

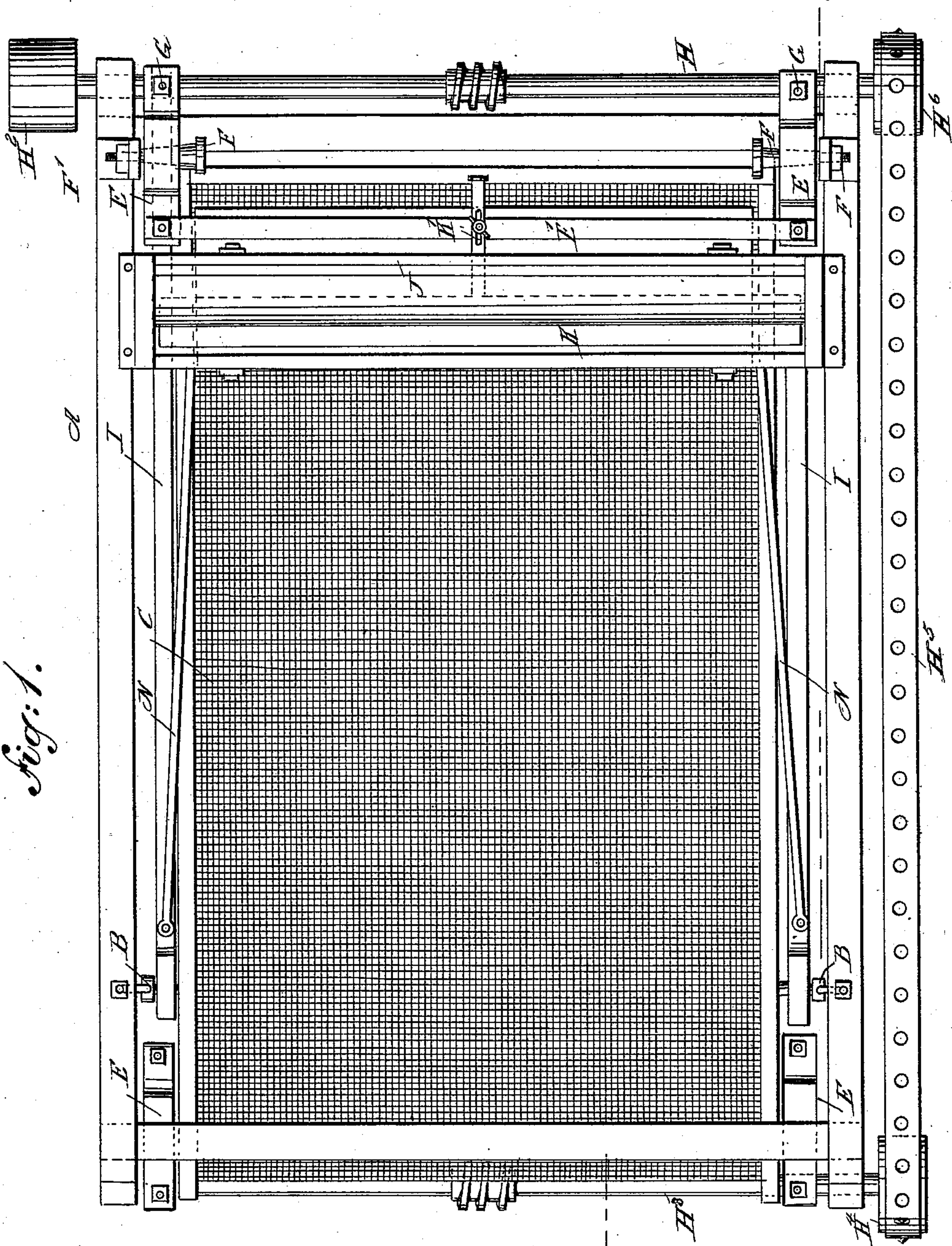
(No Model.)

3 Sheets—Sheet 1.

H. K. MOWSON & R. F. COREY.
SHAKING BOLT.

No. 540,509.

Patented June 4, 1895.



WITNESSES:

Chas. Vida
Thos. G. Foster

INVENTORS

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ATTORNEYS.

(No Model.)

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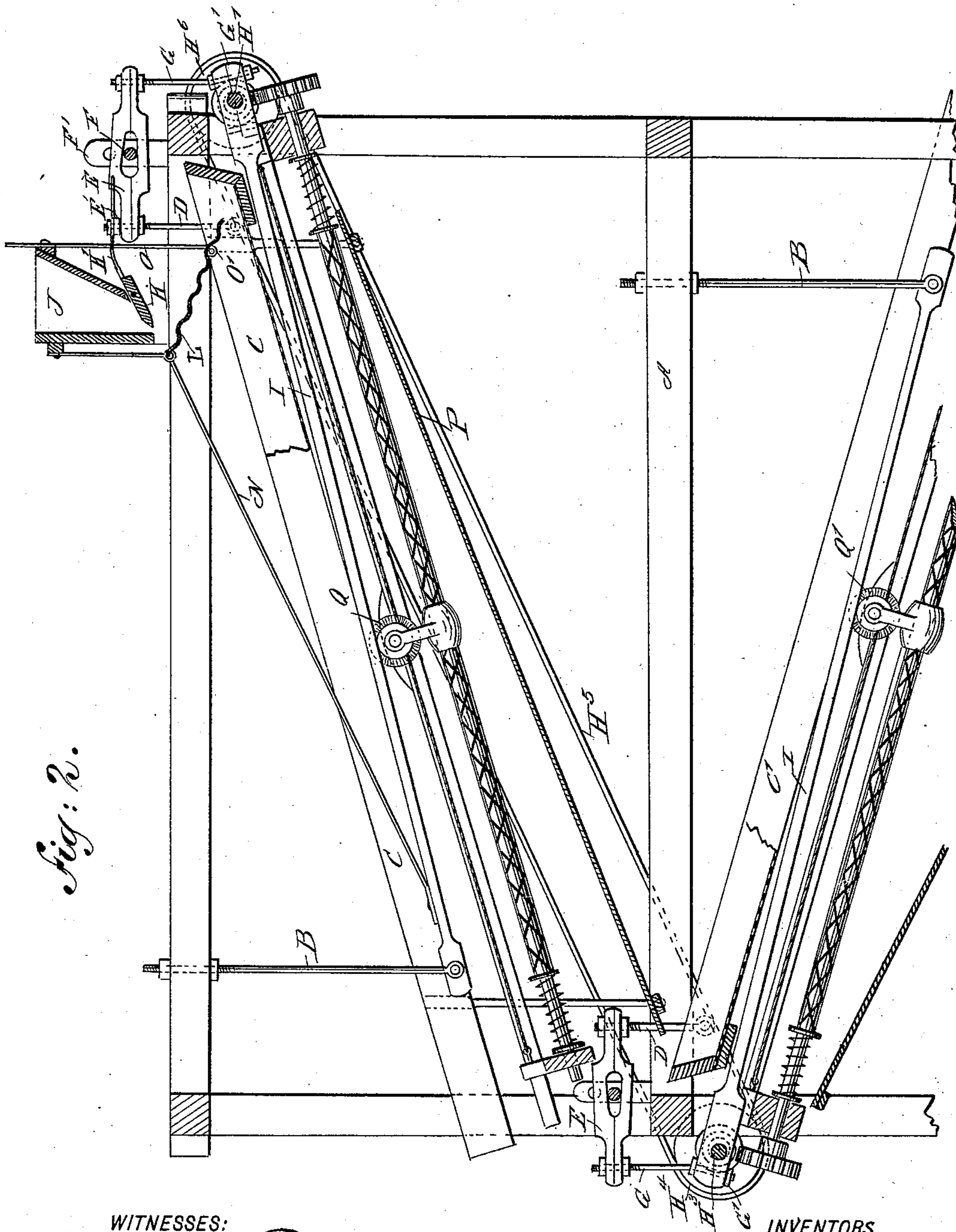


Fig. 2.

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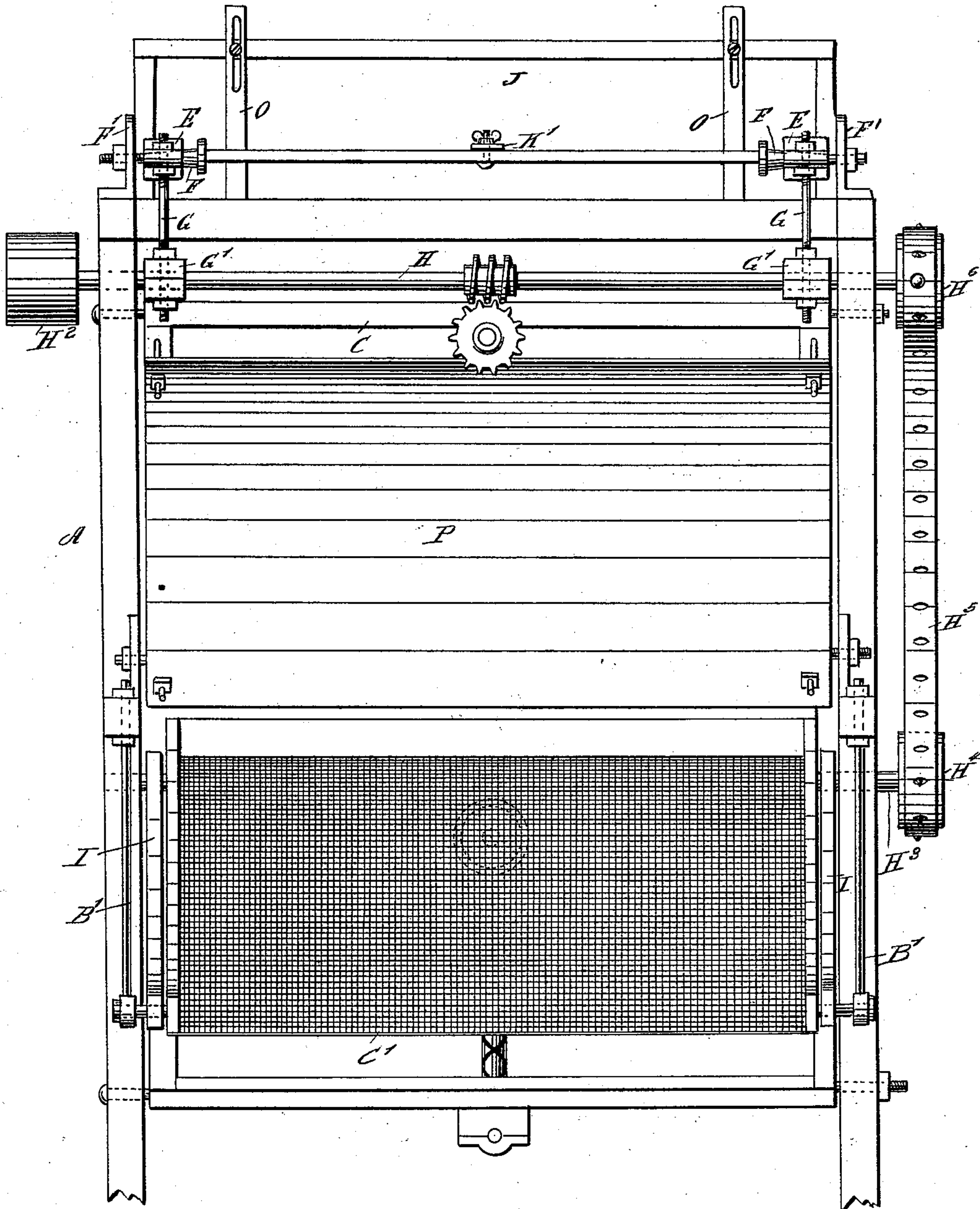
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Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HARRY KIME MOWSON AND ROSWELL FREDERICK COREY, OF SCOTTSVILLE,
NEW YORK.

SHAKING-BOLT.

SPECIFICATION forming part of Letters Patent No. 510,509, dated June 4, 1895.

Application filed October 3, 1894. Serial No. 524,784. (No model.)

To all whom it may concern:

Be it known that we, HARRY KIME MOWSON and ROSWELL FREDERICK COREY, of Scottsville, in the county of Monroe and State of New York, have invented a new and Improved Shaking-Bolt, of which the following is a full, clear, and exact description.

The invention relates to graders; and its object is to provide a new and improved shaking bolt, which is simple and durable in construction and arranged to combine a scalper with a grader, to properly and rapidly bolt large quantities of the various products, such as break chop, middlings and flour, without danger of clogging.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter 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 plan view of the improvement. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 1, and Fig. 3 is an end view of the same.

The improved shaking bolt is provided with a suitably constructed frame A, supporting at one end downwardly extending rods B, connected at their lower ends with the sides of a sieve C arranged preferably in an inclined position within the frame A, as plainly shown in Fig. 2, the connection of the rods B with the sieve being at the lower end thereof.

The upper end of the sieve C is hung at its sides on the rods D extending upwardly and connected with the inner ends of the rocking beams E, fulcrumed at their middle on transversely extending pivot pins F preferably made conical, and engaging elongated apertures in the said rocking beams E. The pivot pins F are held in brackets F', secured on the frame A. The rear ends of the rocking beams E are connected with each other by a bar E', as is plainly shown in the drawings. The outer ends of the rocking beams E are connected with eccentric rods G held on eccentric heads G' engaging the eccentrics H', formed on the transversely extending shaft H mounted to turn in suitable bearings on the frame A, and carrying at one end a pulley

H², connected by a belt with other machinery for imparting a rotary motion to the said shaft H and the eccentrics H', to actuate the eccentric heads G'. The latter are rigidly connected by eccentric rods I, with the sides of the sieve C at the connection of the rods B with the said sieve, so that the eccentrics H', by the said rods I, impart a longitudinal shaking motion to the sieve C, and by the rods G, rocking beams E and rods D, an up and down motion is given to the upper end of the sieve. Thus, a double motion is imparted to the sieve, to readily agitate the material passing over the sieve, the said material being introduced on the sieve at the upper end thereof. For this purpose, a hopper J is provided containing the material to be bolted, and provided at its lower end with an inclined feed gate K, held on a spring arm K' attached to the bar E' connecting the rocking beams with each other. The spring arm K' is held adjustably on the said bar, see Fig. 1, so as to permit of regulating the amount of material passing through the feed gate onto a feed board L, which is corrugated transversely and inclined, and delivers the material onto the upper end of the sieve C. This feed board L is supported on spring arms N, supported on the sides of the sieve C, the said board also resting on a transversely extending rod O' held on vertically disposed arms O, secured to the hopper J.

Now, it will be seen that when the machine is in operation, the feed gate K, as well as the feed board L are agitated to cause the material to pass into the sieve in a well distributed and agitated state. As the material passes down the sieve C, it is greatly agitated by the peculiar motion given to the sieve in the manner above described, the fine material passing through the meshes of the sieve into a chute P, extending under the sieve and supported therefrom in an inclined direction, as is plainly shown in Fig. 2. The lower end of this chute P discharges into the upper end of a second sieve C', similar in construction to the sieve C and likewise inclined, but in an opposite direction. The sieve C' receives a longitudinal motion and an up and down motion at the upper end from a mechanism identical with the one above referred to and used for agitating or shaking the sieve. This

device for imparting motion to the sieve C' is set in motion by eccentrics on a shaft H³, mounted to turn in suitable bearings at the end of the frame A, the said shaft H³ being
5 provided with a sprocket wheel H⁴ connected by a belt or chain H⁵ with a sprocket wheel H⁶, secured on the shaft H, so that the rotary motion of the latter is transmitted to the shaft H³, and consequently, the sieve C' is
10 agitated simultaneously with the sieve C and in the same manner.

In order to clean the meshes of the sieve bottoms, we provide the sieve C with a revoluble brush Q, mounted to travel under the
15 said perforated bottom and rotating at the same time, so that its bristles readily clean the meshes of any flour filling the said meshes. A similar revoluble and traveling brush Q' is arranged under the perforated bottom of the sieve C', and both revoluble brushes are preferably of the construction shown and described in the application for Letters Patent,
20 Serial No. 517,099, filed by us on the 10th day of July, 1894. The mechanism for operating the brushes is identical to the one described in said application, so that further description of the same is not deemed necessary, it being however, understood that the actuating mechanism for the brushes Q is driven from
25 the shaft H, and the shaft H³ drives the mechanism for the brush Q'.

It is further understood that it is not absolutely necessary to employ two sieves C and

C', but in order to produce a very fine grade of flour, two or more such sieves are preferably employed. 35

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

1. A shaking bolt, comprising a sieve held 40 in an inclined position, rods supporting the lower ends of the sieve, rocking beams connected with the upper ends of the said sieve, a driving shaft eccentrically connected with the said beams, and also eccentrically connected with the lower ends of the said sieve, substantially as shown and described. 45

2. A shaking bolt, comprising a sieve held in an inclined position, rods supporting the lower ends of the sieve, rocking beams connected with the upper ends of the said sieve, means, substantially as described, for imparting a longitudinal shaking motion to the said sieve and a swinging motion to the said beams, a hopper provided with a movable 55 feed gate operatively connected with the said beams, and a feed board upon which is discharged the material issuing from the hopper, to feed the material into the upper end of the sieve, as set forth.

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Witnesses:

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