(No Model.)

C. A. SCHIEREN.

MANUFACTURE OF LEATHER LINK BELTING.

No. 377,333. Patented Jan. 31, 1888.

Fig. 2.

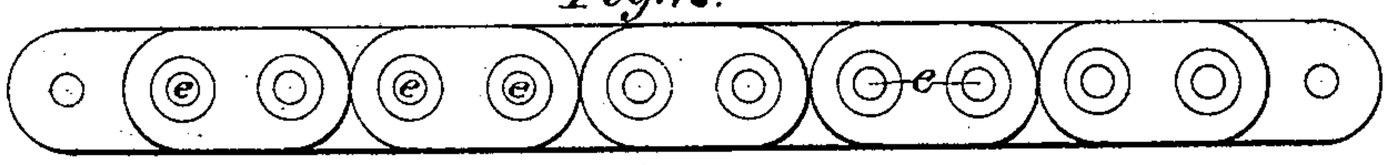


Fig. 1.

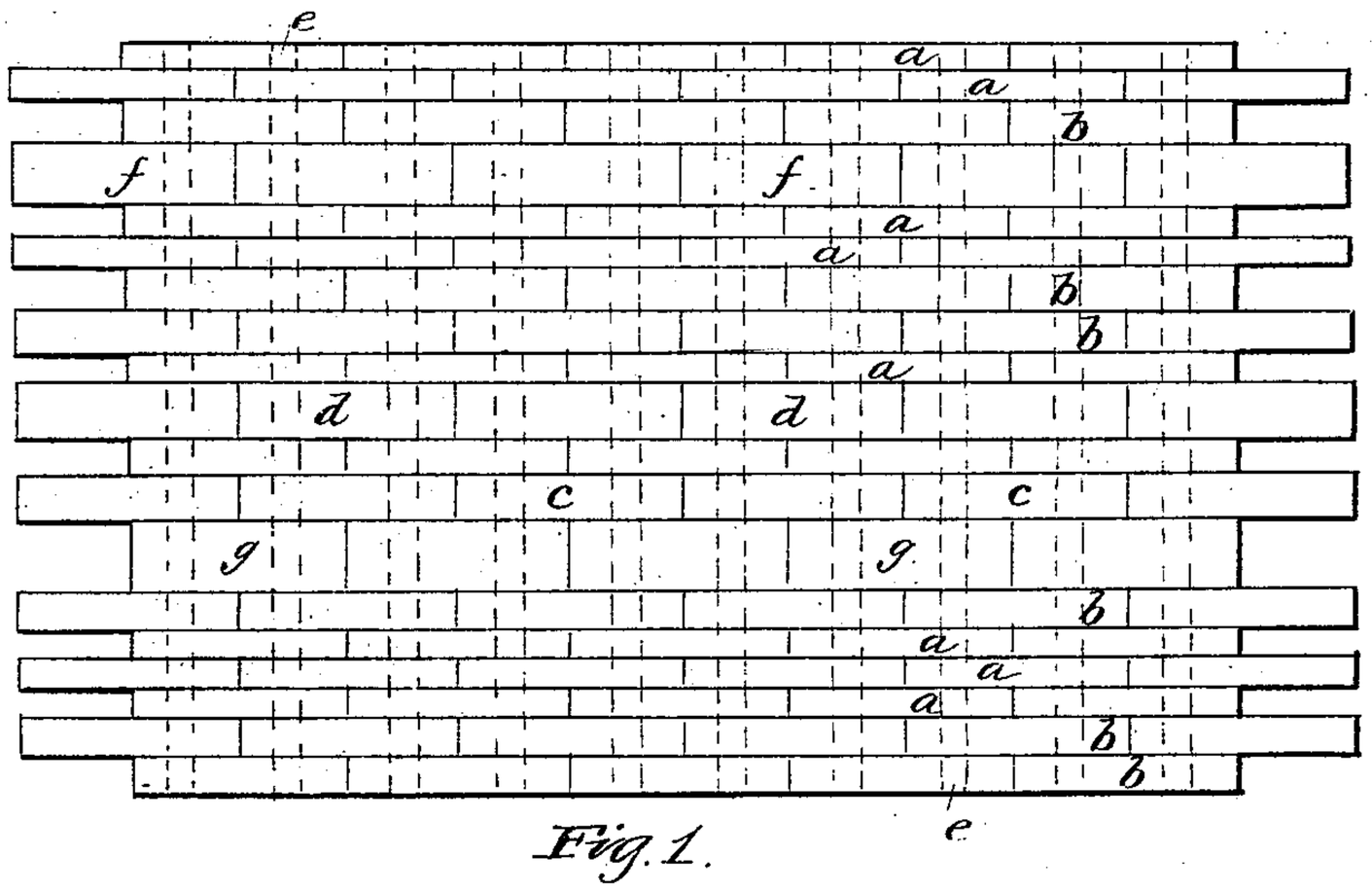


Fig. 3.

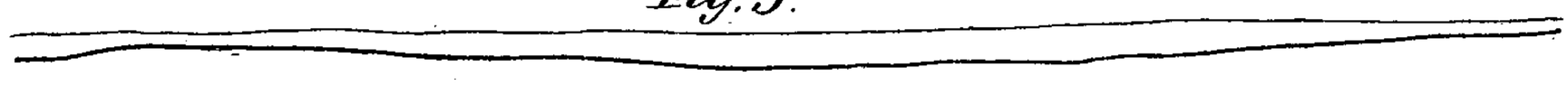
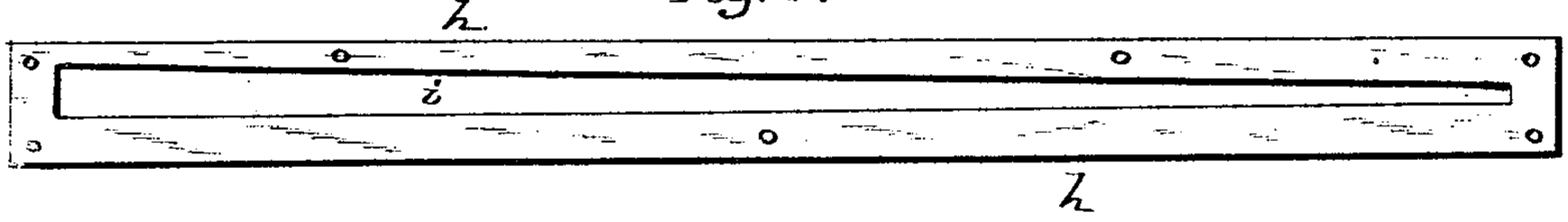


Fig. 4.



Attest:
L. Mc. Bartlett.
M. P. McKee.

Inventor:
Charles A. Schieren.
by F. B. Brock atty.

UNITED STATES PATENT OFFICE.

CHARLES A. SCHIEREN, OF BROOKLYN, NEW YORK.

MANUFACTURE OF LEATHER-LINK BELTING.

SPECIFICATION forming part of Letters Patent No. 377,333, dated January 31, 1888.

Application filed December 1, 1887. Serial No. 256,697. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. SCHIEREN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Method of Making Link Belts; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My improvements relate to machine-belts.

The object of my invention is to produce a driving-belt of leather links united by pins; and in order to make such a belt of uniform breadth I find it necessary to assort the links, (which are stamped from leather of varying thickness,) so that in the completed belt the links of the same thickness will lie in the same longitudinal line or lines of the belt.

Figure 1 is a plan view of a link belt to which my improvements have been applied. Fig. 2 is an edge view of the same. Fig. 3 is a diagram edge view illustrating the varying thickness of a hide of leather. Fig. 4 represents a plan view of a device for assorting leather links.

a a represent a series of links lying in the same longitudinal line of the belt, which are of a uniform thickness.

b b represent another series of longitudinally-lying links of a uniform but different thickness of leather.

c c and *d d* represent other and similarly-arranged links, each series of which is of uniform thickness.

Fig. 3 illustrates in diagram a hide from which the links are or may be stamped of varying thicknesses. Were these links so stamped and put into a common receptacle and taken out therefrom at random without regard to the thickness of the links and so used in the making of a link belt, the result would be that the width of the completed belt would not be uniform and the edges thereof would present a waved and uneven surface. A belt thus made would work with unsatisfactory results, and the pins which unite the joints would be subjected to varying and irregular strains tending to bend and ultimately break them.

By means of my improvements a belt of uniform width is produced, and one in which the pins *e e* (which pass through the belt) are subjected to the least possible strain.

In making link belts from links previously assorted into different series of uniform thicknesses I may use a series of links of the same thickness in the construction of an entire belt. This is possible when I have a large stock of assorted links on hand or the belt required is quite a small one.

The belts may be made of a single section adapted to run on flat or other pulleys, or they may be made of two or more sections lying side by side with break-joints between, whereby they may be adapted to run on crowned pulleys.

My invention consists in first assorting leather links into different series, each of uniform thickness, and then constructing the belt of longitudinal lines of links, each line of which is of a uniform thickness. In carrying out my invention it is immaterial whether each longitudinal line of links be of the same or varying thicknesses throughout the belt.

h represents a plate adapted to be supported upon a table or standard. It is provided with a tapering slot, *i*, and constitutes a device for assorting the leather links. After the links are cut from the stock, they are severally inserted at the wide end of the slot *i* and moved toward the narrower end. At that point where the link is impeded in its passage through the slot is the gage of its thickness, and it is shoved through the slot and falls into the proper receptacle to receive it. Other designs of assorting the links may be employed. In my application filed September 20, 1887, Serial No. 250,251, I show still another device for assorting leather links for belts.

Heretofore links for belting have been made of metal, wood, and paper, and also of a combination of different materials, including leather as an element. In the manufacture of such links from such materials it is a simple and obvious matter to make such links of a uniform thickness. Where solid leather links have been used in the manufacture of link

belting, it has heretofore been the custom to place the cut links (taken at random from the stock on hand) upon the pins, one at a time, by hand, and then rivet them under pressure. Owing to the compressibility of leather, an approximate uniformity of width to the completed belt would result, the irregularities of the several links not being readily apparent upon a casual examination. As a matter of fact, however, this approximate uniformity of width is only obtained by riveting or screwing down the pins under widely-different tensions. Under such conditions there is a want of uniformity in the flexibility of the belt, detracting from its efficiency in use, and the life of the belt is shortened, owing to the undue friction between the sides of the links, where the riveting of the pins is very tight. In addition, there is an unequal wear upon the pins, due to the unequal compression of the links upon them.

By means of my improved method of previously passing the cut links through an assorting device, whereby the links may be placed upon the pins in longitudinal lines of uniform thickness, I obviate the objections which I have above referred to and produce a belt which lasts longer than those made by the usual methods heretofore existing, and which is also more efficient than such belts.

I do not claim the utilization of links having leather facings or links of any material other than leather, for the reason that such links, being made of a manufactured material, can be made of uniform thickness, and my process would not therefore apply. My method is intended solely for the manufacture of belting made from leather stock. As this is a natural product of varying thickness, I have found that to utilize it for link belting a much superior belt may be made by the application of my new method.

By means of my method of treating the leather links by assorting them into groups of different thicknesses I obtain a belt in which the links of uniform thickness lie in one or more longitudinal lines of the belt. This method of construction also enables me to make a link belt from leather strictly uniform, both in width and in flexibility of the joints.

What I claim is—

1. The method herein described of making leather-link belts, which consists, first, in cutting the links from leather stock; secondly, passing said links through an assorting device, whereby the links are grouped into series of different thicknesses, (the thickness of the links of each series being uniform;) thirdly, assembling the links into a belt upon longitudinal lines of links, each of uniform thickness, and, finally, uniting the links by pins, substantially as set forth.

2. That improvement in the manufacture of leather-link belting which consists in separating the prepared links into independent groups by passing them through an assorting device, whereby the links of the same thickness in the completed belt will lie in the same longitudinal line or lines of the belt, substantially as set forth.

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

CHAS. A. SCHIEREN.

Witnesses:

F. A. M. BURRELL,

CHAS. J. SCHLEGEL.