 1857. The title of his patent was, "New and improved machinery for preparing and spinning flax, hemp and other fibrous substances by power". He found that flax could be drawn by steam powered spinning machines into a fine yarn ready for weaving if it was first soaked in hot water (macerated), and the reach (ratch) between the drawing roller and retaining rollers was reduced to two and a half inches. There was however, some difficulties with James Kays (then of Preston) [patent application](#) in 1825, which had been taken out for fourteen years. It appears he had been badly advised when his patent was drawn up. This resulted in the validity of his new development being [disputed by Marshall](#), of Leeds. Kay was forced to sue Marshall in court in 1835 for non payment for the use of his patent, but the defendants disputed the validity of the patent on the grounds that so far as the invention was new it was useless (maceration process), and that so far as it was useful it was not new (spinning process with 2.5 inch ratch). In 1839, the [Court found](#) that as the patent was taken out for an invention consisting of two parts one of which was not new (considered too similar to Horace Halls patent) the whole was found void, he also [failed in his appeal](#) of 1841. McCutcheon states in his book, The Industrial Archaeology of Northern Ireland that,

*"Kays patent included two distinct specifications, one referring to the maceration of the rove, which was held to be novel, the other referring to the contraction of the reach between the drawing and retaining rollers on the spinning frame to a precise 2.5 inches. The latter stipulation was challenged as being an infringement of an earlier spinning system designed by Philippe de Girard (British patent No. 3855 of 1814) and led to the invalidating of the entire patent of 1825. Despite this Kay was without question the originator of the wet spinning process, though this was automatically released to the entire flax-spinning industry by the legal invalidating of his patent"*

Whoever was really responsible for the development of this new process for the wet spinning of flax it was Kay who was responsible for it being generally accepted by the trade and it was a definite turning point as it provided the means to spin, in quantity, very much finer, and more even and regular yarns. It is [stated](#) that before his invention in 1825 the finest linen yarns which could be spun by machine was 40 lea, after up to 200 lea could be spun, and they were better quality than hand spun, and required less skill. He also recognised the commercial sense of it because it was stated that at this time cotton cost 10d per lb., and when spun was worth 18d; whilst flax cost 6d, but when spun was worth 4s, an uplift of 800% when compared to less than 100% with cotton.

There is little doubt that history in the British Isles has credited this invention to James Kay. Although, in 2 Dec., 1826 shortly after Kay's patent, [Philippe Henri de Girard](#) seems to have been prompted to write to the Editor of The Manchester Guardian:

*"Sir:- I beg to submit to the flax-spinners of this country a few observations, which, I believe, will be highly interesting to them; or, at least, will correct a misrepresentation that has been made, and render the merit of an important improvement to the real inventor.*

*A few months ago, a gentleman of the name of Kay, excited a strong sensation in the trade, by announcing a new method of spinning flax, by which much finer and better yarn was produced, than by any other process previously adopted. He announced this invention not only as new, but as his own; the results of his experiments were published in many provincial and London papers; and he granted to several flax-spinners, the right of using his invention, for which he obtained a patent.*

*The public will now hear, perhaps with some astonishment, that all this noise was made for a discovery long since published on the continent, and even patented in England twelve years ago. This new process of spinning, announced by Mr. Kay, is the same which I invented fourteen years since, and which is established, with great success, in France, Saxony, and Germany. A patent was taken out in England, in the month of May, 1815, by my partners in Paris, Messers. Cachard and Lanthois, in the name of Mr. Horace Hall.*

*In this patent is clearly described the principle of reducing the flax to its elementary fibres, by dissolving or moistening the glutinous matter which unites them. The merit of this discovery belongs to me: and the right of using it in England, to Mr. Horace Hall, if any; but certainly neither of them to Mr. Kay.*

*This gentleman proposes solution of potash for separation of the fibres. This was my first process, specified in my patent in France, with another much preferable to this. I have spoken of the solutions of potash, soda, or soap, in my patent, only to prevent the imitators from invading my rights by resorting to the use of those solutions; but a much better method will be found in my explanation and drawings, attached to the patent of Mr. Horace Hall.*

*The yarns produced from my flax-spinning manufactory can be seen on applying to me, and got from my manufactory, at [Hirtenberg](#), near Vienna: or at that of Messers. Kraus and Brother, at Schemnitz, in Saxony, who several years ago, adopted my principle of spinning. The superiority of my process will be evident, when it is stated that we spin commonly 120 leas to the pound, while the first spinners in Leeds do not exceed 42, except as experiments.*

*Why spinners of Leeds have not taken notice of this important part of my inventions, whilst they adopted, with great advantage, the other parts of them, described in the same patent of Mr. Horace Hall, is difficult to explain on any other ground than that, owing to its extreme difference from the usual practice, they doubted of its efficacy: or thought that such a decomposition as it causes would alter the strength of the yarn, which is by no means the case: on the contrary, my yarn has always more strength now than the common yarn because the fibres are more perfectly parallel together.*

*The part of my invention that I alluded to, and which has given to the flax-spinner of England the means of making the first improvements in their old process was this, of reducing the flax into rovings, by drawing it through endless chains and combs, which the flax spinners have adopted these ten years, and which seems to be the only method for*

*making a regular roving of these substances. I am glad that they are now disposed to adopt the second and important part of my invention, and cannot do less than thank Mr. Kay for having called their attention to it.*

*Since the taking out of this patent. I have made many further improvements in my method of spinning among others I have invented a machine for combing the flax, much superior to those now used in Leeds; also another for making the first slivers, which are made in Leeds by hand, &c. &c.*

*I shall be ready to afford full information to any persons requiring it, on these new improvements, by applying to me, at the address hereafter. Your most obedt. servt."*

*PH. DE GIRARD*

*Care of Messers. Harman and Co. London*

[Philippe Henri de Girard](#) definitely felt aggrieved. Why Horace Hall put forward no case for himself is not clear. No doubt it was not easy for the French to deal with England at this period in history, with the [Napoleonic Wars](#) (1803-1815), being so shortly ended.

Whatever the case may be up until the 1820's the spinning wheel and the handloom dominated the Irish linen industry; it was a domestic industry with spinning and weaving mainly taking place on farms and in villages. The lag in the technology allowed cotton to be established and industrialised before linen. However, the development of steam powered wet spinning by James Kay in 1825 brought about great and almost immediate changes in the Irish flax spinning trade. Hand spinning quickly declined, and the flax spinning trade was industrialised in large Belfast mills. These developments not only spelt the end of the hand spinning of flax, but also stifled the further development of the Irish cotton spinning trade.

The paradox in this was that although cotton was probably the flag ship industry of the industrial revolution, because it was in that industry that spinning and weaving were first mechanized. Up until 1750, unlike linen, wool and silk, the production of cotton was not mechanized at any stage. Where water powered [fulling](#) mills had been around for hundreds of years, and water power was being adapted to the production of linen from the late 17th centuries and early 18th centuries, with the introduction of water powered [scutching](#), washing and [beetling](#) mills.

The sluggishness of the Irish economy in the first half of the nineteenth century is thought by many to be the result of the abolition of protective tariffs in the decades after the [1801 Union](#). By the terms of the [Union](#), Ireland and Britain were to be a single free-trade area. However, it was agreed that some Irish industries needed time to adjust. Accordingly, it was arranged that there should be a 10% duty on some eighteen products entering Ireland until 1821. These included leather, glass, and furniture. Woollen and cotton goods got even more favourable terms. In 1820, these duties were reviewed and the Government first suggested that the 10% rate should remain until 1825, then be



phased out, and finally abolished in 1840. However, the free traders in the Government had all duties abolished in 1824. Unprotected Irish industries then faced large-scale English competition. From the 1820s there was widespread distress and unemployment in much of the country as industries based on small-scale handcraft gradually gave way to cheaper imported mass-produced goods. Ireland had little coal and no iron so was at a real disadvantage during the industrial revolution, and Britain's increasing dominance of the Irish market owed much to quicker and cheaper transport. The invention of the [Hargreaves spinning Jenny](#) encouraged the development of a cotton trade in the 1770's. It was centred mainly in the north-east of Ireland where many of the techniques already learnt in the production and sale of linen could be applied to cotton.



However, the cotton era in [Ulster](#) was short-lived. In the early 1820s, the abolition of protective tariffs left the industry open to competition from Lancashire, on top of this there was a general demise in the United Kingdom cotton industry. Protected by tariffs and based almost entirely on the home market, the industry faced a succession of crises in the early 1820s. Then in 1828, [Mulhollands](#), one of the largest cotton mills in Belfast burnt down. The industry never recovered, but time proved this to be a blessing in disguise.

Meanwhile, linen which was being promoted by the [Linen Board](#) (with a government grant of £20,000 p.a.) was being worked mainly on small farms by farming families. They tended to be more interested in the spinning and weaving than the flax cultivation, as it occupied female members of the family, scutching and spinning, all year round. With male family members occupied by weaving at quieter times of the farming year. The Linen Board did not sufficiently promote good practices in the growing of flax, and hence it was of very poor quality, when compared to flax from continental Europe. Therefore with the ending of the Napoleonic wars in 1815, and Europe opening up to trade again, the Irish could not compete with competition from areas such as Belgium and Bielefeld. The linen trade began to decrease, and it was only [kept afloat by encouragement from English flax-spinners](#) who wanted to maintain their trade with Irish weavers. However, they had a very difficult task as there was considerable resistance to machine spun flax as the Irish were rightly very worried it would put an end to hand spinning. However, by offering incentives such as extended credit terms they got the weavers to start using machine spun yarn. Once the Irish weavers realised it's superior quality, and their resultant increases in production there was no going back.

Rather than reinvest in cotton the [Mulhollands](#) investigated the possibilities of moving into linen. They saw that large amounts of Irish flax were being exported to England to be machine spun. Much of this was then re-exported to Ireland for use by the hand weavers. They visited the North of England and saw James Kays process, which they brought back to Belfast. After a small-scale trial in 1828-29 [T. & A. Mulholland](#) opened an 8000 spindle flax-spinning mill in Belfast in 1830. Although they may [not have been the first](#) to see the opportunity, it was the most significant as this was one of the biggest

mills in Belfast - The York Street Mill. The project was a magnificent success, and there was a move by other troubled cotton spinners, as well as other businessmen, into flax spinning. By 1850 linen spinning in Belfast was very much greater than cotton spinning. The York Street Mill by 1856 had 25,000 spindles and was probably one of the largest mills of its type in the world, possibly second only to [Marshall's of Leeds](#). This concentration of mills, mainly in Belfast, put many of the traditional hand spinners out of business. With this it also caused many of the weavers to move into the northeast to be nearer supplies of yarn.

With the devastation caused by the [Great Famine in Ireland](#), it forced the large industrial spinners to look for alternatives to the hand loom weavers. Powerlooms were being improved and there was at first a slow movement in that direction. However, Irish linen experienced somewhat of a revival during the [American Civil War](#) when there were disruptions to the supply of cotton reaching Europe. There was a shortage of cotton goods, known as the [Cotton Famine](#), on the world market, and Irish linen took up the slack. There was significant expansion in the industry, and for many enormous profits. Even after the end of the Civil War in 1865, the momentum was maintained and companies continued to flourish until 1873. Belfast was by then the largest linen producing area in the world, and this continued to be the case up until [WW1](#) the city well earned the nickname of [Linenopolis](#). As Manchester was the cotton capital, Belfast was the linen capital of the British Empire.

As industrialisation developed and grew in the 19th century, conditions for the [employees](#) often worsened. Legislation was introduced slowly, at first to help those under 18. Later working hours were reduced. Despite the hardships there was a special camaraderie, and for many it helped them through these hard times, and sometimes even led them, years later, to remember their time in the mill with some fondness.

## **20th Century**

However, with the revival of the cotton industry, and its ability to produce low cost goods, and an Irish linen industry with over capacity. Companies inevitably began to get into difficulties, and there were many closures. The industry fought back with increased efficiencies, and new developments. There was a short pick up in fortunes in the early 20th century, but with the introduction of [man made and synthetic fibres](#), and rising costs, the situation became very difficult for the mass production of Irish linen. Many old companies could not adjust to the new challenges. They continued trying to sell to their traditional markets.

The industry enjoyed a rebirth during WW2, and was also in demand during the Korean War of 1950-53. However, thereafter it declined rapidly.

With cheaper alternatives there was a reduction in demand for the lower quality, more bulk produced Irish linen, from hotels, hospitals and other institutions. Only the better quality linens were being retained by the very top hotels, restaurants and airlines who wished to use the Irish linen brand to make a statement, and differentiate themselves from

their cheaper competition. However, these better quality linens were not being taken up by volume users.

Sales also held up to a large extent in certain sectors of the retail market, and suppliers had to be alert to the specific requirements of these niche markets.

However, [Irish linen](#) was never completely supplanted. Its unique qualities of comfort, drape and its distinctive appearance kept it a niche in the luxury market, and its unique physical properties maintained its use in industrial textiles. These advantages were well backed up by the confirmed quality, and the confidence and equity established in the [Irish linen](#) brand.

In the latter part of the 20th century there were increased efforts to promote linen to the apparel trade. At this time there was a growing reaction against the synthetic fibres, as they had been probably over used for apparel in the 1960's. In the 1970's the promotional work started to pay dividends, and by the late 1980's linen was in general use in the top of the range apparel in most countries in the developed world. Linen in apparels was by now far outstripping its traditional household textiles and industrial sectors.

## **21st Century**

Irish linen is still woven today in the same traditional areas, and by descendants of those who have worked in the industry, and passed down skills, that have been learned over many hundreds of years.

Today the Irish linen industry is very much smaller than it was in the past, because competition at the lower end of the market, for more every day linens, has long since been won by cheap products from low cost countries. The Irish linen companies that remain weaving in Ireland focus on the quality end of the market, and on trying to give the customer more precisely what they want.

After all this history Thomas Ferguson is the very last Irish linen damask weaver left weaving traditional household linens, others remain weaving plain apparel linens.

However, as long as there are discerning customers with an appreciation for the craft, quality, and heritage, and brand of this great natural product; it is here to stay.

**"I shall do all that in me lies to discourage the woollen manufacture in Ireland, and to encourage the linen manufacture there, and to promote the trade of England."**

## **King William III**

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