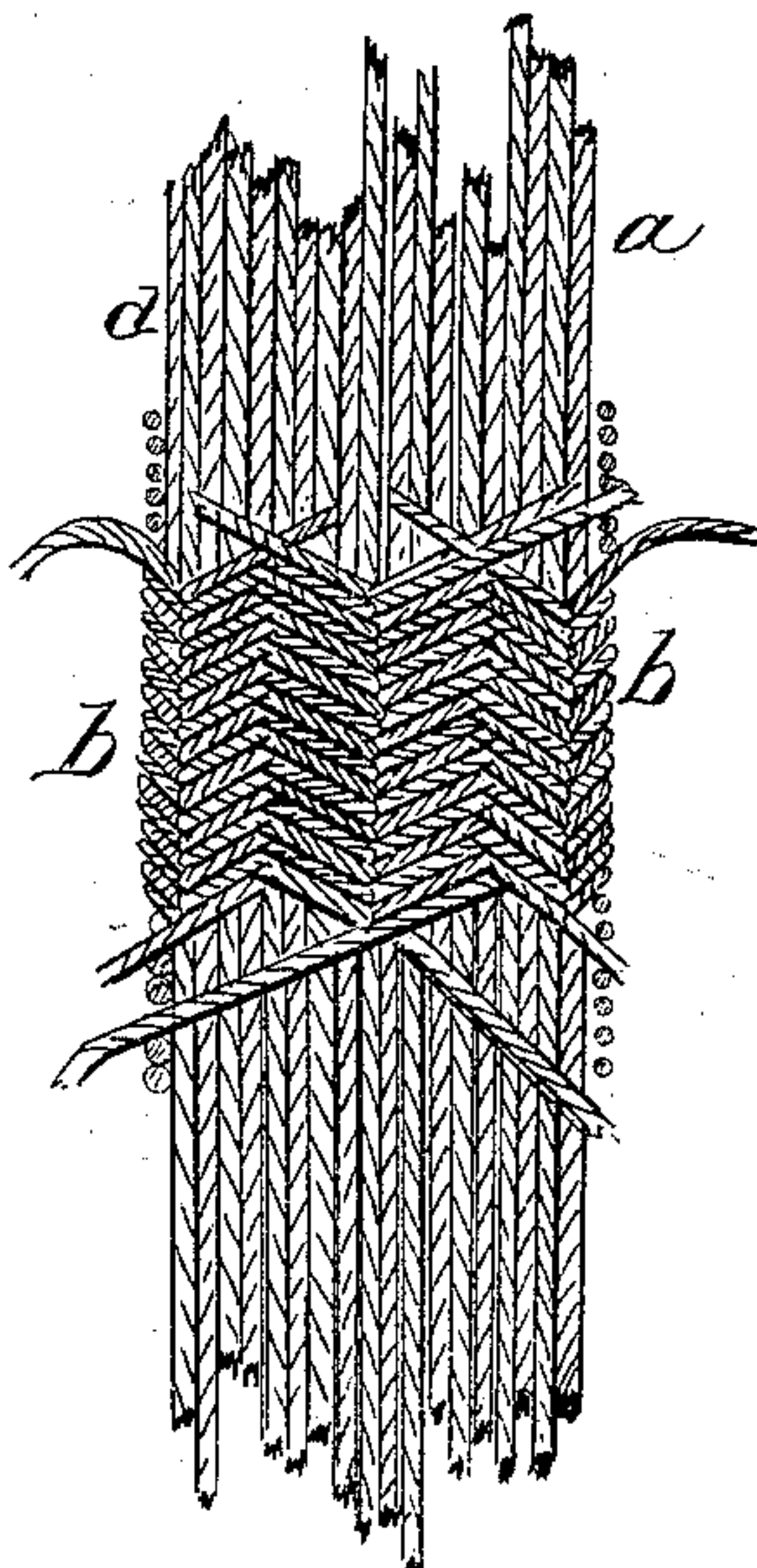


*L. G. Yon,*  
*Cord Machine.*

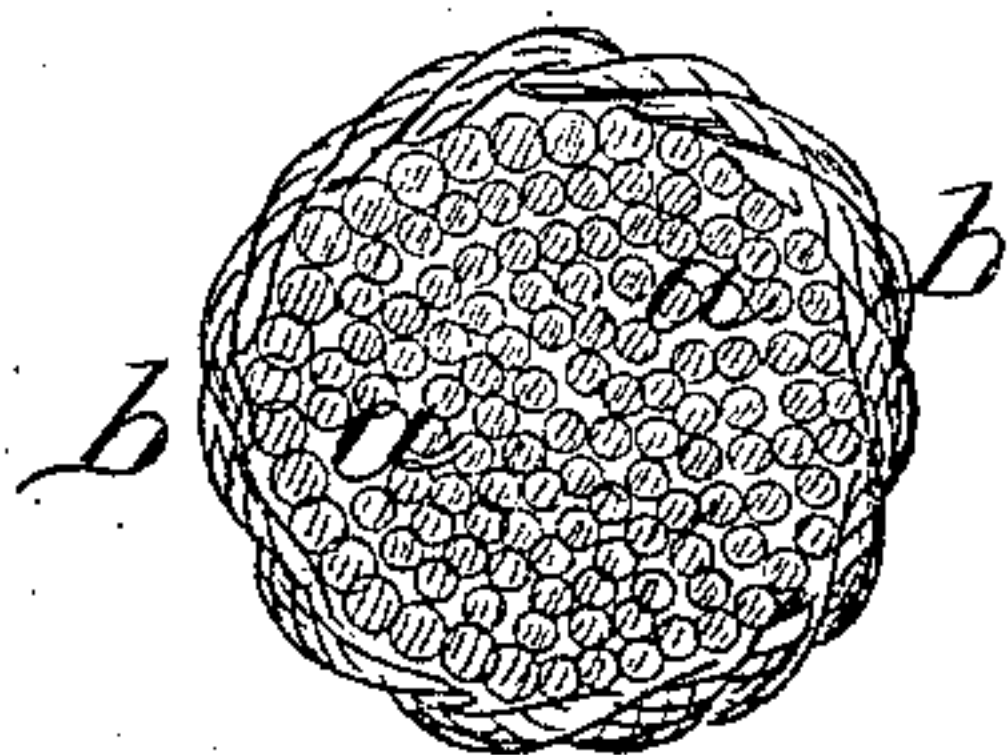
*No. 91,995.*

*Patented June. 29. 1869.*

*Fig: 1*



*Fig: 2.*



*Witnesses:*

*C. Praetig*  
*Wm. A. Morgan*

*Inventor:*

*L. G. Yon.*

*Wm. A. Morgan*

*Attorneys:*

# United States Patent Office.

LOUIS GABRIEL YON, OF PARIS, FRANCE.

*Letters Patent No. 91,995, dated June 29, 1869.*

## IMPROVEMENT IN ROPES, CORD, &c.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that I, LOUIS GABRIEL YON, of Paris, France, have invented certain new and useful Improvements in Ropes, Cords, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side view of my improved rope.

Figure 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of making ropes and cables, so as to utilize the material to the best advantage.

Heretofore, ropes were made by twisting a certain number of threads of hemp, or other material, so as to form strands, that are laid spirally around a core to form the cable or rope.

The successive spiral twistings of the fibres will shorten the same to such an extent that a length of six feet of fibres will yield but four feet of twisted product, which difference is yet increased for large-sized cables.

Part of the resistance of the fibres being utilized in the successive torsions, less resistance for longitudinal strain will remain.

As, furthermore, all the fibres are not working evenly, the outer ones being more strained than the inner, the rope is more apt to break. This can frequently be noticed by unwinding the cords of cables that were but little used. Numbers of broken fibres and strands will be found therein.

The present construction of ropes is, therefore, defective, as it requires a greater length of yarn, and reduces the strength.

My process of manufacturing ropes, cords, and cables is as follows:

To make a cable of any diameter, I take a number of rope-yarns, or strings, *a a*, which I stretch evenly, disposing and placing them, without any torsion, into bundles parallel to one another.

This operation is effected either by manual or mechanical labor.

Around this cylindrical bundle, I weave, in any suitable manner, a suitable layer, *b*, of rope, whereby I obtain ropes and cables, which cause a great saving of yarn, as from one yard of rope-yarn bundle, as aforesaid, I obtain one yard of rope.

Another advantage is, that I can dispense with the core, and still obtain greater strength, as all the fibres, when strained, are working together in the direction of the strain, in which there is also their greater resistance.

If, by frequent use, the outer layer *b* should be worn, it will be easy to fit a new one to the same cable.

The rope-yarn bundles *a* may, if desired, be separately bound together in suitable manner.

The same system may be adapted, also, to iron, brass, or other ropes and cables.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

As a new article of manufacture, ropes or cables, constructed as described, of the straight inner threads *a*, bound together by the outer woven layer of thread *b*, as herein described, for the purpose specified.

L. GABRIEL YON.

Witnesses:

C. DEMOS,  
A. GUION, JR.,  
J. U. ZUST.