

H. D. HALL.
Saw-Mills.

No. 158,703.

Patented Jan. 12, 1875.

Fig. 1.

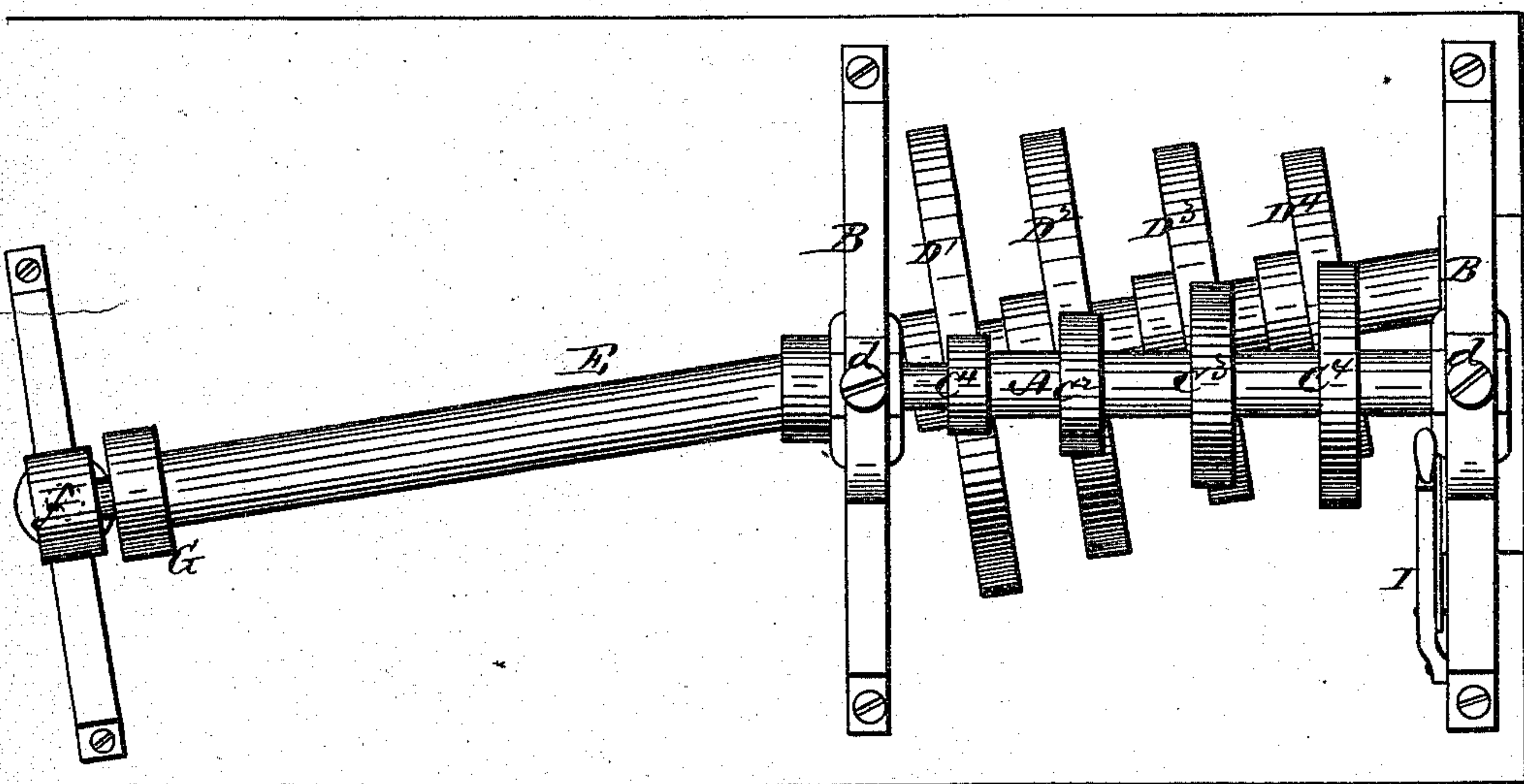


Fig. 3.

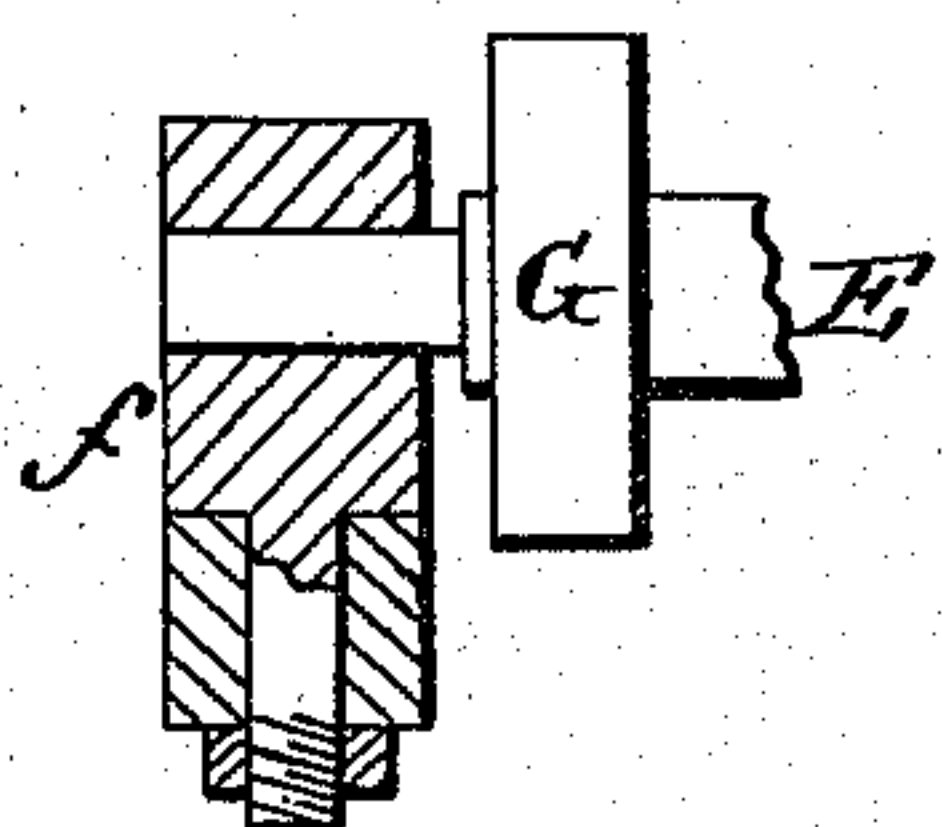
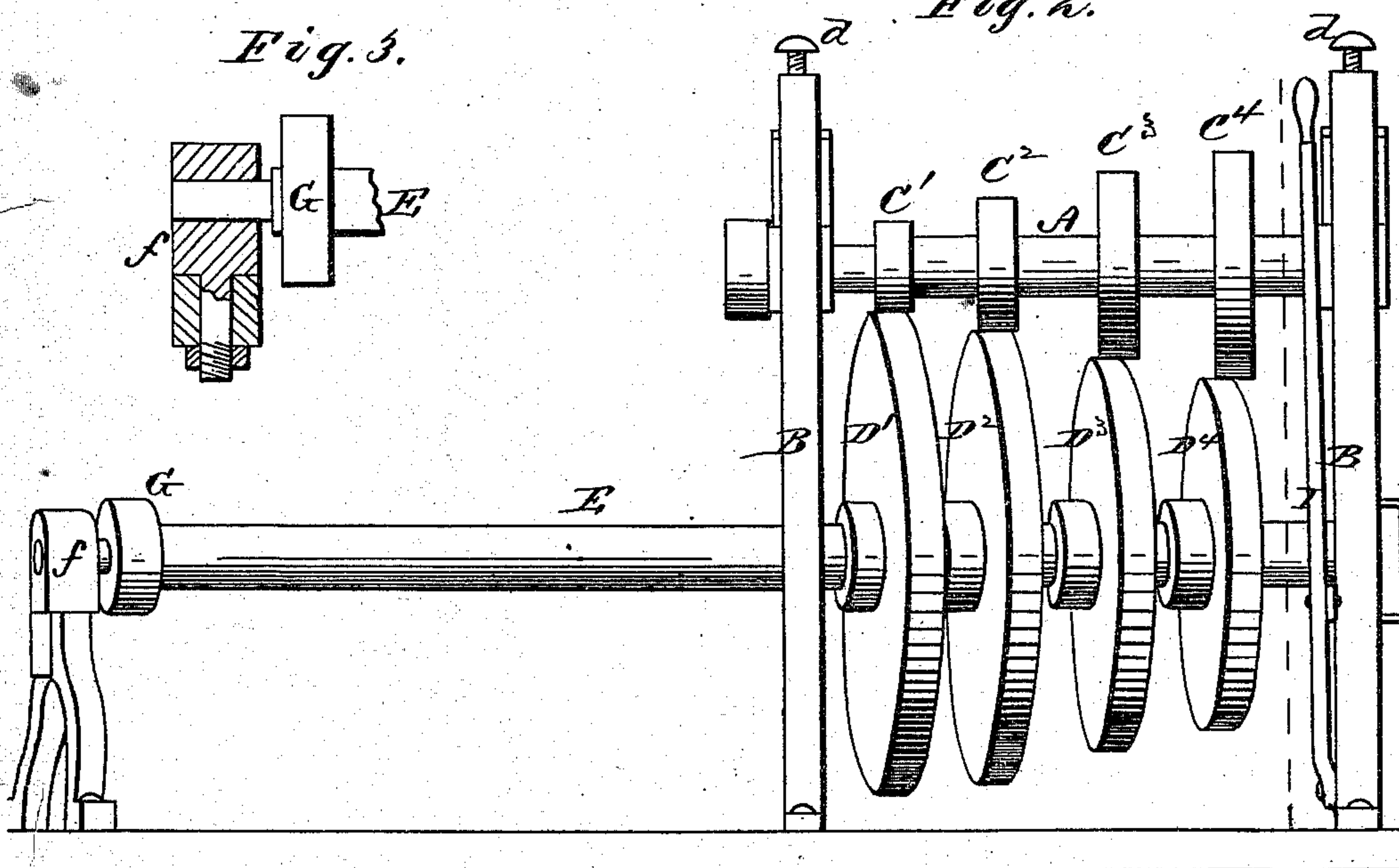


Fig. 2.



WITNESSES

Henry N. Miller
C. L. Ewert.

INVENTOR

H. D. Hall.
per
Alexander Macdonald
ATTORNEYS

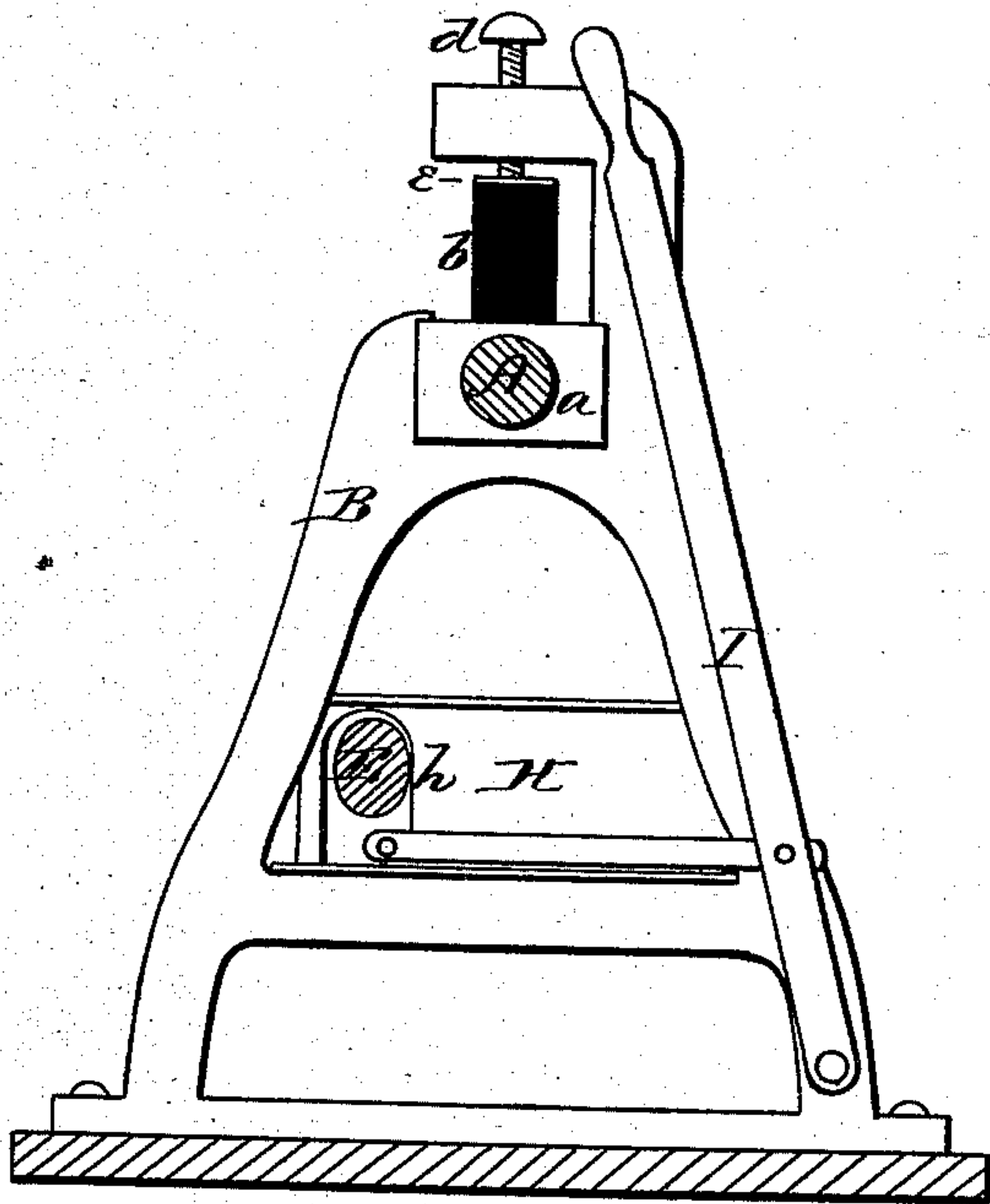
2 Sheets--Sheet 2.

H. D. HALL.
Saw-Mills.

No. 158,703.

Patented Jan. 12, 1875.

Fig. 4.



WITNESSES

Henry N. Miller
C. L. Ewert.

INVENTOR

H. D. Hall,
Alexander
ATTORNEYS

UNITED STATES PATENT OFFICE.

HERMAN D. HALL, OF DENVER, COLORADO TERRITORY.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. **158,703**, dated January 12, 1875; application filed December 19, 1874.

To all whom it may concern:

Be it known that I, HERMAN D. HALL, of Denver, in the county of Arapahoe and in the Territory of Colorado, have invented certain new and useful Improvements in Saw-Mills; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a mechanism for feeding the log-carriage of a saw-mill, whereby the log may be fed at any desired rate of speed, while the power or driving shaft is being run at the same rate of speed, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, and Fig. 2 is a front elevation, of my machine. Fig. 3 is a vertical section of a pivoted journal-box. Fig. 4 is a vertical section through the line *x*, Fig. 2.

A represents the driving-shaft, connected, by a belt or otherwise, with any suitable power for running the same. This shaft has its bearings in boxes *a*, which are placed in slots in vertical frames B B, and are held down by means of rubber springs *b*, the tension of said springs being regulated by means of set-screws *d* bearing upon metal plates *e*, placed on top of the rubber springs. On the driving-shaft A, at suitable distances apart, are secured a series of wheels, $C^1 C^2 C^3 C^4$, increasing gradually in the length of their diameter from one end to the other. E represents the shaft, which communicates motion to the log-carriage by means of a cog-wheel, G, secured on the inner end of the shaft, and gearing with a rack-bar on the carriage. The inner end of the shaft E has its bearing in a journal-box, *f*, which is pivoted, as shown in Fig. 3, on top of a suitable standard or frame. The outer end of the shaft E has its bearing in a journal-box, *h*, which is placed in a horizontal way or guide, H, attached to the outer

frame B, and the box *h* moved back and forth therein by a lever, I, or other suitable means. On the shaft E are secured a series of wheels, $D^1 D^2 D^3 D^4$, which correspond with the wheels upon the driving-shaft A, and increase gradually in the length of their diameter in the opposite direction from that of the wheels on the driving-shaft. The shafts A and E are arranged relatively to each other in such a manner that when they are parallel with each other they will be in different vertical planes, and none of the wheels on one shaft will be in contact with a wheel on the other. As the outer end of the shaft E is moved so as to bring it under the driving-shaft A, the wheel D^4 nearest the outer end will come in contact with the wheel C^4 on the driving-shaft, while none of the others are in contact. By moving the shaft still farther, the wheels $D^4 C^4$ will be thrown out of contact, and the wheels $D^3 C^3$ brought in contact, with each other, and so on any one of the wheels on the shaft E may be thrown in contact with the corresponding wheel on the driving-shaft, and thus move the log-carriage at any desired speed, while the driving-shaft continues at the same rate of speed.

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

1. In a mechanism for feeding the log-carriage for saw-mills, the combination of the driving-shaft A and the movable shaft E, arranged in different vertical planes, and each provided with a series of wheels of different diameters, substantially as and for the purposes herein set forth.

2. The combination of the driving-shaft A, with wheels $C^1 C^2 C^3 C^4$, rubber springs *d*, and the shaft E, with wheels $D^1 D^2 D^3 D^4$, pivoted box *f*, and sliding box *h*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of December, 1874.

HERMAN D. HALL.

Witnesses:

C. L. EVERT,
WM. L. BRAMHALL.