

# W.V. Gee.

## Imp<sup>l</sup> in Looms.

No. 120,510.

Patented Oct. 31, 1871.

Fig. 1

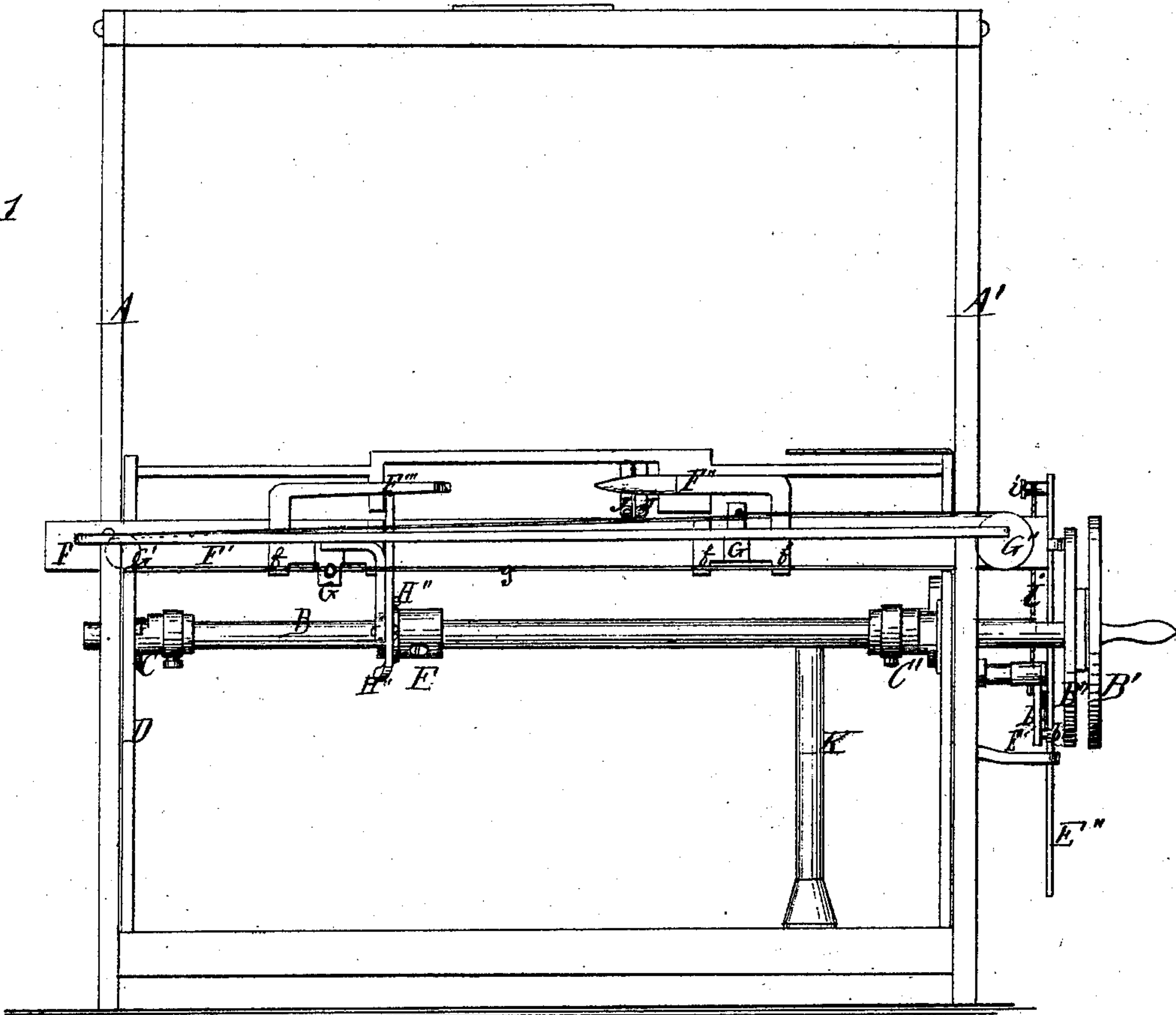
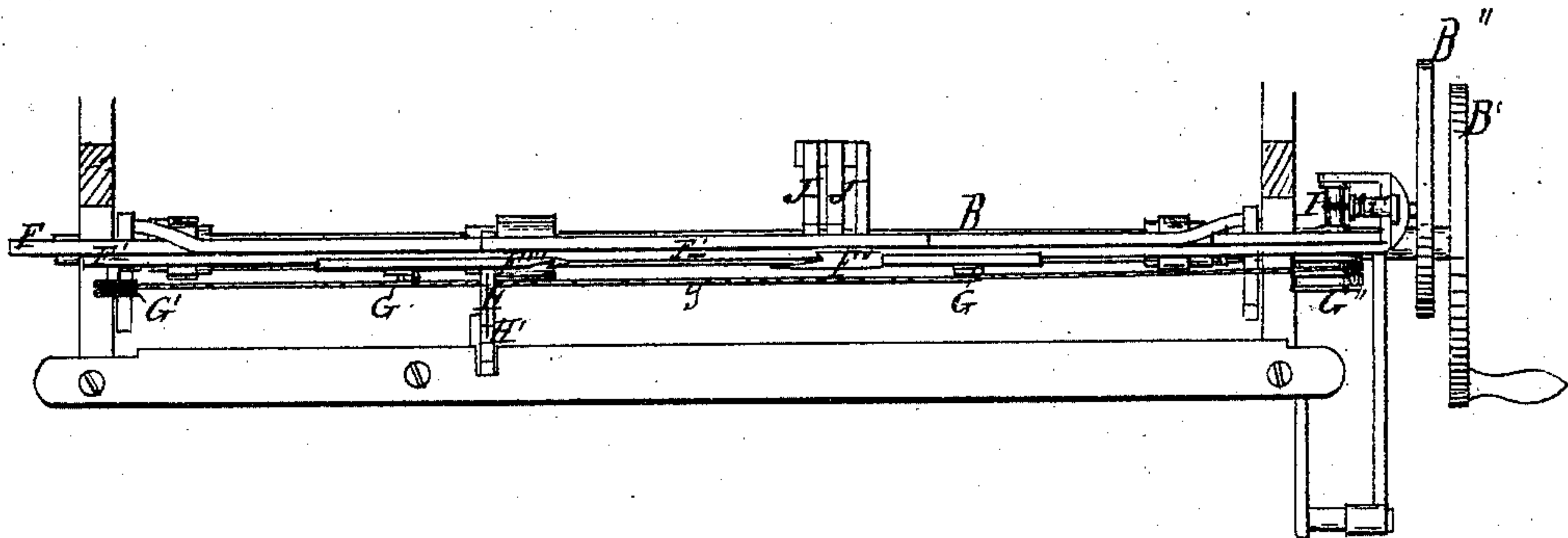


Fig. 2



Witnesses.

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Frank B. Curtis

Inventor

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Atty

2 Sheets--Sheet 2.  
W. V. Gee.

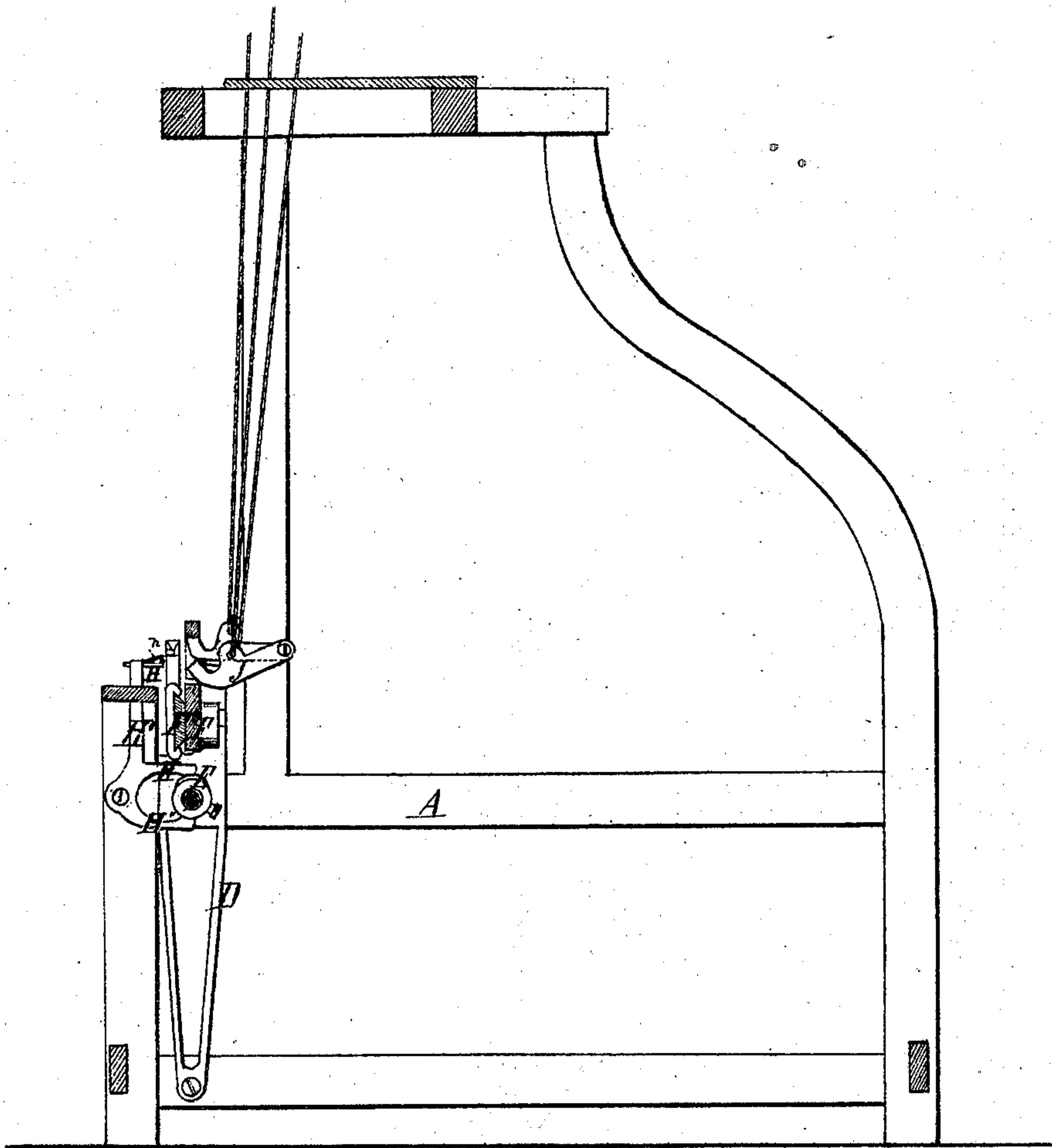
Improvement in

LOOMS.

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Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM V. GEE, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN LOOMS.

Specification forming part of Letters Patent No. 120,510, dated October 31, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM V. GEE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Looms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a front view of my invention. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical section.

This invention has relation to looms; and it consists in the application of certain improvements by means of which the shuttle or weft-carrying finger is required to travel only one-half the usual distance required, thereby saving time and increasing the amount of work produced in a given period.

In the accompanying drawing, illustrating my invention, A A' represent the ends of a loom-frame, A' being the driving end. B is a transverse shaft, holding the eccentrics C C', which operate the batten-frame D, and an eccentric, E, for controlling the operation of a device the function of which will be hereinafter detailed. On the driving end of the shaft B is a crank or driving-wheel, B', and a grooved cam, B'', on which travels a stud, b, projecting from an arm, b', pivoted to a bracket, which extends from the driving end of the loom-frame. The arm b' is connected by a link, E', with a bar, E'', which is thereby operated to rise and fall through a slotted bracket, E'', secured to and projecting from the end of the batten-frame D. F indicates a horizontal bar supported on the batten-frame; F', a bevel-edged horizontal race, upon which the finger and hook F'' F''', respectively, travel reciprocally, being each provided with dovetailed guides f f to support them on the race F'; G G, cleats secured to the guide portions of the finger and hook, and formed with eyes, by means of which a continuous cord, g, is attached thereto. This cord passes over a pulley-wheel, G', journaled at one end of the race, and has both of its ends secured to a pulley-wheel, G'', journaled at the opposite end.

The reciprocating rotary motion of the wheel G'' operates the finger and hook, which alternately come together and separate, the end of the hook in the first instance entering the tubu-

lar portion of the finger and there seizing the weft-yarn, which the finger has carried with it from the edge of the warp half the distance, and afterward drawing it to the opposite edge. Having reached the latter point the yarn is caught by a hook, H, on the end of an oscillating lever, H', constructed with jaws H'', between which the eccentric E, previously referred to, rotates and oscillates said lever and the hook which it holds. A finger, h, properly attached to this hook is made to close the latter after it has taken hold of a yarn, and until it has drawn the same forward some distance, when it opens automatically, and falling back, allows the yarn to pass over it, the hook at the same time reversing its travel for the purpose of seizing the next stretch of yarn, and so on; the looped end of each succeeding stretch being taken as a link to form the chain selvage of the material which is being woven.

I denotes a pulley-wheel, journaled on the same shaft with the wheel G''. A cord, i, which passes around the wheel I is connected by its ends to a stud, i', projecting from the upper end of the bar E'', and to the pin which connects together said bar and the link E'. Thus, when the bar E'' is made to rise and fall through the medium of the cam b', the cord i rotates the wheel I, and motion is thereby communicated to the finger F'' and hook F''' to operate them, as before described.

J represents the "mails," having eyes, through which the weft-yarns are fed from the bobbins K to the finger F''. These mails are hung on a transverse bar behind the batten-frame, and have cords connecting them with a Jacquard attachment, which, being in general use, is not shown in the drawing.

The mails are operated in the usual manner, each holding a different-colored yarn, which may be brought into requisition when desired.

Having described my invention, I claim—

The bar E'', cam B'', cord i, link E', arm b', and pulley I, in combination with the cord g, pulleys G' G'', finger F'', and hook F''', arranged to operate substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM V. GEE.

Witnesses:

WM. NEILL,  
HENRY GALASHAN.

(95)