

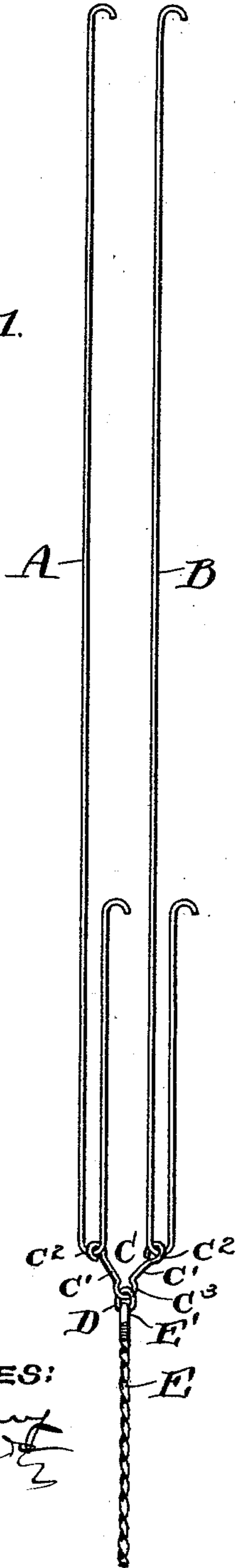
(No Model.)

I. HILLAS.
JACQUARD MECHANISM FOR LOOMS.

No. 497,879.

Patented May 23, 1893.

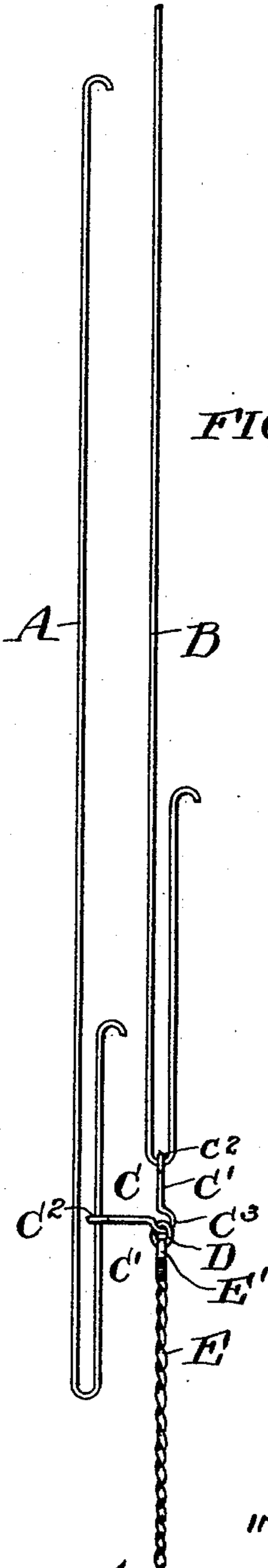
FIG. 1.



WITNESSES:

Henry D. ...
Douglas Stewart

FIG. 2.



INVENTOR:

Ira Hillas
by his atty
Francis J. Chambers

UNITED STATES PATENT OFFICE.

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JACQUARD MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 497,879, dated May 23, 1893.

Application filed December 14, 1892. Serial No. 455,115. (No model.) Patented in England May 20, 1889, No. 8,326.

To all whom it may concern:

Be it known that I, ISAAC HILLAS, a subject of the Queen of Great Britain, residing at Springfield, Morley, near Leeds, England, have invented a certain new and useful Improvement in Jacquard Mechanism for Looms, (for which I have already secured Letters Patent of Great Britain, numbered 8,326, dated May 20, 1889,) of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to Jacquard apparatus, and particularly to that class of such apparatus known as double-lift jacquards, in which a single neck cord is connected with and actuated by two of the Jacquard hooks or wires.

The object of my invention is to obviate the wear on the neck cord, and the sudden jerks and strains incident to the methods of attaching the neck cords to the hooks heretofore generally employed.

The novel features of my invention which I desire to protect by Letters Patent will be found more specifically set out in the claims appended to this specification.

The nature of my invention will be best understood as described in connection with the drawings in which I have illustrated it in the best form known to me, and in which—

Figure 1, shows two hooks of the jacquard with my improved connection with the neck cord, and, Fig. 2, shows the same parts with one of the hooks raised.

A and B indicate two hooks of the jacquard which are to be secured to the same neck cord indicated at E.

C, is a link preferably formed of bent wire, and having at its ends eyes, C² C² by which it is loosely pivoted on the ends of the hooks A and B. The best construction of the link C, is that shown in which it is formed with two arms C' C' substantially at right angles to each other, and of a length, which will as indicated in Fig. 2, enable one arm C' to extend down in line with a raised hook, while the other extends over to the other hook, but without pulling or drawing it toward the hook

in operation. The neck cord E, should be attached to link C at its center and for that purpose I form a bend C³ in the loop to which the neck cord can be directly attached, but preferably I attach the cord by a link D which is made of metal loosely pivoted in the bend C³ and adapted to have the cord E secured to it as shown at E'.

Heretofore it has been customary to connect two Jacquard hooks to the same neck cord, but this connection has been made in such a way, that, on the lifting of the Jacquard hooks the neck cords were suddenly raised, and on account of these sudden strains often gave way, causing delay and inconvenience. By my arrangement however, in which the link supporting the neck cord is pivotally connected to the Jacquard hooks no such sudden jerks occur and there is substantially no rubbing or friction on the neck cord. Thus as shown in the drawings, when the link C is raised by the lifting of one of the hooks, as B, it turns, into a position where the cord is substantially in line with the hook, as shown in Fig. 2, and the link slides on the hook not raised, and by this turning and sliding movement all sudden strains are done away with.

I am aware that it is not new with me to connect two hooks to one neck cord by a T piece in the manner for instance, shown, in English Patents No. 1,629 of 1873 and No. 1,859 of 1876, but in these prior constructions the T piece is precluded by guides from turning on the hooks and this turning action is an essential feature of my construction.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination in a Jacquard apparatus of two hooks or wires and a link C loosely pivoted on each hook so as to freely turn and slide on either hook, said link being adapted to support a neck cord at a point intermediate to its pivotal connections.

2. The combination in a Jacquard apparatus of two hooks or wires and a link C, having arms C' C' set at an angle to each other, said arms being loosely pivoted, one to each hook, so as to freely turn and slide on either

hook, said link C being adapted to support a neck cord at a point intermediate to its pivotal connections.

3. The combination in a Jacquard apparatus of two hooks or wires, a link C having
5 arms C' C' set at an angle to each other and loosely pivoted at their ends to the respective hooks, said link having also a bend C³ at the

junction of its arms and a link D loosely pivoted in bend C³ and adapted to be connected to
10 with a neck cord.

ISAAC HILLAS.

Witnesses:

EDWD. S. SWAIN,
L. M. LENTZ.