

No. 804,547.

PATENTED NOV. 14, 1905.

E. F. PECKHAM & W. J. HYDE.

RULING MACHINE.

APPLICATION FILED APR. 12, 1904.

Fig. 1.

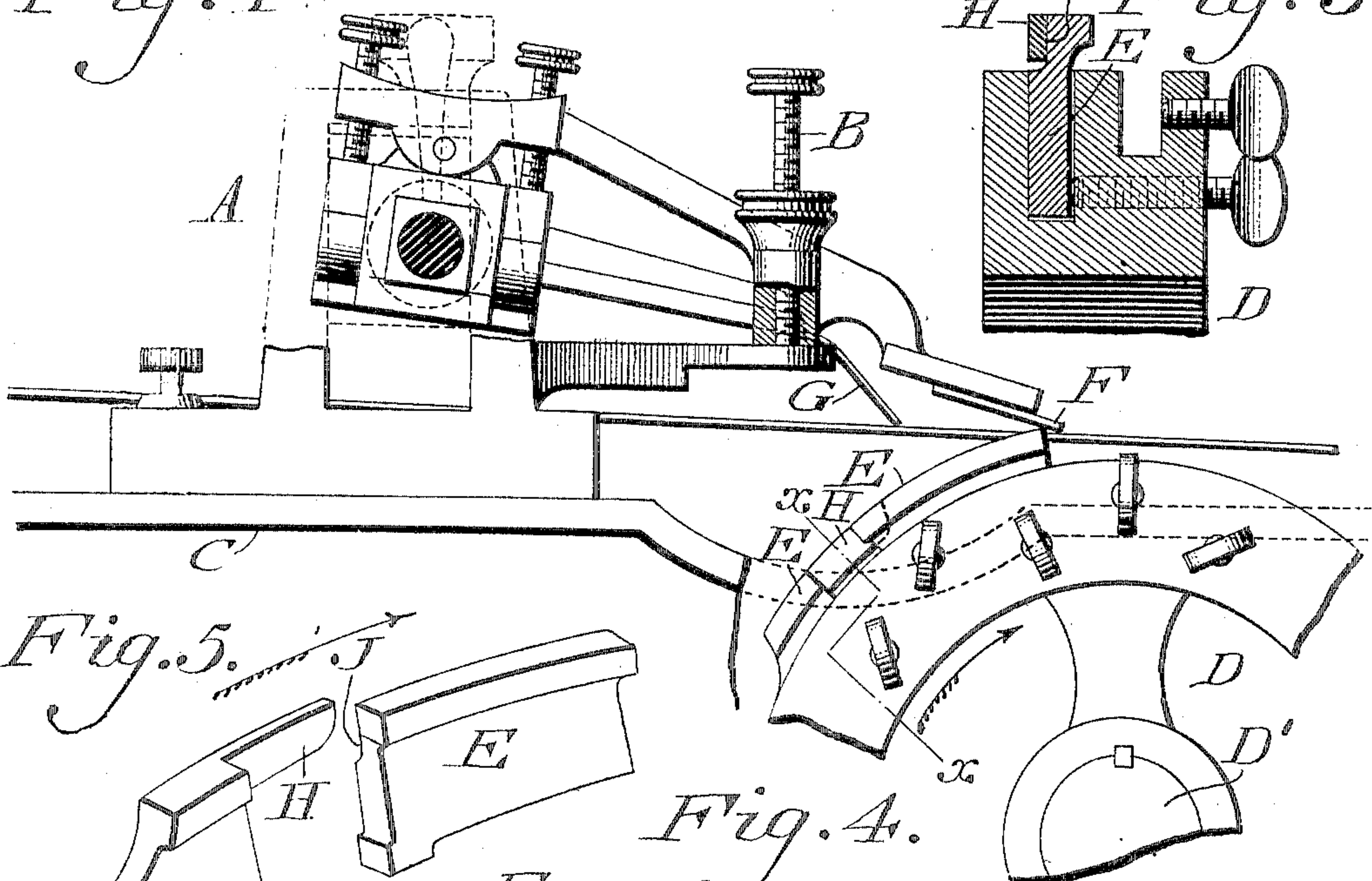


Fig. 3.

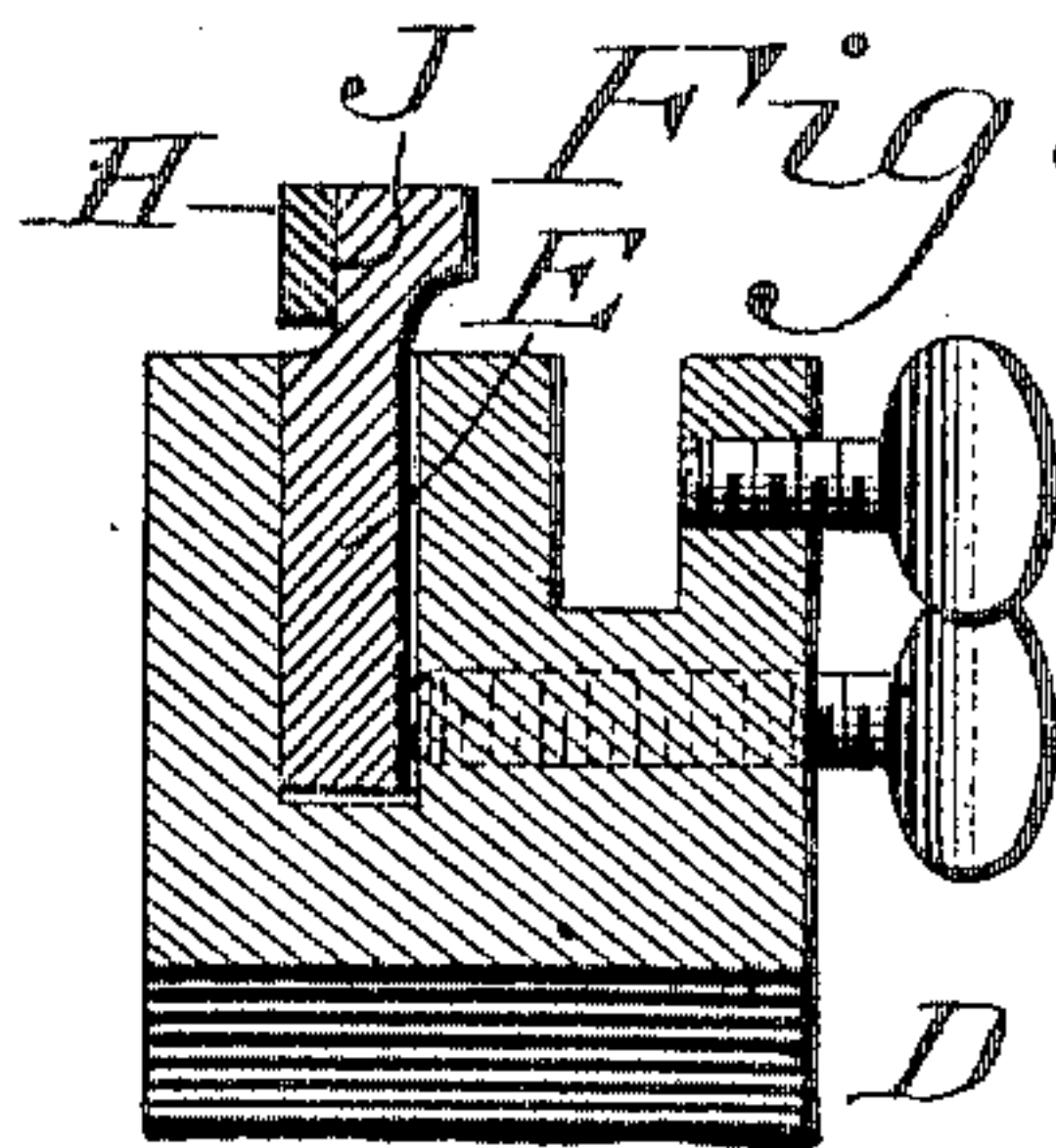


Fig. 5.

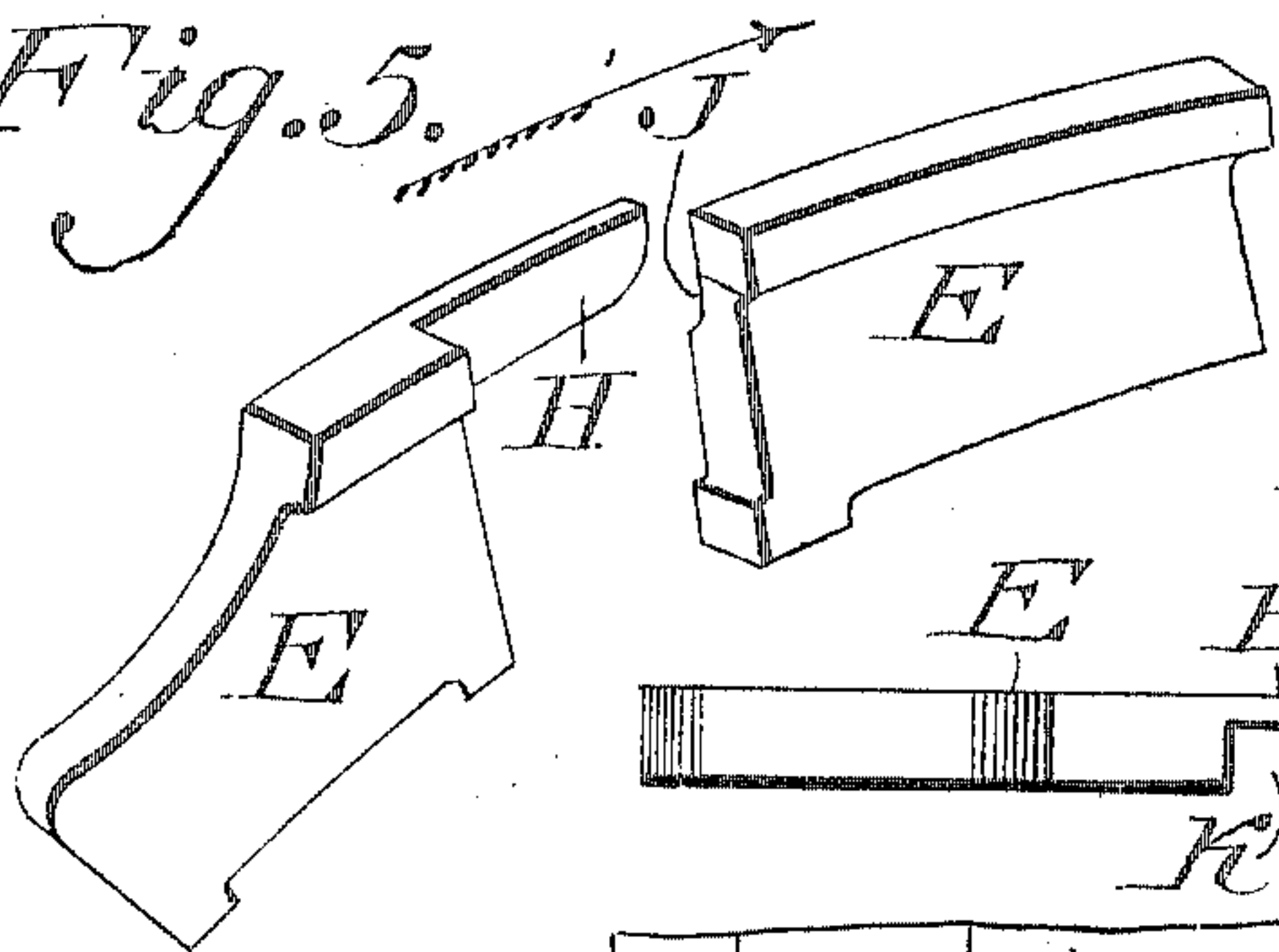


Fig. 4.

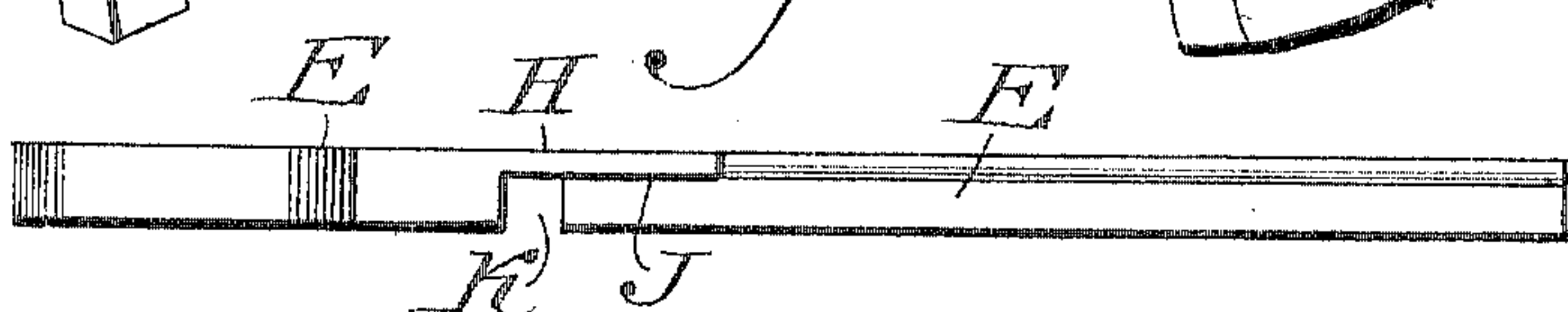
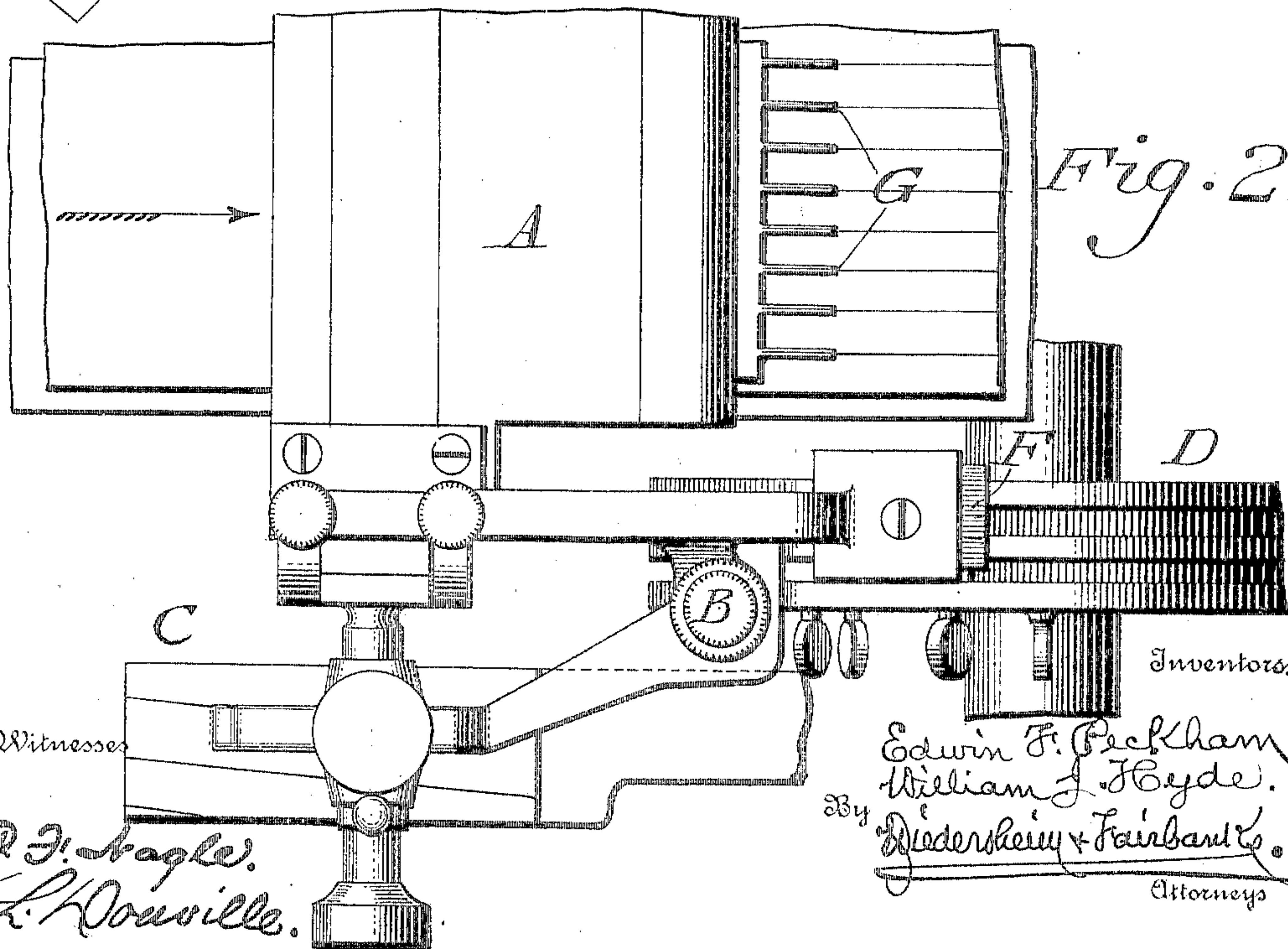


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN F. PECKHAM AND WILLIAM J. HYDE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS, BY MESNE ASSIGNMENTS, TO THE W. O. HICKOK MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

RULING-MACHINE.

No. 804,547.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed April 12, 1904. Serial No. 202,760.

To all whom it may concern:

Be it known that we, EDWIN F. PECKHAM and WILLIAM J. HYDE, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented new and useful Improvements in Ruling-Machines, of which the following is a specification.

Our invention relates to a ruling-machine; and it consists of means for rendering the pens thereof inoperative when so desired without the liability of producing irregular work between the gaps of the lines or blurring or blotting the sheet. To this end we provide the cams or plates of the lifting ring or head with lap-joints over which a contacting member of the pen-carrier rides with uniformity and without liability to drop until the length of said cams is reached, when the carrier properly lowers and causes the ruling to be continued.

Figure 1 represents a partial side elevation and partial vertical section of a portion of a ruling-machine embodying our invention. Fig. 2 represents a top or plan view thereof. Fig. 3 represents an irregular section on line *x x*, Fig. 1. Fig. 4 represents a top or plan view of the cams or plates employed. Fig. 5 represents a perspective view of said cams or plates in separated condition.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the pen-carrier of a ruling-machine, B the adjusting and controlling screw thereof, and C the portion of the frame of the machine on which said carrier is mounted.

D designates a ring which is mounted on the rotary shaft D' and is provided with a plurality of grooves or recesses in its periphery to receive the cams or plates E, by which the carrier A is raised when it is desired to stop the ruling operation, the motion of said ring, however, continuing. The cams E *per se* are set relatively to the intervals desired to hold the carrier in elevated position; but these features *per se* are well known. In the present case the cams E E respectively occupy the recesses in the ring or head D and have their peripheral portion projecting beyond the periphery of said head. The sides of the head have screws fitted thereto so as to engage the portions of the cams which oc-

cupy said recesses, and so hold said cams in their adjusted positions toward and from each other, admitting of lengthening or shortening the actions of said cams. In the present case there is connected to the lower end of the pen-carrier the bar F, which is adapted to be engaged by the upper faces of said cams E and raised, thus lifting the pens G from the sheet to be ruled and forming breaks in the continuity of the lines ruled thereon. On the end of one of the cams there is the projecting tongue H, and on the side of the other cam there is the recess or groove J, the latter being adapted to receive said tongue, and thus form a bridge from one cam to the other, whereby as the bar F rides over the top of one cam E it reaches the tongue H and rides on the top thereof, and so passes to the other cam, whereby said bar is prevented from dropping in the gap K that exists between the adjacent cams, thus preserving the continuity of the elevation of the carrier, whereby there will be no sudden dropping or jarring of the carrier and the work of ruling will be accomplished in a uniform manner without liability of blurring or splashing the sheet being ruled. After the bar F has passed the upper part of the terminal cam it is permitted to ride down the same, and thus cause the lowering of the pens, when the ruling will again commence and be continued until it is desired to again stop the same.

Various changes may be made in the details of construction shown without departing from the general spirit of our invention, and we do not, therefore, desire to be limited in each case to the same.

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

1. In a ruling-machine, a pen-raising device, consisting of a movable head and elevating cams thereon, said cams being provided respectively with a tongue and a groove which engage, forming a lap-joint, the peripheral portions of said cam and tongue projecting beyond the periphery of said head.

2. In a ruling-machine, a pen-carrier having means for raising the same, consisting of a movable head and elevated cams thereon, said cams being provided respectively with a tongue and a groove which engage, forming a lap-joint, the peripheral portions of said

cams and tongue projecting beyond the periphery of said head.

3. In a ruling-machine, a movable head having in the periphery thereof a plurality of
5 parallel grooves, a plurality of cams respectively occupying said grooves, means on the head for adjustably holding said cams on said head, a tongue at the side of the peripheral
10 portion of one cam, and a groove on the adjacent side of the peripheral portion of the

other cam, said groove receiving said tongue, and the peripheral portions of said cams and tongue projecting beyond the periphery of said head.

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