

No. 679,695.

Patented July 30, 1901.

G. H. ELLIS.

FLAX SLIVER.

(Application filed Feb. 23, 1901.)

(No Model.)

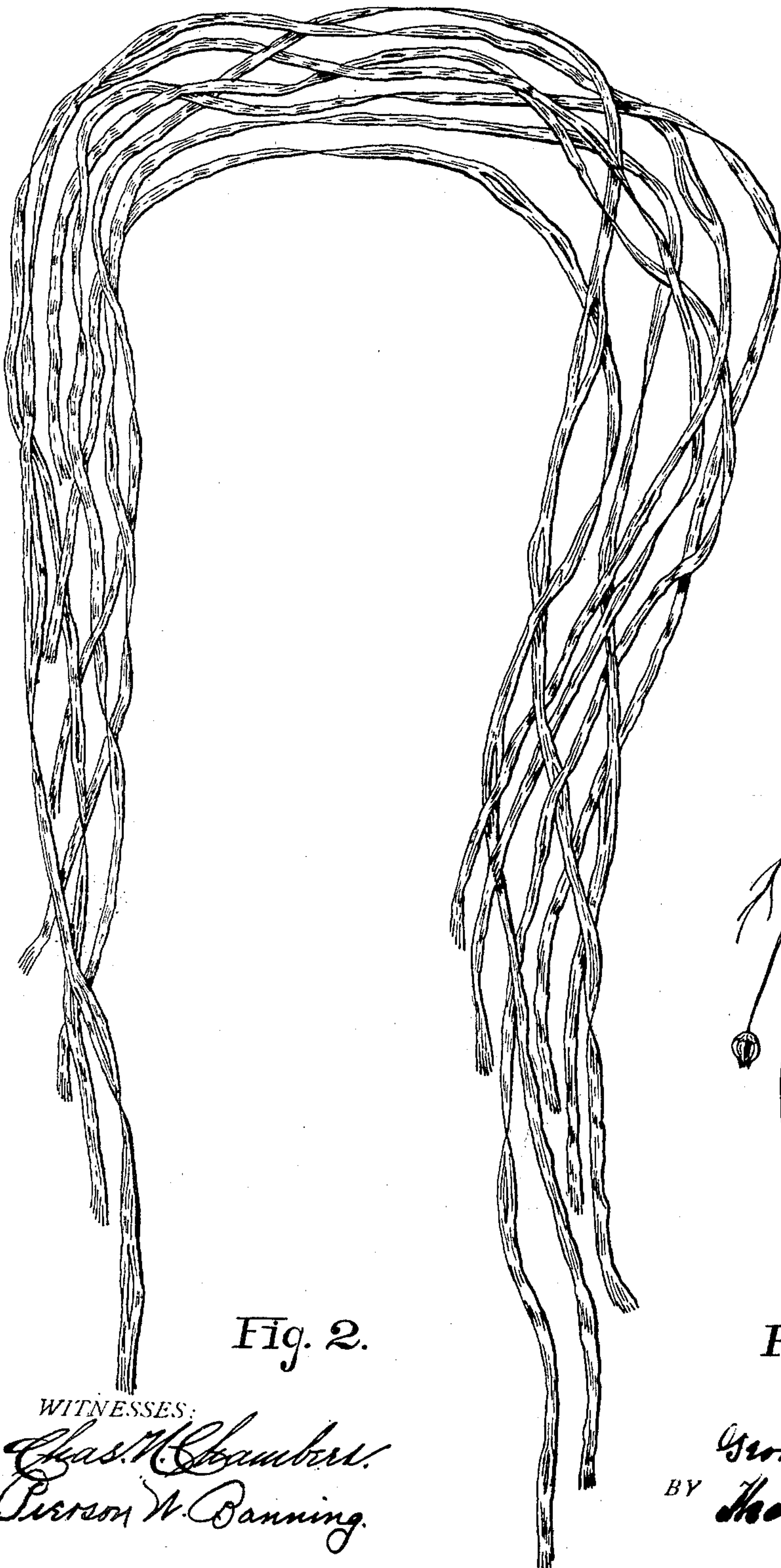


Fig. 2.

WITNESSES:
Chas. M. Chambers.
Person W. Banning.

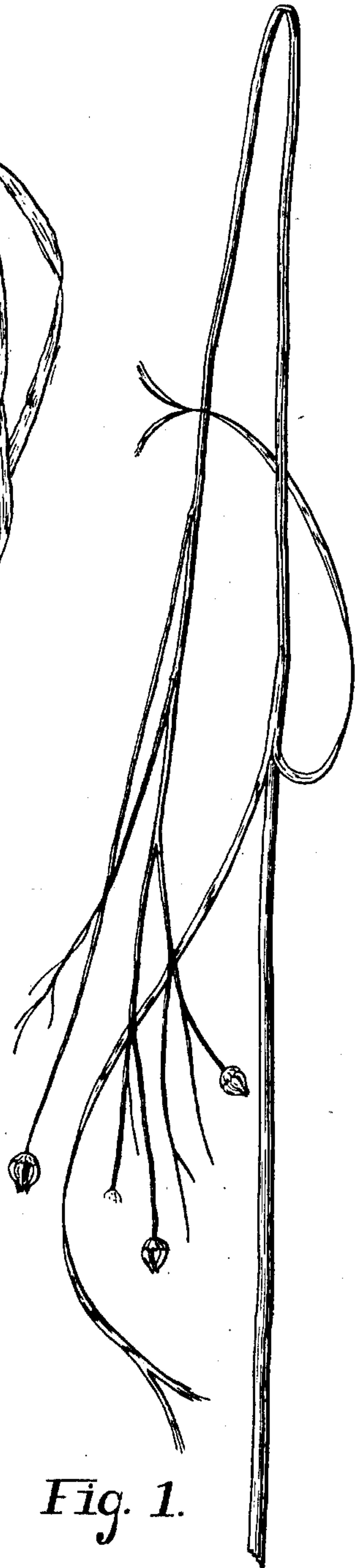


Fig. 1.

INVENTOR.
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UNITED STATES PATENT OFFICE.

GEORGE H. ELLIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM DEERING,
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FLAX-SLIVER.

SPECIFICATION forming part of Letters Patent No. 679,695, dated July 30, 1901.

Application filed February 23, 1901. Serial No. 48,616. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE H. ELLIS, of Chicago, in the county of Cook and State of Illinois, have invented a new Sliver from which
5 Flax Twine for Binding Grain and Similar Purposes May be Spun, of which the following is a specification.

The object of my invention is to avoid as much as possible the separating of the filaments of the cortex of flax-straw, which separation necessarily impairs the strength. It is stated in official Government reports that the cortex of flax-straw when separated to its ultimate extent gives the bast a length of
15 from .197 to 2.598 inches. As a result fiber so short must be well twisted in order to get the greatest strength. This is true to such an extent that flax fiber is not so well adapted for the manufacture of twine for binding
20 grain as some other fibers. In binding-twine as little twist as possible is given in order to avoid kinking while passing from the ball to the holding and knotting devices. By producing a sliver from flax-straw consisting of
25 the cortex in approximately its full length I accomplish a sliver which can be twisted into coarse twines, the fibers having the greatest possible length. If the flax be unretted, then the natural cementing material prevents separation, so that, in effect, I have filaments as long as the straw from which the cortex was stripped. If in decorticating the woody portions are finely broken, the ribbons stripped therefrom may be easily twisted, as the hurds
35 naturally fall away to a large extent.

In the drawings, in Figure 1 I have shown a straw of flax with the cortex partly peeled therefrom. In Fig. 2, which may be considered as mainly diagrammatic, the "ribbons of fiber," as they may be termed, each ribbon consisting of the cortex of a single straw, are shown lapping each other as they do in the
40 sliver I produce.

I produce this sliver by means of a machine

forming the subject-matter of an application 45 filed August 12, 1900, Serial No. 32,824. The sliver forming the subject-matter of this application can be made of either retted or unretted flax-straw, as preferred. In preparing this sliver for binding-twine merely it is found
50 much cheaper to produce it from unretted flax-straw.

I do not consider the ribbons formed by taking the bark from the flax-straws as "fiber" in the ordinary sense of the term, for, on the
55 contrary, in the treatment the bark is not reduced to fiber, but is more in the nature of ribbons, as shown in the drawings, incidentally slightly split in places, but separation avoided as much as possible. 60

I use no cards in preparing my sliver, as carding will defeat my object in proportion to the extent to which such carding is carried. From my sliver a twine for the purposes of binding grain may be made having as few as
65 sixteen turns to the foot, which renders it well qualified for the purpose.

In cases where it is necessary I rotate the can in which the sliver is delivered from the machine which prepares it in order to give a
70 slight twist, so that it can be drawn into spinners without falling apart. When designed for the manufacture of twine for binding grain, I find it not important to remove the epidermis from the cortices proper. 75

What I claim as my invention, and desire to secure by Letters Patent, is—

A sliver from which twine may be spun, consisting of a multiplicity of lapped ribbons of the cortices of flax-straw, substantially as
80 described.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE H. ELLIS.

Witnesses:

CHAS. N. CHAMBERS,
J. F. STEWARD.