

A. H. Hook,

Belting

No. 102268.

Patented Apr. 26. 1870.

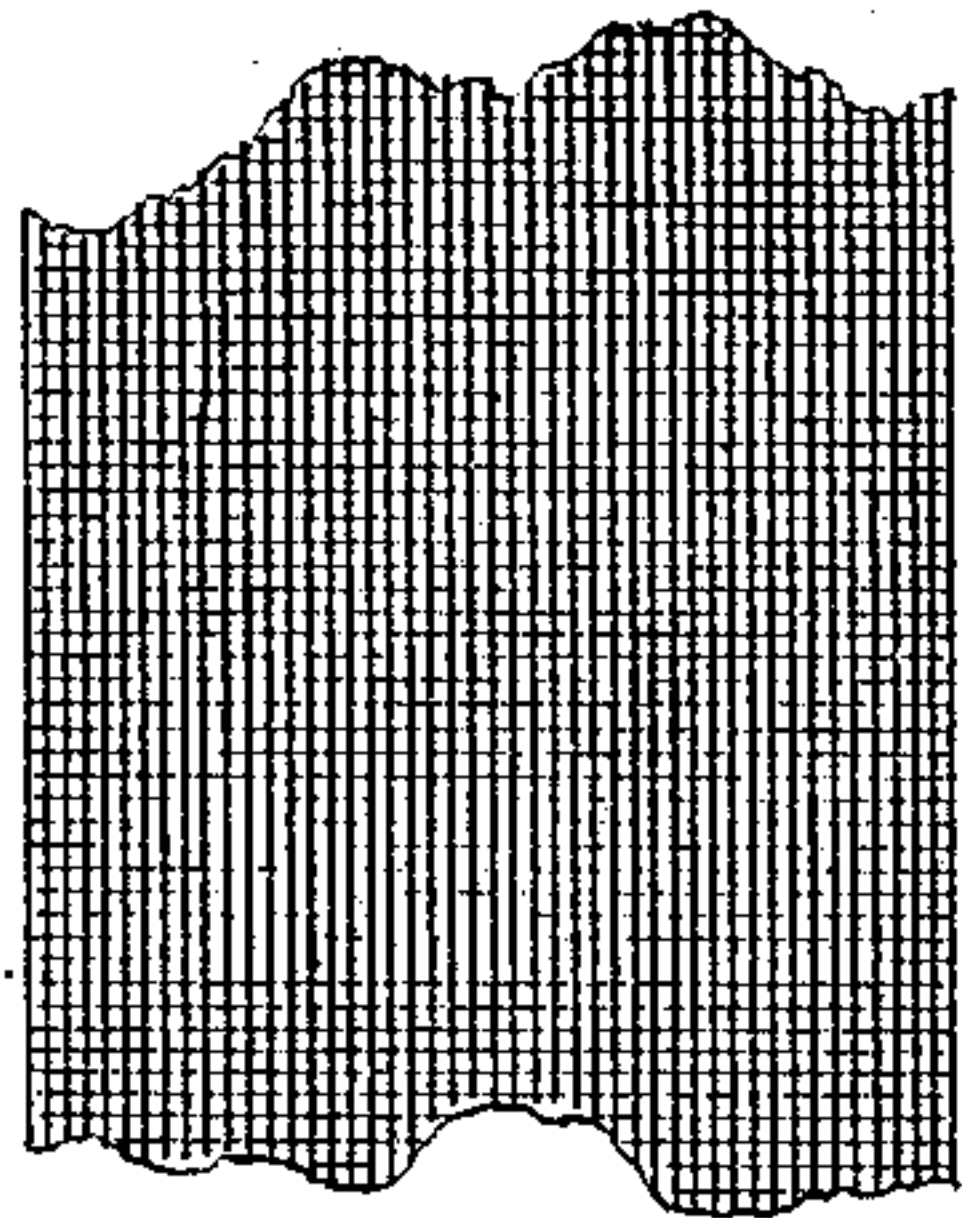


Fig 1.



Fig 2.

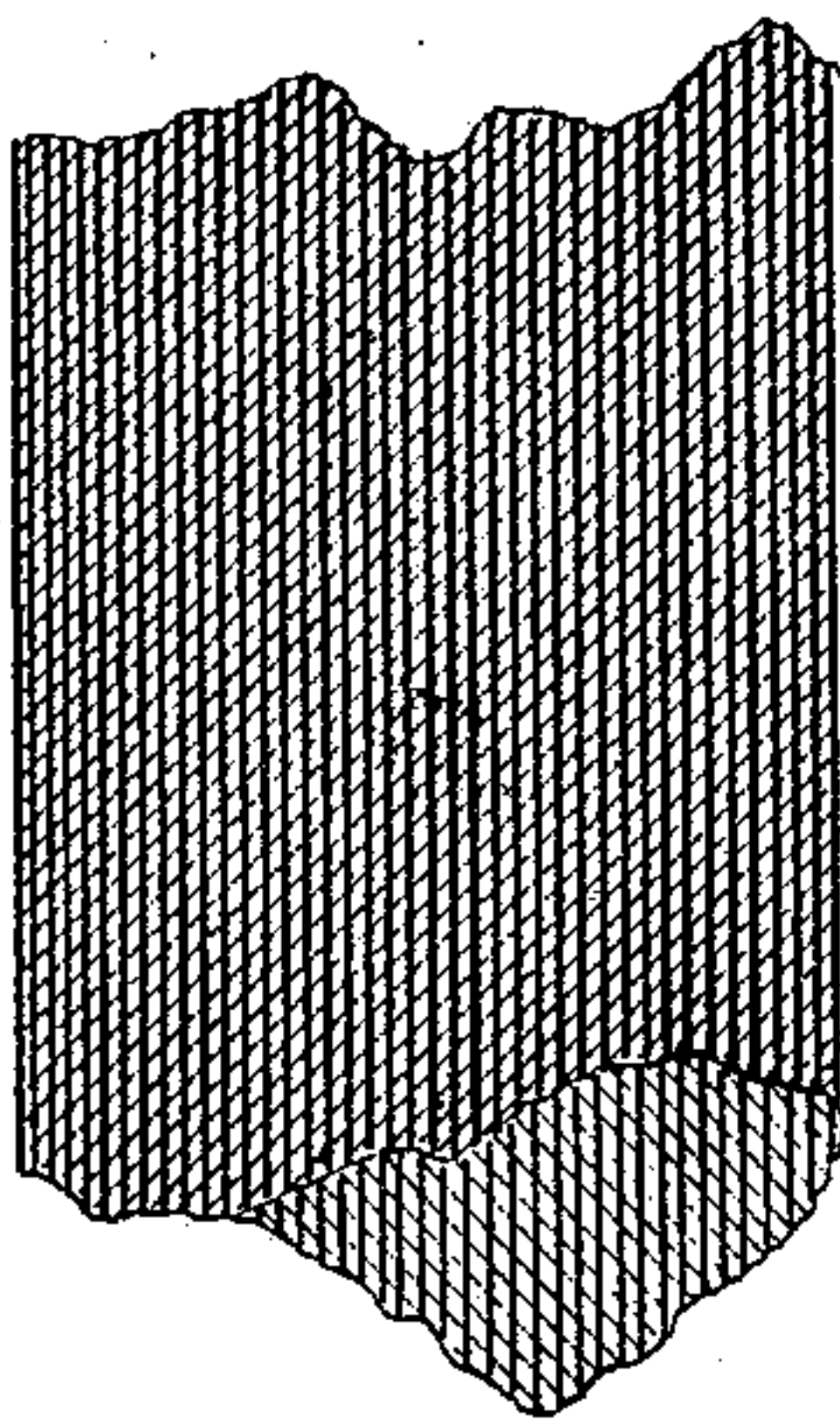


Fig 3.

Witnesses.
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ALBERT H. HOOK, OF NEW YORK, N. Y.

Letters Patent No. 102,268, dated April 26, 1870.

IMPROVEMENT IN THE MANUFACTURE OF INDIA-RUBBER BELTS.

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

Be it known that I, ALBERT H. HOOK, of the city, county, and State of New York, have invented a new improvement in the Manufacture of India-Rubber Belts, with the view of increasing the strength of the belt, and that the following is a clear and exact description thereof, reference being taken to the annexed drawings, of which—

Figure 1 is a view of an ordinary three-ply belt as it is usually made.

Figure 2, a cross-section thereof.

Figure 3 is a view of my improved belt.

In all the figures the warp of the cloth is shown in black lines and the filling in red.

Rubber belts are now being made of cloth in which the warp is at right angle with the filling. This cloth is covered with rubber in calenders, and cut into strips parallel to the threads of the warp. The outside strip is double the width of the required belt, and is folded up in a manner as shown in fig. 2 in cross-section, and for a three-ply belt one strip, of the width of the belt, and cut also in the direction of the warp, is placed inside the folds of the outer strip, and the whole is then caused to adhere together.

For a four-ply belt two strips are placed between the folds of the first strip, and so on. After the belt is so formed it is placed in a heater and cured.

It is self-evident that a fabric of this description depends for its strength altogether upon the warp, which runs in the direction of the belt, while the filling, which

runs at right angle to the said warp serves merely to hold the various threads of the warp together.

The object of my improvement is to cause the threads of the filling to sustain a certain portion of the strain to which the belt is subjected, and this I accomplish by weaving the cloth of which the said belt is composed in a diagonal loom, or by stretching cloth woven in the ordinary manner with square filling, diagonally, so that the filling shall cross the warp at an angle of forty-five degrees, more or less, as shown in fig. 3. This cloth is then covered with rubber and cut into strips parallel to the warp and folded in the same manner as above described.

It will be seen at once that the filling in the two flaps of the outer strips must run at right angles to the filling in the front part of the said outer strip, and care must be taken to place all the inner strips, if there are any, also in reversed directions, causing their fillings to cross each other at right angles. A belt so made cannot tear in two without tearing the warp and all the strands of the filling simultaneously.

Having now described my invention,

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

A rubber belt composed of cloth, the filling of which crosses the warp diagonally.

Witnesses:

ALBERT H. HOOK.

C. A. BROWN,

R. A. ADAMS.