

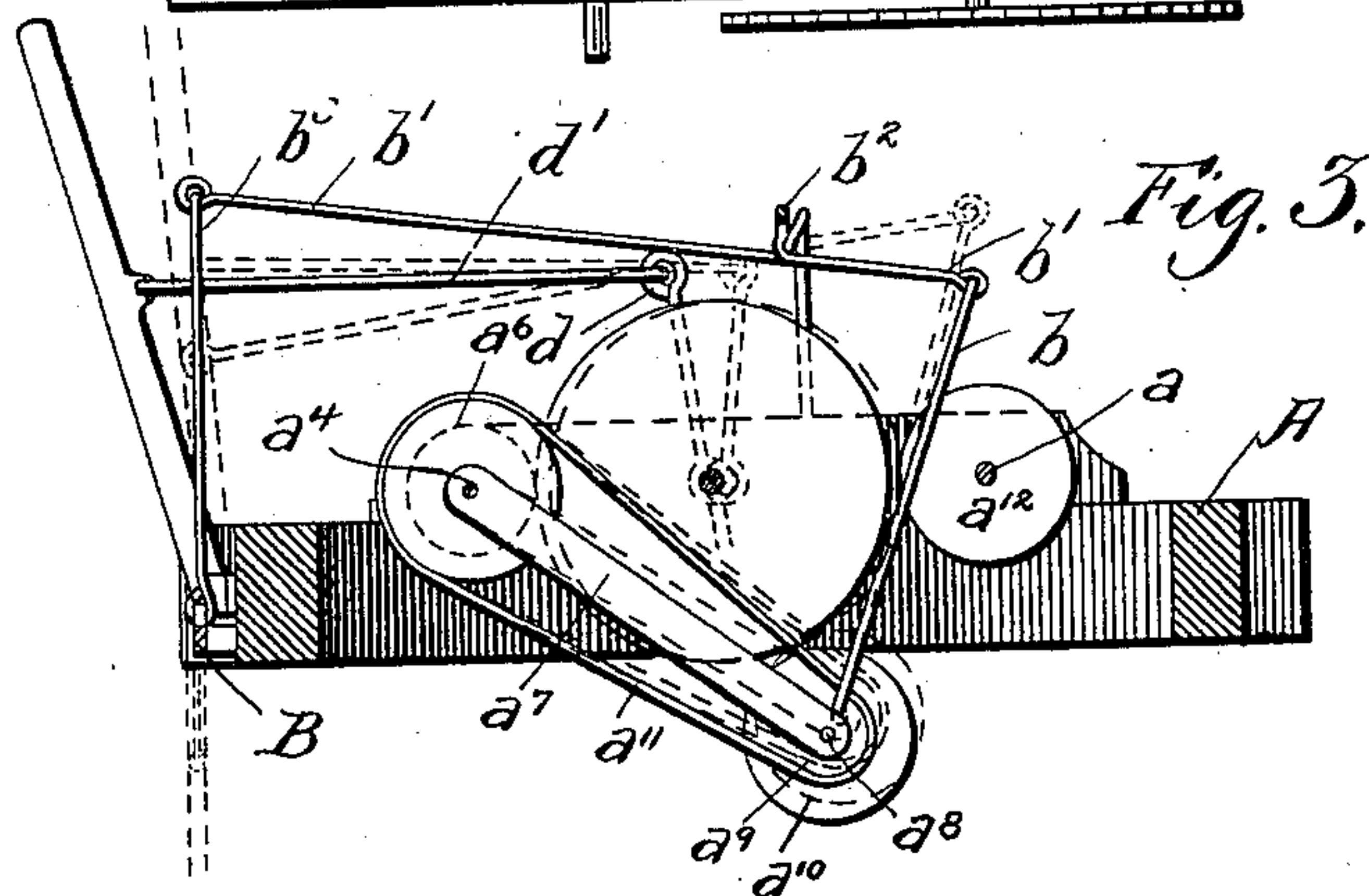
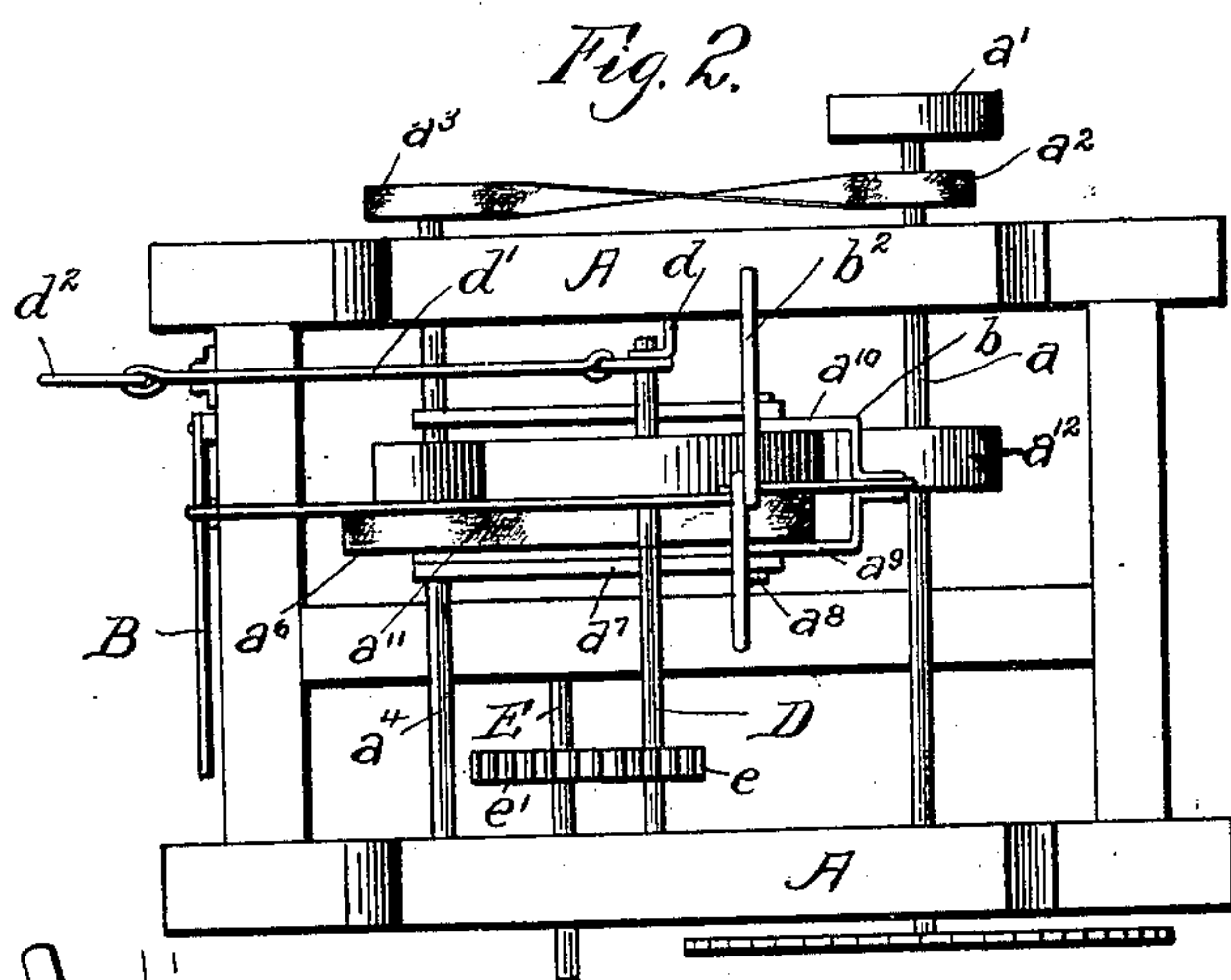
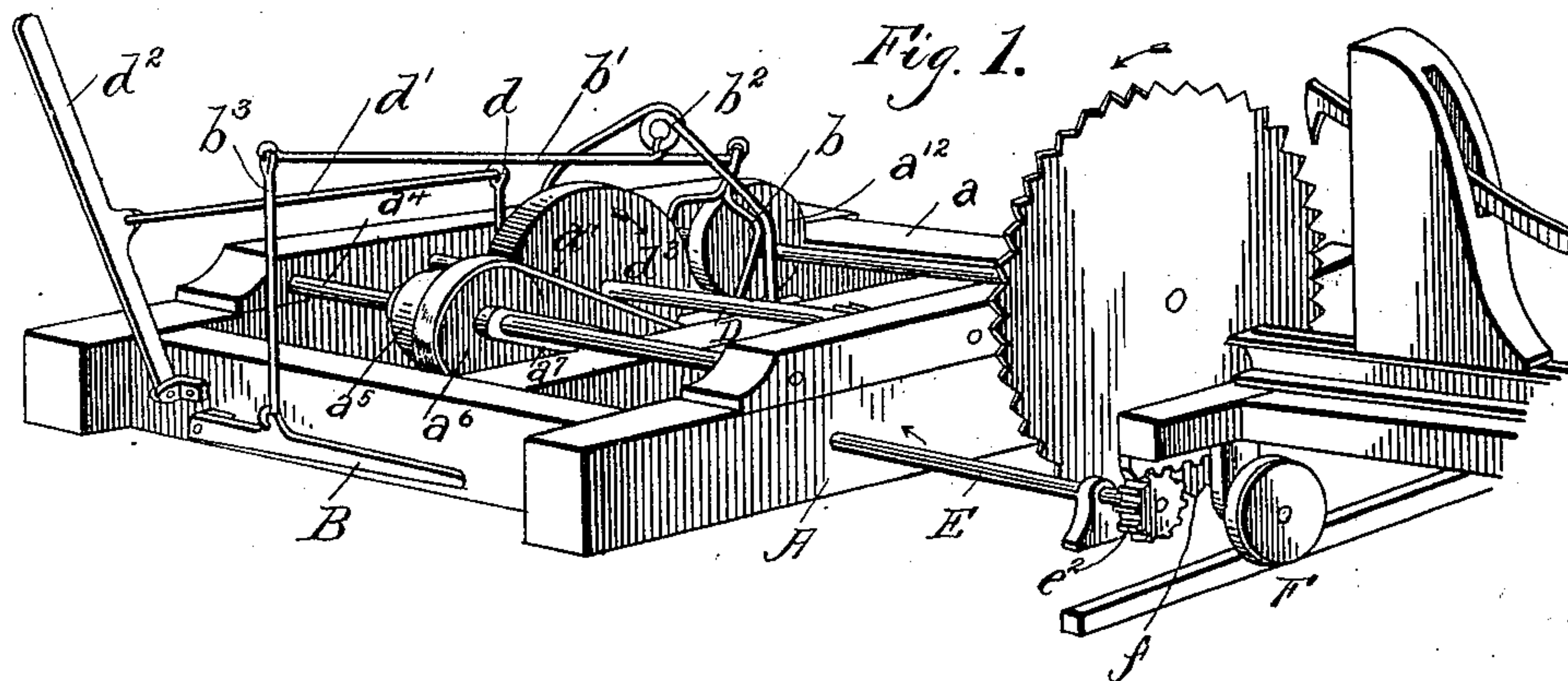
No. 658,172.

Patented Sept. 18, 1900.

A. DEMERS:
SAW FRAME.

(Application filed Feb. 9, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

ARTHUR DEMERS, OF ST. JULIEN DE WOLFSTOWN, CANADA.

SAW-FRAME.

SPECIFICATION forming part of Letters Patent No. 658,172, dated September 18, 1900.

Application filed February 9, 1900. Serial No. 4,600. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR DEMERS, a subject of Her Majesty the Queen of Great Britain, residing at St. Julien de Wolfstown, county of Wolfe, Province of Quebec, Canada, have invented certain new and useful Improvements in Saw-Frames; and I do hereby declare that the following is 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.

This invention relates to saw-frames, especially that class which are employed in cutting lumber from logs; and one object is to provide a saw-frame of this character which is adapted to positively feed the logs to the saw at different speeds and return the log-carriage at the completion of the cut.

A further object is to provide a saw-frame which is simple in construction, efficient in operation, and which can be manufactured at a moderate cost.

To these ends the invention consists in a saw-frame constructed substantially as hereinafter illustrated and described, and defined in the appended claims.

Referring to the drawings, in which similar letters of reference indicate similar parts, Figure 1 is a view in perspective of a saw-frame constructed in accordance with this invention and showing the means for feeding the log-carriage. Fig. 2 is a plan view of the saw-frame; and Fig. 3 is a transverse central section thereof, showing in dotted lines the position of the parts when the speed is increased.

In the drawings, A represents the saw-frame, which is preferably constructed of wooden beams suitably braced and which may be of any usual or preferred form. The saw-shaft a is journaled at one end of the frame in suitable bearings and is provided with a saw at one end and at the other with a suitable drive-pulley a^1 , adapted to be connected, by means of a belt, to the source of power. Adjacent to the drive-pulley is fixed a second pulley a^2 , which is connected by a cross-belt to the pulley a^3 , fixed upon the shaft a^4 , located in suitable bearings at the opposite end of the frame. A friction-wheel a^5 is fixed upon said shaft a^4 , and adjacent to said friction-wheel is fixed a pulley a^6 . Suitable bars are loosely sleeved upon the shaft a^4 and ex-

tend downwardly within the frame A, forming a hanger-frame a^7 , at the lower end of which is journaled a shaft a^8 , upon which is fixed a pulley a^9 and a friction-wheel a^{10} . The pulleys a^6 and a^9 are operatively connected by a belt a^{11} , as is clearly shown in Fig. 3.

Attached to the lower end of the hanger-frame a^7 is the yoke b , connected at its upper end with a rod b^1 , which is pivoted in a suitable supporting-standard b^2 , fixed upon the upper side of the frame A and connected at its outer end by means of a link b^3 to the operating-lever B, which is pivoted to the frame A. It will be seen from the construction that by moving the lever B the hanger-frame, and with it the friction-wheel a^{10} , may be raised or lowered.

Centrally arranged within the frame A is the shaft D, which is journaled at its outer end to the frame A and at its inner end to a suitable supporting-standard d , and the upper end of the said standard d is connected, by means of a rod d^1 , with the operating-lever d^2 , pivoted to the end of the frame A. Fixed upon the shaft D is the friction-wheel d^3 , which is located between the friction-wheel a^5 and a friction-wheel a^{12} , fixed upon the saw-shaft a , the said friction-wheels being all arranged in the same plane. From this construction it is evident that by suitably operating the lever d^2 the friction-wheel d^3 may be thrown into engagement with either the friction-wheel a^5 or the friction-wheel a^{12} , or it may be placed between the two and out of engagement with either of the said friction-wheels.

Upon the shaft D, near the outer end thereof, is fixed a pinion e , which meshes with a gear-wheel e^1 , fixed upon a shaft E, journaled in the frame A. The shaft E extends through and beyond the frame A, and fixed upon the outer end of this shaft E is a cog-wheel e^2 , which is adapted to mesh with a rack f , secured upon the frame of the log-carriage F. The log-carriage F may be of any usual or preferred construction suitable for the intended purpose. Power being applied the shaft a is revolved, thus rotating the saw in the direction indicated by the arrow in Fig. 1. The lever d^2 is now depressed, bringing the friction-wheel d^3 into engagement with the friction-wheel a^5 , which is being rotated

through the medium of the belt. The shaft E is thus revolved through the gearing connecting it with the shaft D, and the log-carriage is advanced, feeding the log to the saw.

5 When it is desired to stop the feed of the log, it is only necessary to operate the lever d^2 to throw the friction-wheel d^3 out of engagement with the friction-wheel a^5 . When it is
10 desired to give a more rapid feed to the log-carriage, as in sawing small logs, the lever d^2 is operated to throw the friction-wheel out of engagement with the friction-wheel a^5 and held by hand or any suitable mechanical means in this position. The lever B is now
15 depressed by the foot of the operator, and the hanger-frame a^7 is raised, bringing the friction-wheel a^{10} into engagement with the friction-wheel d^3 , when by reason of the difference in the diameter of the pulleys a^6 and
20 a^9 the friction-wheel d^3 will be very rapidly rotated, giving a more rapid feed to the log-carriage, as will be readily understood. When it is desired to retract the log-carriage, it is only necessary to throw the friction-wheel d^3
25 into engagement with the friction-wheel a^{12} by means of the lever d^2 , when the rotation of the shaft E will be reversed and the log-carriage returned to its starting-point.

While I have herein shown a preferred
30 form of carrying my invention into effect, yet I do not desire to limit myself to such preferred details of construction, but claim the right to use any and all modifications thereof which will serve to carry into effect the
35 objects to be attained by this invention in so far as such modifications and changes may fall within the spirit and scope of my said invention.

I claim—

40 1. A saw-frame, comprising a saw-shaft having a saw at one end and a driving-pulley at the other end; a pulley fixed upon said shaft;

a shaft a^4 having a pulley connected by a belt with the pulley of said saw-shaft; a friction-wheel and a pulley fixed upon said shaft a^4 ; 45 a movable shaft located between the said shafts, having a pinion fixed thereon; a friction-wheel fixed upon said movable shaft and adapted to be thrown into engagement with either the friction-wheel of the saw-shaft or 50 that of the shaft a^4 ; an operating-lever connected with said movable shaft; a hanger-frame loosely mounted upon the shaft a^4 ; a pulley and a friction-wheel fixed upon a shaft journaled in said hanger-frame; a driving- 55 belt connecting said pulley with the pulley on the shaft a^4 , an operating-lever connected with said hanger; a feed-shaft journaled in said frame having a gear-wheel meshing with the pinion on the said movable shaft; and a 60 cog-wheel fixed on the end of said feed-shaft and adapted to engage a rack fixed upon the log-carriage for feeding the same, substantially as described.

2. A saw-frame, comprising a saw-shaft and 65 a shaft driven by said saw-shaft; a friction-wheel fixed on each of said shafts; a movable shaft arranged between the said shafts; a friction-wheel mounted upon said movable shaft and adapted to be thrown into or out 70 of engagement with said friction-wheels; a movable hanger-frame carrying a friction-wheel; adapted to be thrown into or out of engagement with the friction-wheel of said movable shaft; and a feed-shaft operatively 75 connected with said movable shaft and adapted to feed a log-carriage, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ARTHUR DEMERS.

Witnesses:

JOSEPH T. GUILLET,
P. O. GUILLET.