

No. 768,235.

PATENTED AUG. 23, 1904.

H. C. O'BLENESS.
GRAVITY INCLINE MACHINE.

APPLICATION FILED JAN. 9, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

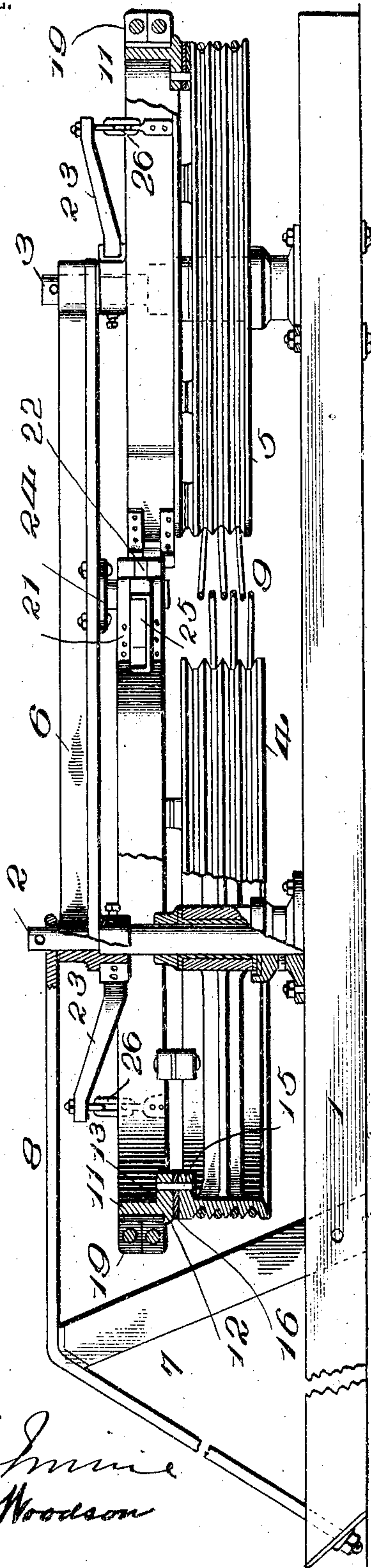
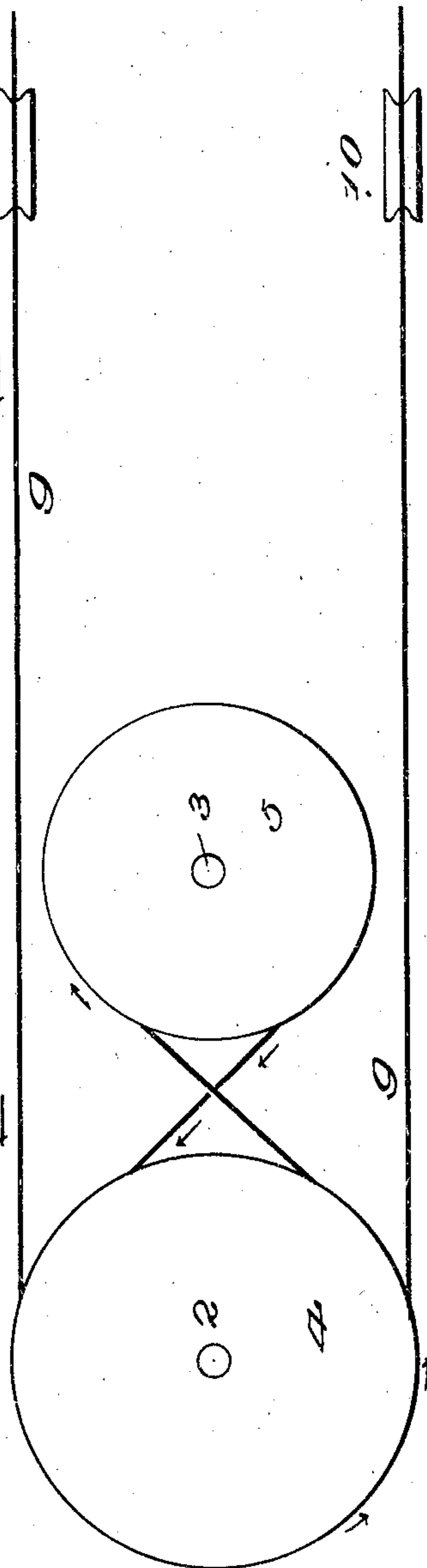


Fig. 2.



Witnesses

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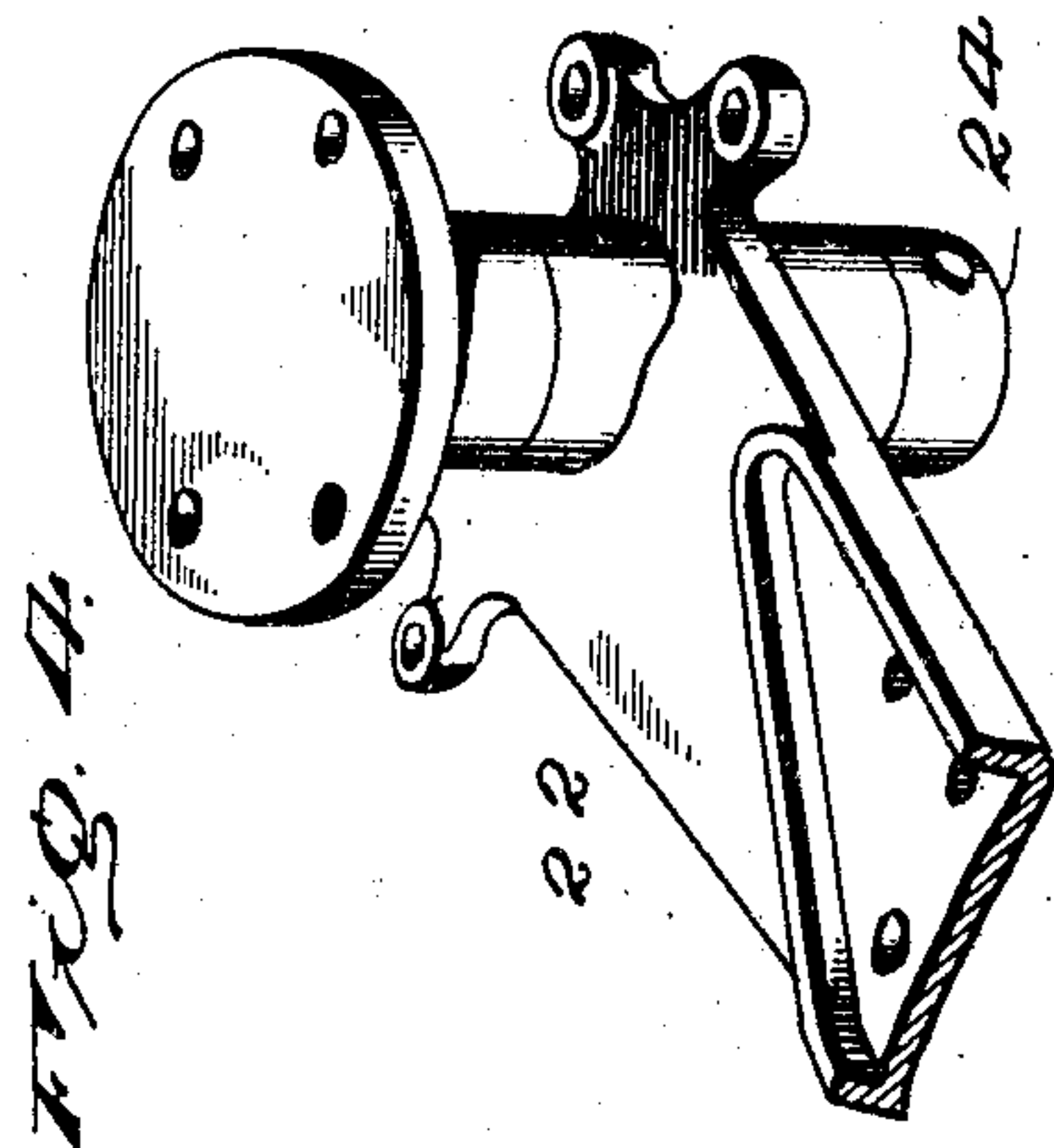
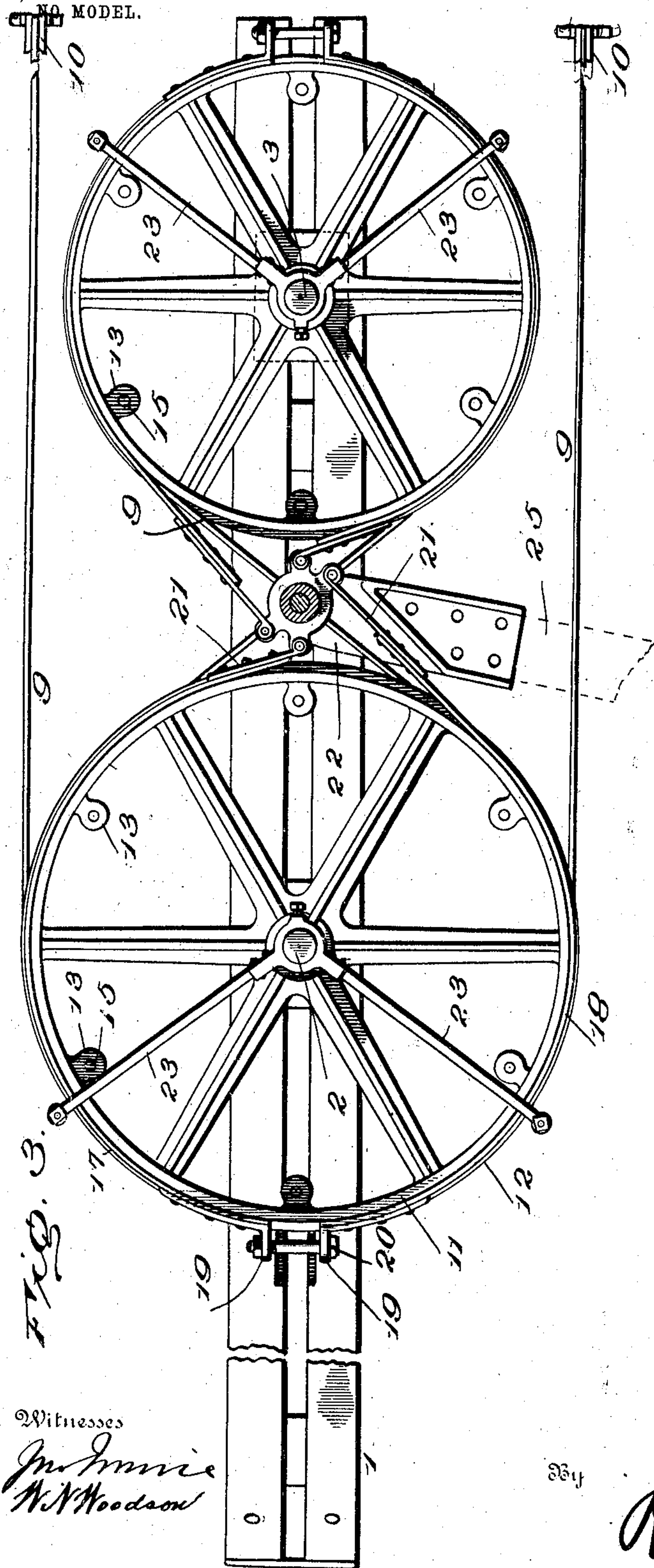
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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GRAVITY-INCLINE MACHINE.

SPECIFICATION forming part of Letters Patent No. 768,235, dated August 23, 1904.

Application filed January 9, 1904. Serial No. 188,356. (No model.)

To all whom it may concern:

Be it known that I, HARRY C. O'BLENES, a citizen of the United States, residing at Athens, in the county of Athens and State of Ohio, have
5 invented certain new and useful Improvements in Gravity-Incline Machines, of which the following is a specification.

This invention relates to controlling mechanism for regulating the descent of loads and
10 the ascent of empty cars or carriers elevated by the superior weight of the gravitating load.

The invention appertains to the type of governing mechanism chiefly designed for use in connection with inclined railways in which the
15 loaded cars are utilized as means for bringing the empty cars into position to receive the load.

An essential feature of the invention is to devise simple and effective means whereby
20 the system is readily under control of the operator, thereby preventing running away of the loaded cars, burning of the brake-wheels, and stripping of the brakes, also to enable adjustment of the brake-bands to compensate
25 for wear and to insure absolute control of the system under all conditions.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the
30 means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying
35 drawings, in which—

Figure 1 is a side elevation of a controlling mechanism embodying the invention, parts
40 being broken away to show more clearly the relative arrangement of the operating elements. Fig. 2 is a top plan view of the multiple sheaves, illustrating the manner of applying the cable thereto so as to obviate slipping. Fig. 3 is a top plan view of the mechanism. Fig. 4 is a perspective view of the
45 brake-actuator and its support.

Corresponding and like parts are referred

to in the following description and indicated in all the views of the drawings by the same
50 reference characters.

The bed of the machine is indicated at 1 and may be of any solid and substantial construction and, as illustrated, comprises heavy
timbers longitudinally disposed and rigidly
55 connected. Journals or posts 2 and 3 project from the bed and are spaced apart a proper distance and form supports for the sheaves 4 and 5, which are loosely mounted thereon. The posts or journals 2 and 3 are
60 secured to the bed by bolts or in any determinate way, so as to provide substantial joints and a rigid framework. The upper or outer ends of the posts are connected by means of a tie 6, which may be a beam or
65 frame. A brace 7 projects upward from an end portion of the bed, and a stay rod or bar 8 is flexed over its extremity and has one end secured to the projecting end of the post 2 and its opposite end connected to the bed 1.
70

The sheaves 4 and 5 are of different diameters and are provided with a series of grooves to provide, in effect, multiple sheaves, around which the rope or cable 9 is wound and crossed, substantially as shown in Figs. 1 and
75 2, to preclude slipping and insure positive gripping of the sheaves by the cable. Direction-pulleys 10 are conveniently disposed for the end portions of the cable to play over and to maintain the parts of the cable between the
80 pulleys 10 and the sheaves 4 in the plane of the grooved portions of the sheaves from which the parts of the cable proceed, thereby obviating all tendency of the cable to leave the sheaves. Each sheave is provided with a brake-rim and
85 brake-band, and inasmuch as these parts are of duplicate construction a detailed description of one only will be given. The brake-rim 11 is provided with an outer flange 12 at its lower edge and with inwardly-extended
90 lugs 13 to coincide with corresponding lugs 14 of the sheaves, the lugs 13 and 14 having registering openings through which bolts or fastenings 15 pass for rigid connection of the parts. The brake-rim is spaced from the
95 sheave, and a washer 16, of refractory mate-

rial, is interposed between the matching lugs 13 and 14, so as to properly space the parts. The brake-band is of sectional construction and comprises the parts 17 and 18, having outwardly-extended lugs 19 at one end apertured to receive the connecting-bolt 20 and having their opposite ends adjustably connected to plates 21, loosely connected to the brake-actuator 22. Each of the parts 17 may consist of a single strip or consists of an outer strap of wrought-iron and an inner strip of suitable material to engage frictionally with the rim 11 to retard the movement thereof when the brake is set. One strip is used until same begins to wear thin. Then an inner strip may be attached to the outer strip by any suitable fastenings, such as rivets or the like. By having the plates 21 adjustably connected with the parts 17 and the latter in turn adjustably connected by the bolt or fastening 20 ample provision is had for compensating for wear, so that the mechanism may be maintained in proper working condition. The brake-bands are supported by the brake-actuator 22 and by means of arms 23, secured to the posts or journals and extended therefrom. Links 26 or analogous means connect the arms 23 and brake-bands.

The brake-actuator 22 is pivotally mounted upon a journal 24, pendent from the tie 6 and bolted or otherwise secured thereto. The four plates 21 are pivotally connected to the brake-actuator a distance from its axis, so as to insure a drawing together of opposite ends of the respective brake-bands upon operating the brake-actuator to set the brakes. A handle 25 is secured to the brake-actuator to afford ample leverage for turning the same

about its axis when it is required to set the brakes.

Having thus described the invention, what is claimed as new is—

1. In controlling mechanism of the character described, the combination of a post, a sheave journaled thereon, a brake-rim in connection with said sheave, arms extended from the post and adapted to support the brake-band, a brake-actuator, and means connecting opposite ends of the brake-band to the brake-actuator, substantially as set forth.

2. In controlling mechanism of the character described, the combination of a sheave provided with inwardly-extended lugs in the plane of an edge, a brake-rim provided with corresponding lugs in the plane of the edge adjacent to said sheave, means connecting the two sets of lugs, and refractory material interposed between the lugs of the sheave and brake-rim, substantially as set forth.

3. In controlling mechanism of the character described, the combination of two sheaves spaced apart and arranged in the same plane, brake-rims connected to the respective sheaves and arranged in the same plane, brake-bands for the respective brake-rims, and an actuator arranged in the plane of the brake-rims and in the space formed between them and having the terminal portions of the respective brake-bands connected thereto, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY C. O'BLENESS. [L. S.]

Witnesses:

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C. L. BIDDISON.