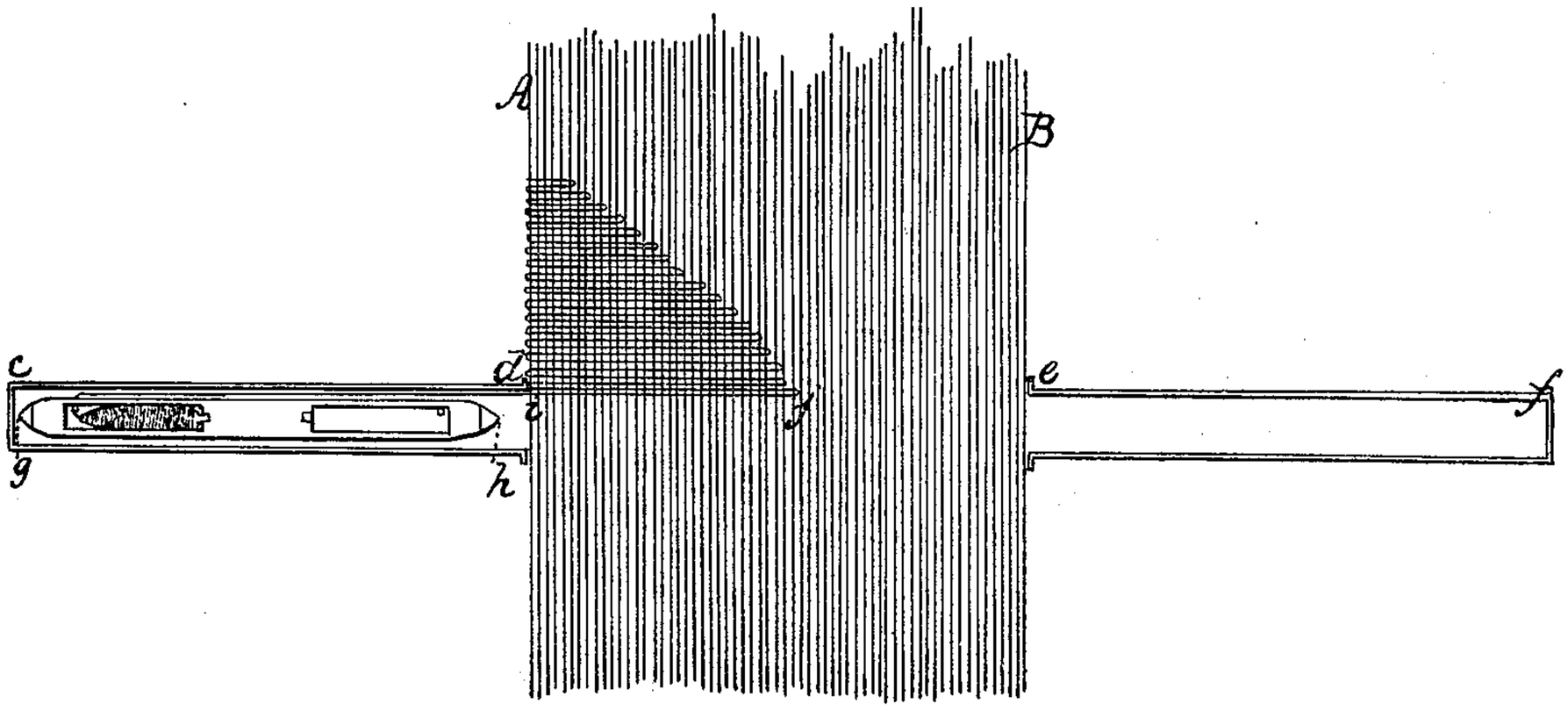
B. J. Goulliaud.

Irregular Weaving.

No. 37,546. Patented Jan. 27, 1863.



Witnesses.
Albert Koch
Geo Hutton

Inventor.
B. J. Goulliaud
per
D. F. O.

UNITED STATES PATENT OFFICE.

B. J. GOULLIOUD, OF PARIS, FRANCE, ASSIGNOR TO SOLOMON AND ADOLPH OTTENHEIMER, OF NEW YORK, N. Y.

IMPROVEMENT IN WEAVING CORSETS.

Specification forming part of Letters Patent No. **37,546**, dated January 27, 1863.

To all whom it may concern:

Be it known that I, BENOÎT JOSEPH GOULLIOUD, of Paris, in the Empire of France, have invented, made, and applied to use a certain new and useful Improvement in Means for Weaving Corsets and Similar Articles; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the annexed drawing, making part of this specification, wherein I have shown a plan of my shuttle and shuttle-boxes to fully illustrate the nature of my said invention.

In weaving stays, corsets, or similar articles it is necessary to introduce gores or gussets, to make the fabric woven of greater length at the edges than at the middle, so that such corsets will be of a shape to fit the person. It will be understood that by means of a Jacquard loom the warps can be so raised and depressed that the weaving will only take place at one side, and that a gore or gusset shape can be formed in the fabric, and then a gore or gusset can be woven on the other side of the fabric, or the weaving can take place all across the fabric. When the weaving is only one side of the fabric, the ordinary shuttle would leave a loose thread in its travel across the warps, that are stationary, because the shuttle would not travel sufficiently beyond the side where the weaving was being performed to draw up the slack thread left on the side where the weaving was not being performed.

The nature of my said invention consists in a peculiar lay and shuttle-boxes combined with a shuttle that delivers its thread at or near one end, and is in length about one-third of the breadth of the lay, whereby I am enabled to weave gussets or gores without any slack thread being left, because the length of the shuttle bears such a relation to the entire breadth of the lay that little or no thread will be drawn off the bobbin when the shuttle is thrown in one direction. Hence the weaving can be at one edge only of the fabric to form a gore or gusset, or the weaving may be all across the fabric.

In the drawing, A B represents the warp of the fabric being woven. *c d* is the shuttle-box at one side, and *e f* the shuttle-box at the other side. *g h* is the shuttle. I have shown the same as formed with two mortises or openings for the reception of the bobbin or cop. The red line represents the weft or filling thread.

The shuttle is to be propelled as usual, and the shuttle-boxes are formed in any well-known manner. The length, however, of the shuttle and of each shuttle-box is about one-third of the entire breadth of the lay, so that the shuttle itself will reach from one box to the other, or nearly so. The filling-thread is led out at or near one end of the shuttle. Hence the said point of delivery is contiguous to the goods when the shuttle is in one box, and distant the entire length of the shuttle (which equals the width of the goods) when the shuttle is in the other box. In weaving all across the fabric the filling-thread is given out but little as the shuttle moves in one direction, but when it moves in the other direction the filling-thread is drawn out during almost the entire travel of the shuttle; or, in other words, when the shuttle is in one box there is nearly as much filling-thread drawn out as is required at the next throw of the shuttle, and when the shuttle is in the other box there is only a short length of weft reaching from the end of the shuttle, contiguous to the cloth, to the selvage.

We will now suppose that a gusset or gore is to be woven on the left side of the fabric. The filling-thread passes out at the left end, *g*, of the shuttle. There is therefore as much length of thread between *g* and *i* as the width of the fabric. Hence when the shuttle is thrown into the box *e f* the thread is not drawn out of the shuttle, but as the shuttle is thrown back into the box *c d* the thread is drawn out a length corresponding to the distance *i j*, and the gusset-selvage is formed at the points *i* and *j* without slack thread being left at either point; and it will be apparent that there would not be any slack filling-thread left at either selvage of the gusset, whether the warp detained said filling only at the very edge, or whether the weaving extended entirely across the fabric.

When gores or gussets are to be woven on the right side of the fabric, the weft-thread is to be passed out at the right end, *h*, of the shuttle from a bobbin introduced in the mortise at that end, or the shuttle itself might be

turned over to bring the point of delivery of the thread at the end *h*.

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

A lay and shuttle-boxes formed substantially as specified, in combination with a shuttle that delivers its thread at or near one end, and is in length about one-third of the breadth of the lay, whereby the shuttle when thrown in one direction shall cause little or no thread to unroll from the bobbin, for the purposes and as specified.

In witness whereof I have hereunto set my signature this 9th day of April, 1862.

B. J. GOULLIOUD.

Witnesses:

ALBERT KOCH,

GEO. HUTTON.