

(No Model.)

2 Sheets—Sheet 1.

B. S. TAYLOR & C. HERITAGE.
STOP MOTION FOR LOOMS.

No. 520,277.

Patented May 22, 1894.

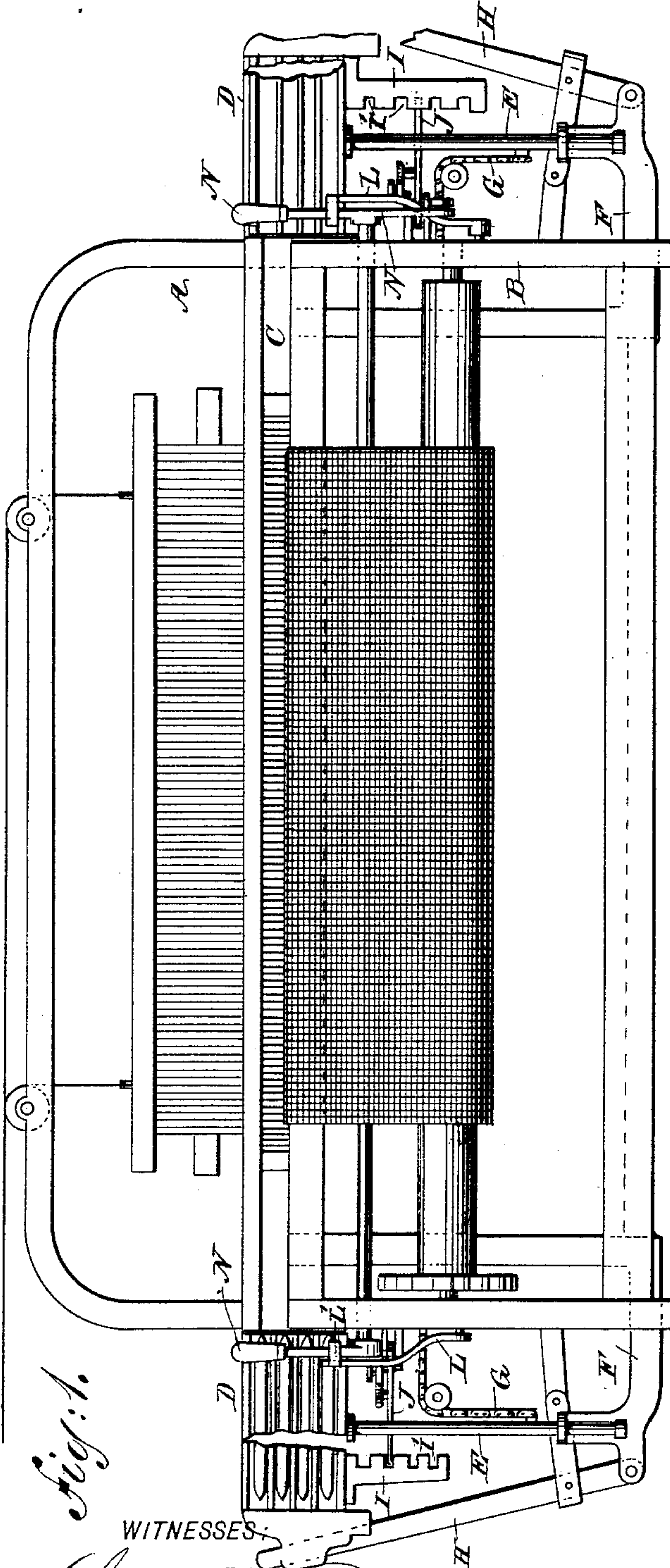


Fig. 1.

WITNESSES:

Chas. Vida.
G. Sedgwick

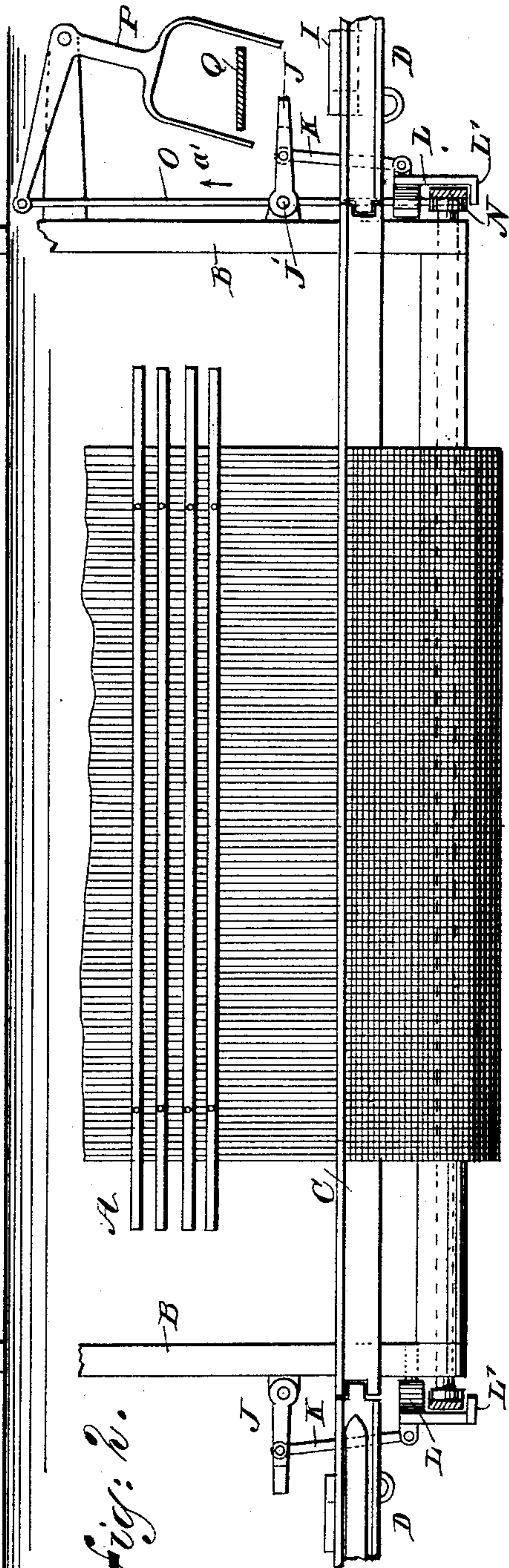


Fig. 2.

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BY C. Heritage
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ATTORNEYS.

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Fig. 4.

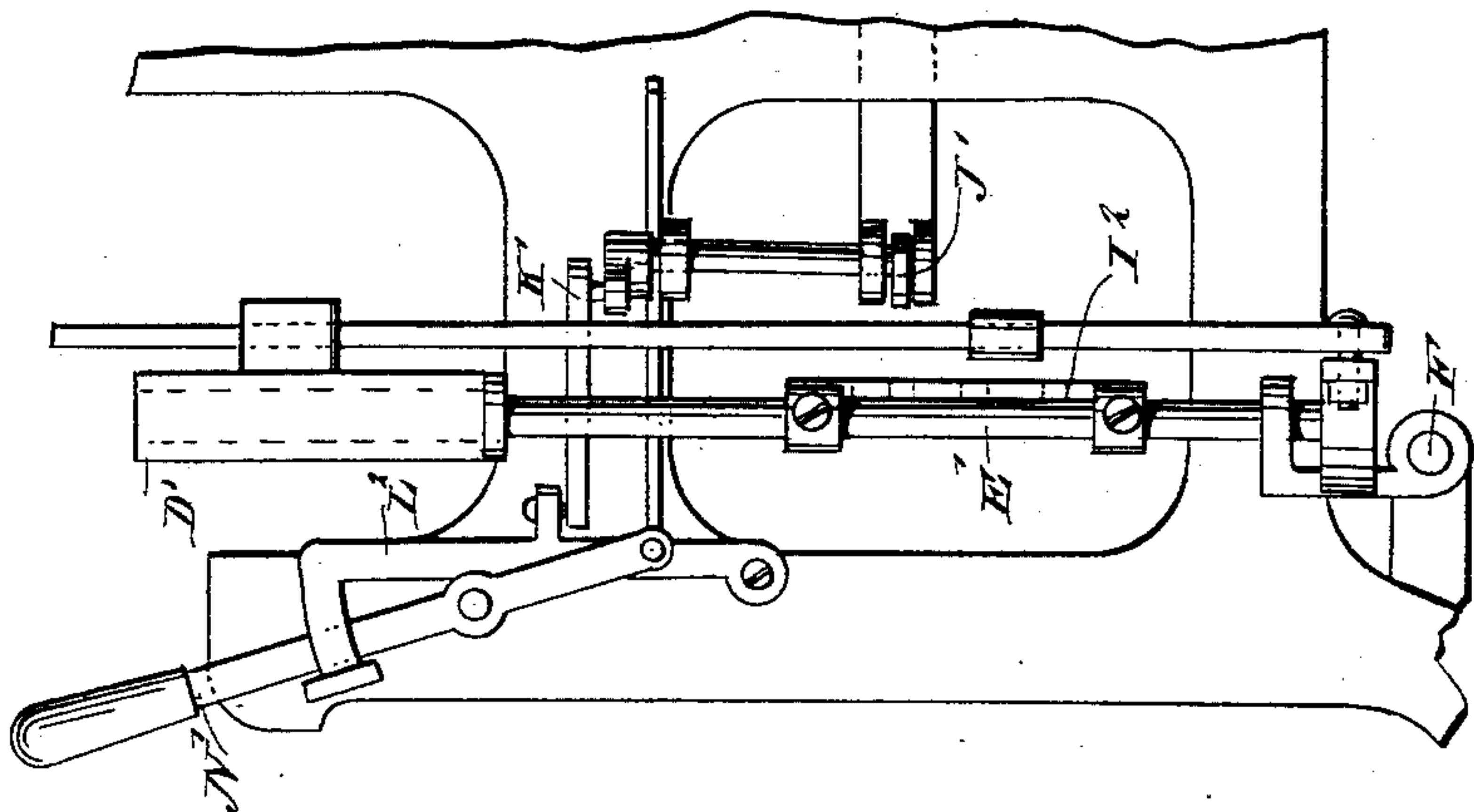
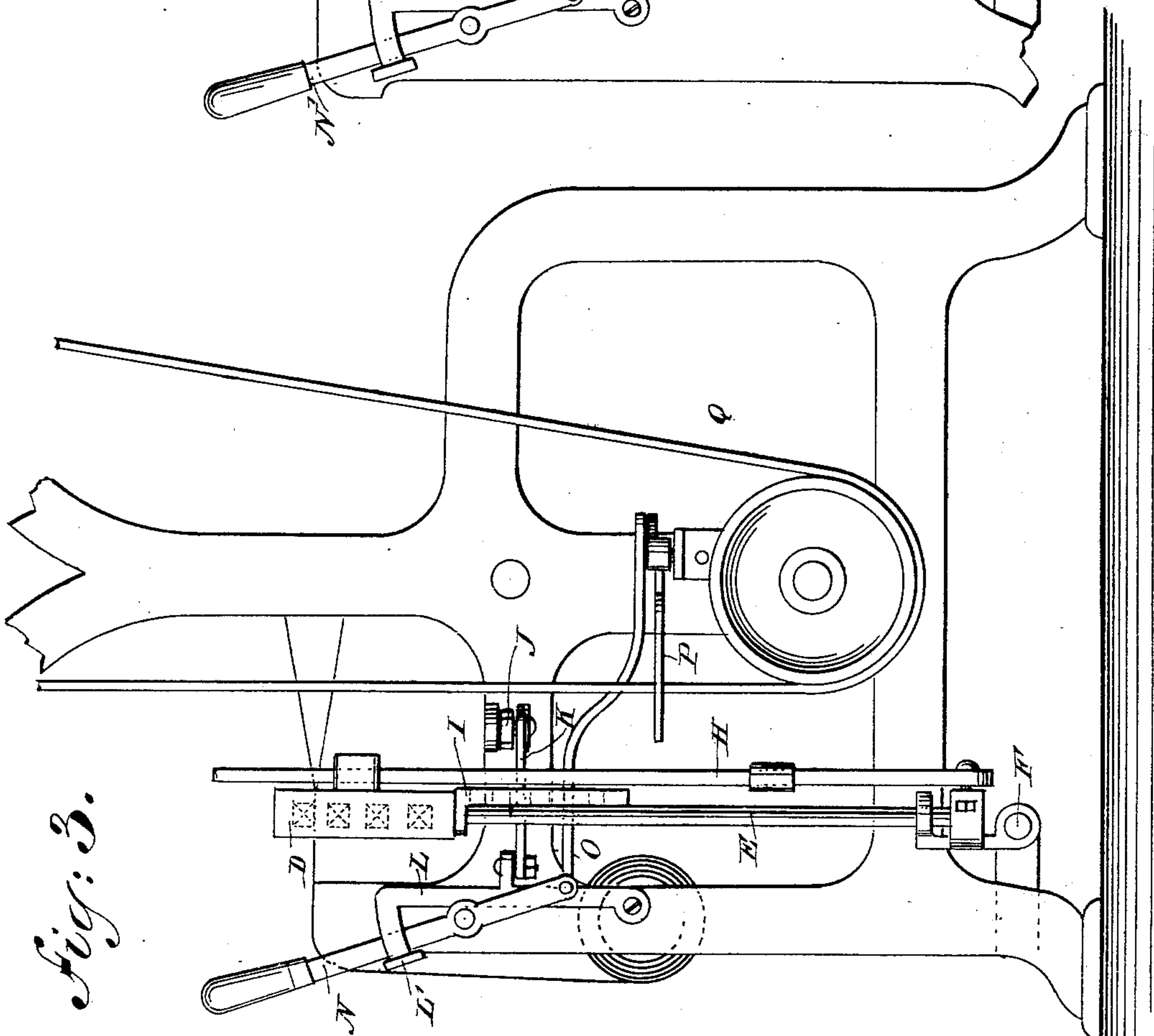


Fig. 3.



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UNITED STATES PATENT OFFICE.

BENJAMIN STREET TAYLOR AND CHARLES HERITAGE, OF HAMPDEN,
MASSACHUSETTS.

STOP-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 520,277, dated May 22, 1894.

Application filed May 29, 1893. Serial No. 475,888. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN STREET TAYLOR and CHARLES HERITAGE, of Hampden, in the county of Hampden and State of Massachusetts, have invented a new and Improved Stop-Motion for Looms, of which the following is a full, clear, and exact description.

The invention relates to looms, and its object is to provide a new and improved shuttle box stop motion, which is simple and durable in construction, very effective in operation, and arranged to immediately stop the loom in case the shuttle box is not even with the shuttle race at the time the loom starts to pick.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of part of a loom provided with the improvement. Fig. 2 is a plan view of the same with parts in section. Fig. 3 is an enlarged side elevation of the same; and Fig. 4 is a similar view of a modified form of the same.

The loom A of any approved construction, is provided with the usual frame B, the lay having the shuttle race C, on the ends of which are located the shuttle boxes D, each fixed to a rod E mounted on the lay rock shaft F, operated in the usual manner, so as to move the shuttle box in and out of alignment with the shuttle race. Each rod E is connected with the usual lifting mechanism G, for raising and lowering each shuttle box D, so as to bring the proper shuttle in alignment with the shuttle race. The picker stick H, operates on the shuttles in the usual manner; further description of the same is not deemed necessary.

On each of the shuttle boxes D is secured a downwardly-extending arm I, formed with a series of notches I', corresponding in number with the shuttles in the shuttle box, the said arm moving with the shuttle box and being adapted to pass a lever J, in case the shuttle box is in the proper position relative to the

shuttle race by one of the notches I' passing by the end of the said lever J. In case, however, the shuttle box is not in the proper position, that is higher or lower, as illustrated to the right of Fig. 1, then the arm I will strike the free end of the said lever J, as then a corresponding notch I' in the arm I is not in register with the free end of the lever J. The lever J is pivoted at J' to the frame B, and is pivotally-connected by a link K with a lever L, fulcrumed on the frame B and provided with an extension arm L', engaging the belt shifting lever N, connected in the usual manner by a link O with the shifting fork P, controlling the belt Q for imparting the necessary motion to the loom. It will be seen that when the loom is running and the belt Q is on the fast pulley, as shown in Fig. 3, and one of the shuttle boxes should not be in proper alignment with the shuttle race at the time the loom starts to pick, then the arm I will impart a swinging motion to the lever J in the direction of the arrow a', Fig. 2, so that a swinging motion in the same direction is given to the lever L, which, by its extension arm L', imparts a swinging motion to the belt shifting lever N, whereby the belt shifter P is actuated and the belt Q moves from the fast pulley to the loose pulley. The loom is thus automatically stopped before any damage can be done owing to the wrong position of the shuttle box. As long as the shuttle boxes are in the proper position relative to the shuttle race, the arms I will pass the levers J without imparting a swinging motion to the same to affect the belt shifting levers, but the said levers can always be manipulated by the operator in stopping and starting the loom, without affecting the position of the lever J.

As illustrated in Fig. 4, the arm I² is not directly attached to the shuttle box D' but to the rod E' supporting the shuttle box D', but otherwise the operation is exactly the same, it being understood that the arm I² is provided with notches which register with the lever J' at the time the shuttle box is in the proper position relative to the raceway, but in case the shuttle box is not in this position, the said arm I² will strike the lever J' to impart

a swinging motion thereto, so as to cause the link K' to actuate the lever L² to shift the belt shifting lever N' to actuate the belt shifter.

Having thus fully described our invention,
5 we claim as new and desire to secure by Letters Patent—

1. In a loom, the combination with the rising and falling shuttle box, and a belt shifter,
10 of a notched arm carried by the shuttle box, a pivoted lever, and a connection between the said lever and the belt shifter, whereby the belt shifter will be operated to stop the loom whenever the shuttle box is not in proper position relative to the shuttle race, as set forth.

2. In a loom, the combination with the rising and falling shuttle box, and a belt shifter,
15 of a downwardly projecting and notched arm secured to the shuttle box, a pivoted lever, a second pivoted lever having an extension engaging the belt shifting lever, and a link connecting the said pivoted levers, substantially
20 as herein shown and described.

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Witnesses:

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