

(No Model.)

J. CRAIG.
Tread Mill.

No. 230,751.

Patented Aug. 3, 1880.

FIG. 1.

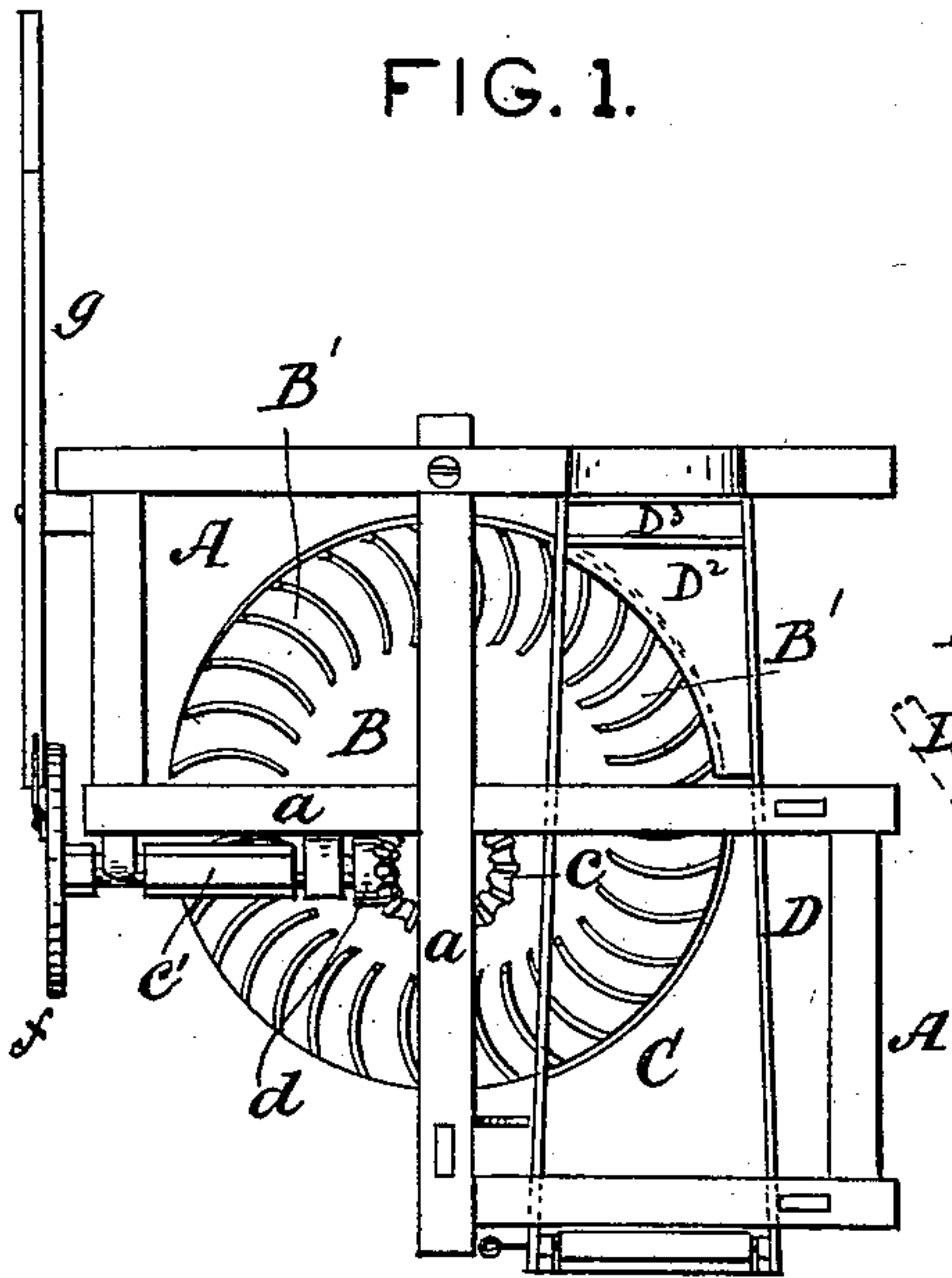


FIG. 2.

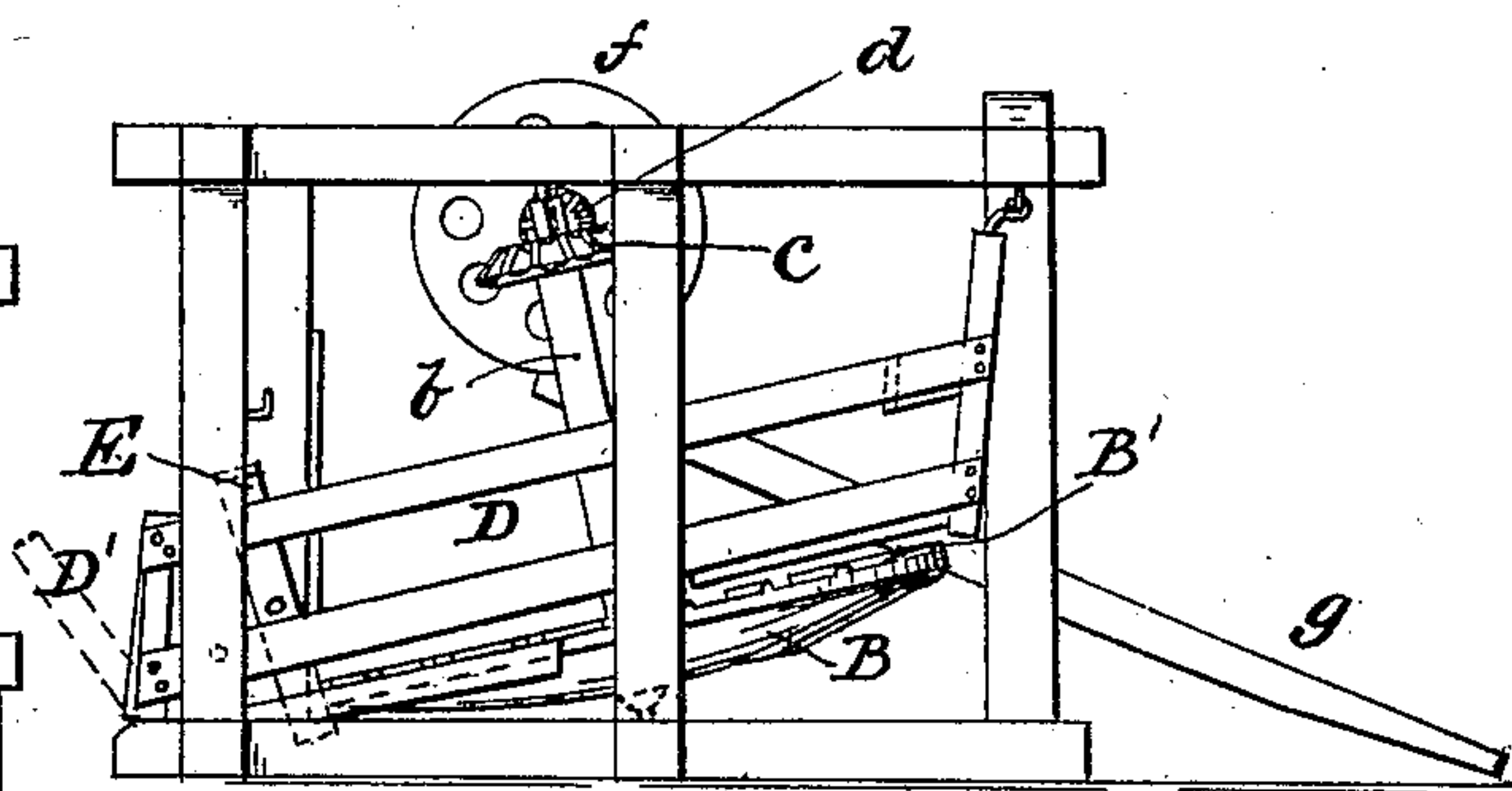


FIG. 3.

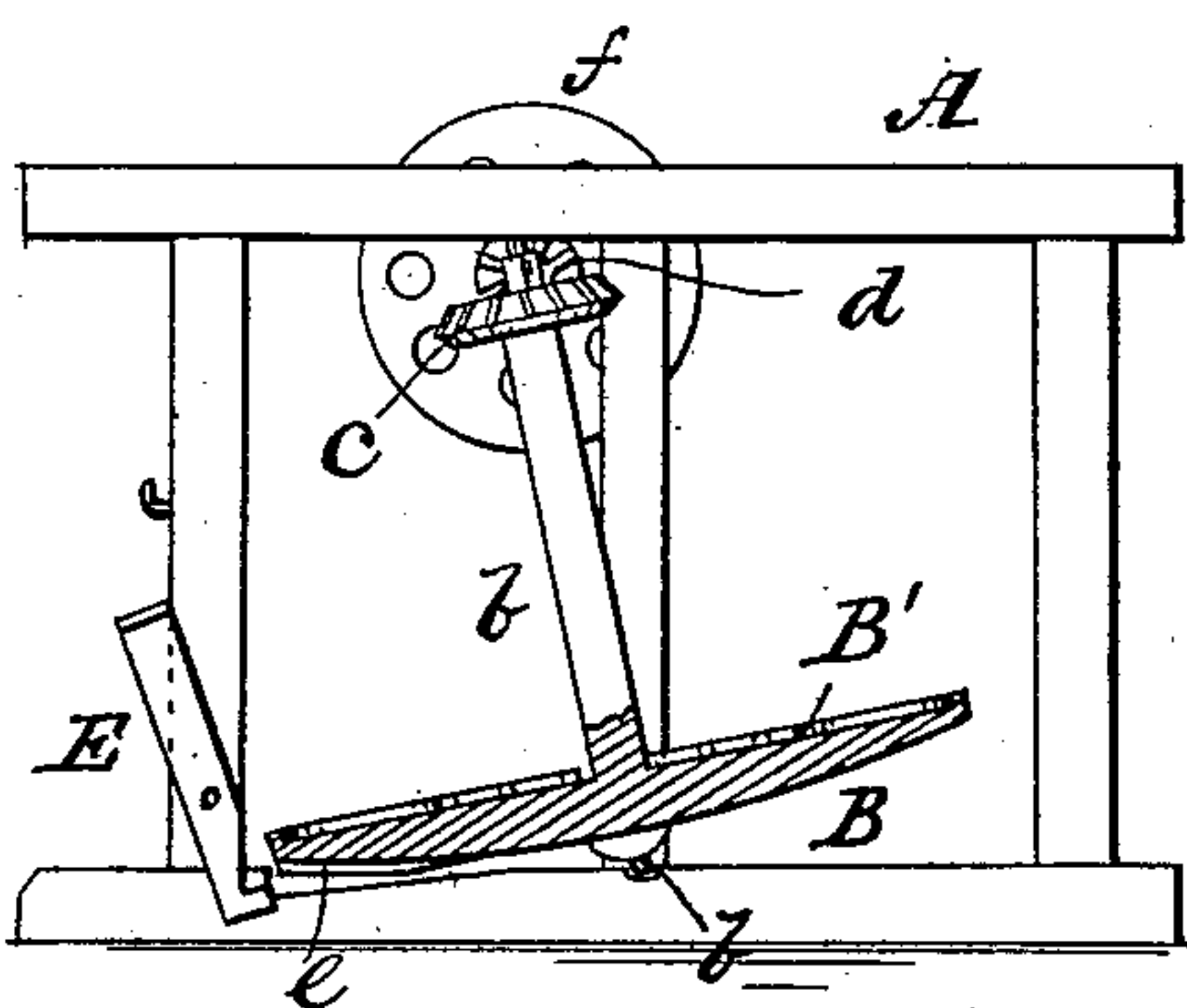


FIG. 4.

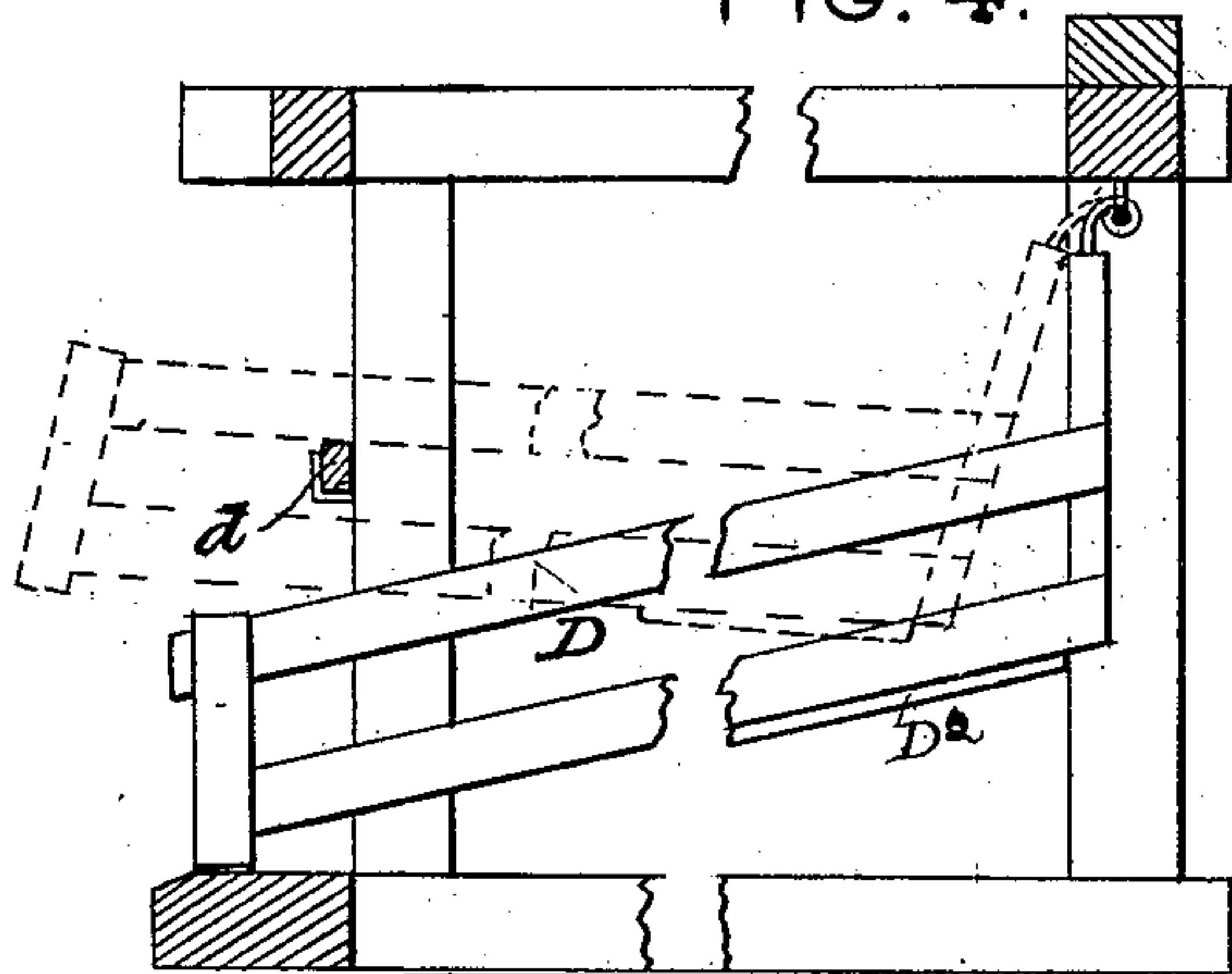
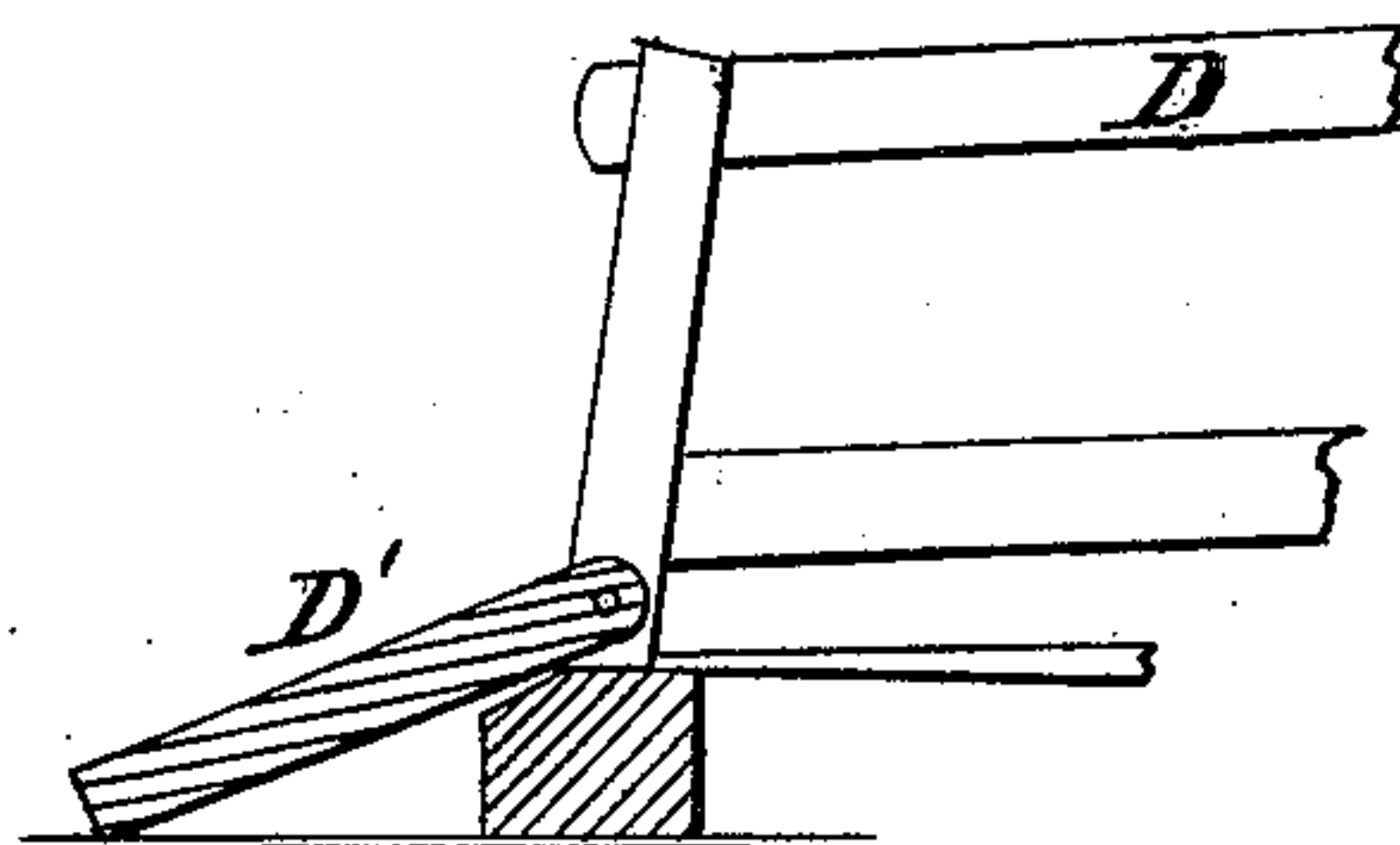


FIG. 5.



Witnesses:
R. B. Turpin
Wm. C. McGill, Jr.

Inventor:

John Craig

By R.E. & A.P. Lacey Attys.

UNITED STATES PATENT OFFICE.

JOHN CRAIG, OF SCHUYLER, NEBRASKA.

TREAD-MILL.

SPECIFICATION forming part of Letters Patent No. 230,751, dated August 3, 1880.

Application filed June 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN CRAIG, a citizen of the United States, resident at Schuyler, in the county of Colfax and State of Nebraska, have invented certain new and useful Improvements in Tread-Mills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has relation to improvements
15 in tread-mills used as a motor power to drive machinery, having, principally, for its object to enable the application of the power between the feet of the horse or animal and the rotary table or wheel to be effected in about
20 a plane to correspond with the resultant plane of motion of the two motions of the table and the feet of the horse or animal; and, further, to provide for adjusting the stall to a point above its normal position, as may be required
25 under certain circumstances; and it consists, primarily, of a rotary table or wheel having a circular series of marginal curved cleats or bars and of a suspended adjustable stall, substantially as hereinafter more fully set forth.

30 In the drawings, Figure 1 is a plan. Fig. 2 is a side elevation. Fig. 3 is a vertical section, showing the tread-wheel. Fig. 4 is a vertical section, showing the adjustable stall, and Fig. 5 is a detail view of a portion of the
35 adjustable stall.

In the accompanying drawings, A indicates an upright frame, by preference consisting of two smaller upright frames, arranged diagonally opposite to each other. The two main
40 horizontal or top beams, *a a*, resting or secured upon the upper ends of the uprights of two sides of each frame, cross each other about centrally, as seen in Fig. 1. The point of intersection or crossing between the beams *a a*
45 is about in line with the center of the table or platform, and consequently permits of its serving as a point of bearing for the upper end of the shaft of the table or disk.

B is the rotary table or disk, disposed in
50 an inclined position to the horizontal plane of the frame, with its shaft *b* bearing at

its lower end in a step in one of the base-pieces of the frame A, and at its upper end, as already stated, in one of the beams at about their point of crossing. This shaft
55 has at its upper end a beveled-gear wheel, *c*, which engages with a pinion, *d*, on one end of a shaft, *c'*, suitably supported in position in bearings attached to one of the beams *a*. The other end of the shaft *c'* is pro-
60 vided with a circularly-perforated disk or eccentric, *f*, to which is attached the pitman *g*, for transmitting the motion of the wheel or table to the machinery to be driven or oper-
65 ated. The wheel or table B is provided, adjacent to its margin or circumference, with a circular series of uniformly-spaced-apart cleats or bars, *B'*, by the contact of the feet of the animal with which the wheel or table is put in
70 motion. These bars or cleats are curved regularly in the direction of their longitudinal plane from end to end, as seen in Fig. 1, and constitute one of the main features of my invention.

It will be noticed that by the curvature of
75 the cleats the feet of the horse or animal will strike them and act upon the wheel or table about in a plane which corresponds with the resultant of the motion of the wheel and that of the horse, thus enabling the horse to work
80 with greater ease and for a longer time.

At one side of the wheel or table is an inclined floor, C, as seen in Fig. 1, into which the wheel extends to permit the animal as the latter passes up the incline C to pass upon the
85 wheel to operate it. Adjusted or hung at one end to the frame A, in position so as to inclose the floor or incline C, is a stall, D, adapted to stand in the position indicated in full lines in Figs. 2, 4, and 5, with a hinged tail-
90 gate, *D'*, let down, as seen in Fig. 5, to allow the animal to pass into the stall, or to be adjusted to an elevated position, as indicated in dotted lines in Fig. 4. A cross-bar, *d*, held or inserted in stirrups fastened to the frame A,
95 permits of the holding of the stall in this latter position whenever occasion may demand it. The stall is also provided with a partial floor or guard, *D²*, fixed on the under side of its inner end, and has its edge cut circular in form,
100 corresponding to the periphery of the tread-wheel. This guard or floor extends slightly

over the edge of the wheel and prevents the animal from stepping off or from getting its feet fast between the rim of the wheel and the frame; and it is also provided with a feed-
5 trough, D, fixed in its inner end, as shown. The floor or guard and the trough are raised or lowered in the adjustment of the stall. The stall is adjustable to and from the wheel, to adapt it to larger or smaller animals, or it may
10 be raised so that a man can pass under it for any desired purpose.

E is a notched lever pivoted to the frame A and adapted to engage a stop, e, on the under side of the wheel or table B, its object being
15 to hold the latter from revolving when necessary.

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

1. In a tread-mill, the inclined disk or wheel 20 having a circular series of marginal curved cleats or bars, substantially as and for the purpose set forth.

2. In a tread-mill, the stall D, constructed with a circular guard or floor, D², on its inner 25 end, and a hinged end gate, D, in its outer end, and having its inner end hinged to the frame, so that it may be adjusted vertically to and from the wheel B, as set forth.

In testimony that I claim the foregoing I 30 have hereunto set my hand and seal this 5th day of June, 1880.

JOHN CRAIG. [L. S.]

Witnesses:

B. F. BUFFINGTON,
ADOLPH DWORAK.