

No. 671,280.

Patented Apr. 2, 1901.

J. JENÉ.

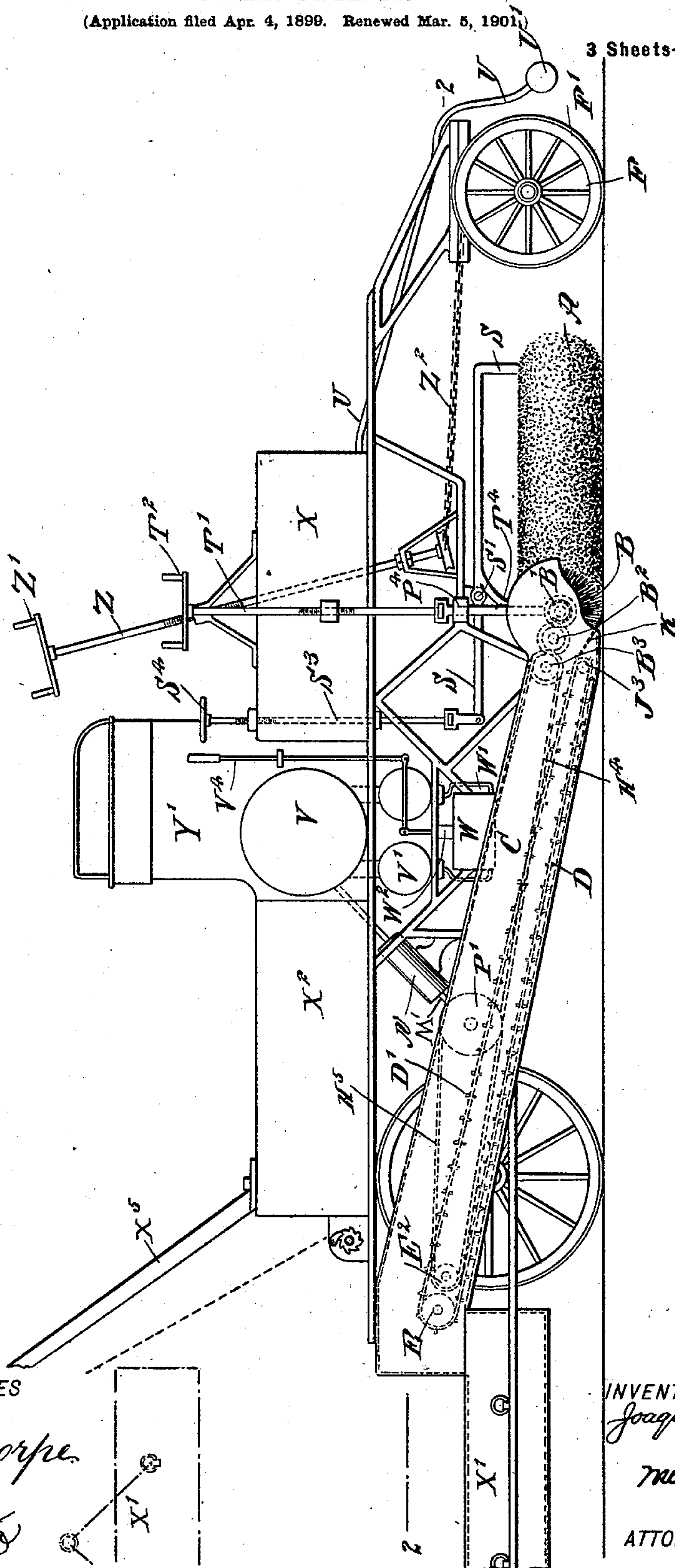
STREET SWEEPER.

(Application filed Apr. 4, 1899. Renewed Mar. 5, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



WITNESSES

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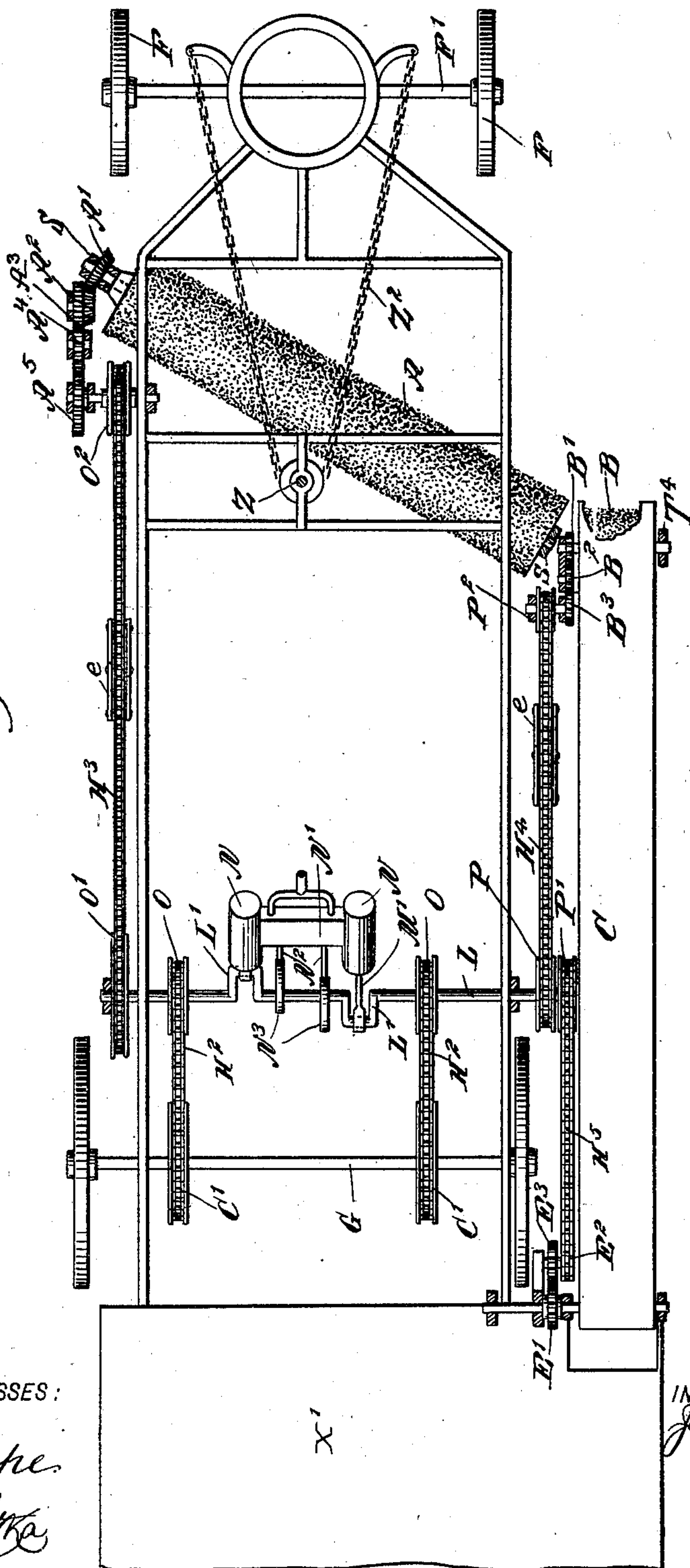
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Fig. 2.



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Fig. 6.

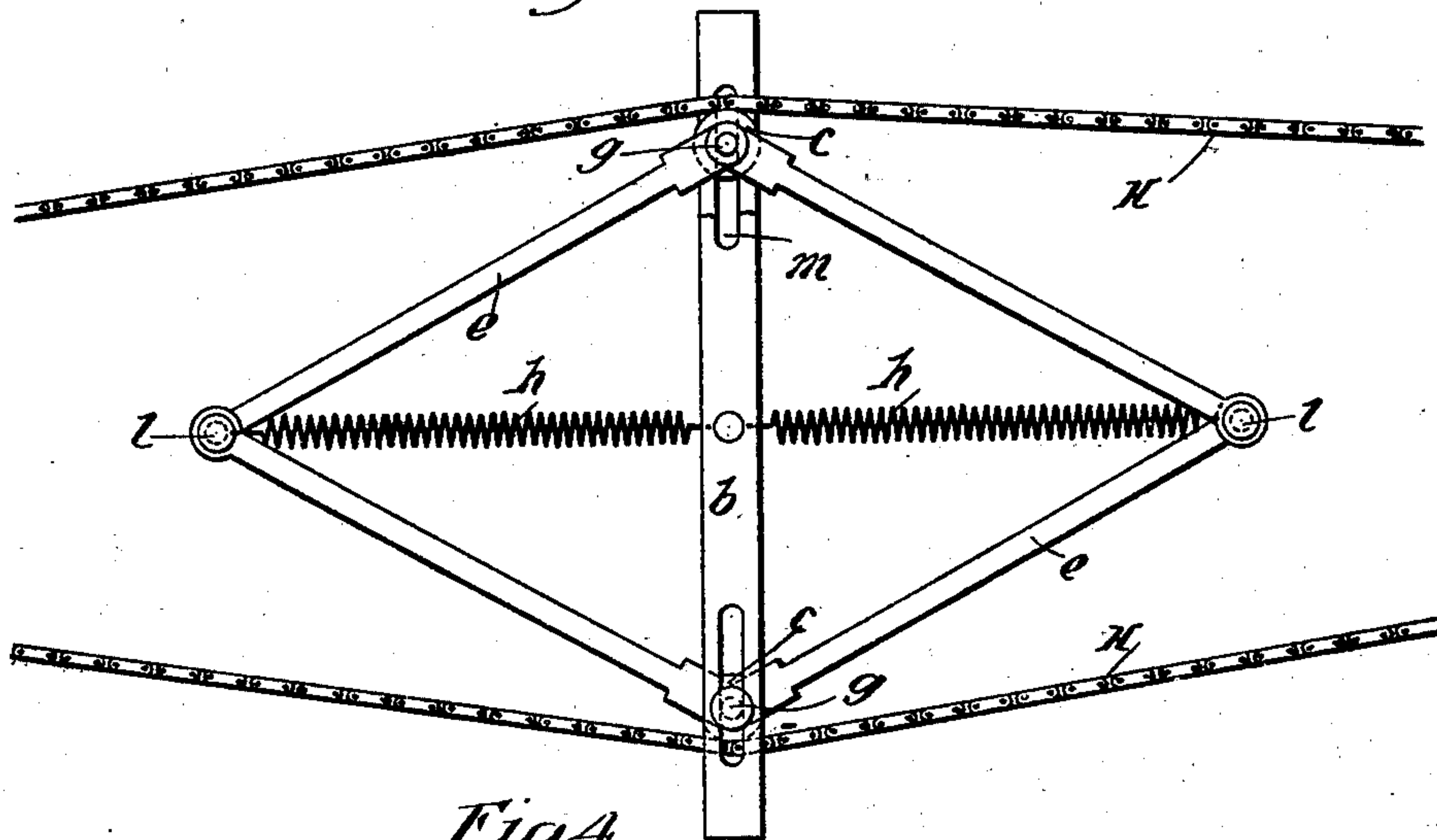


Fig. 4.

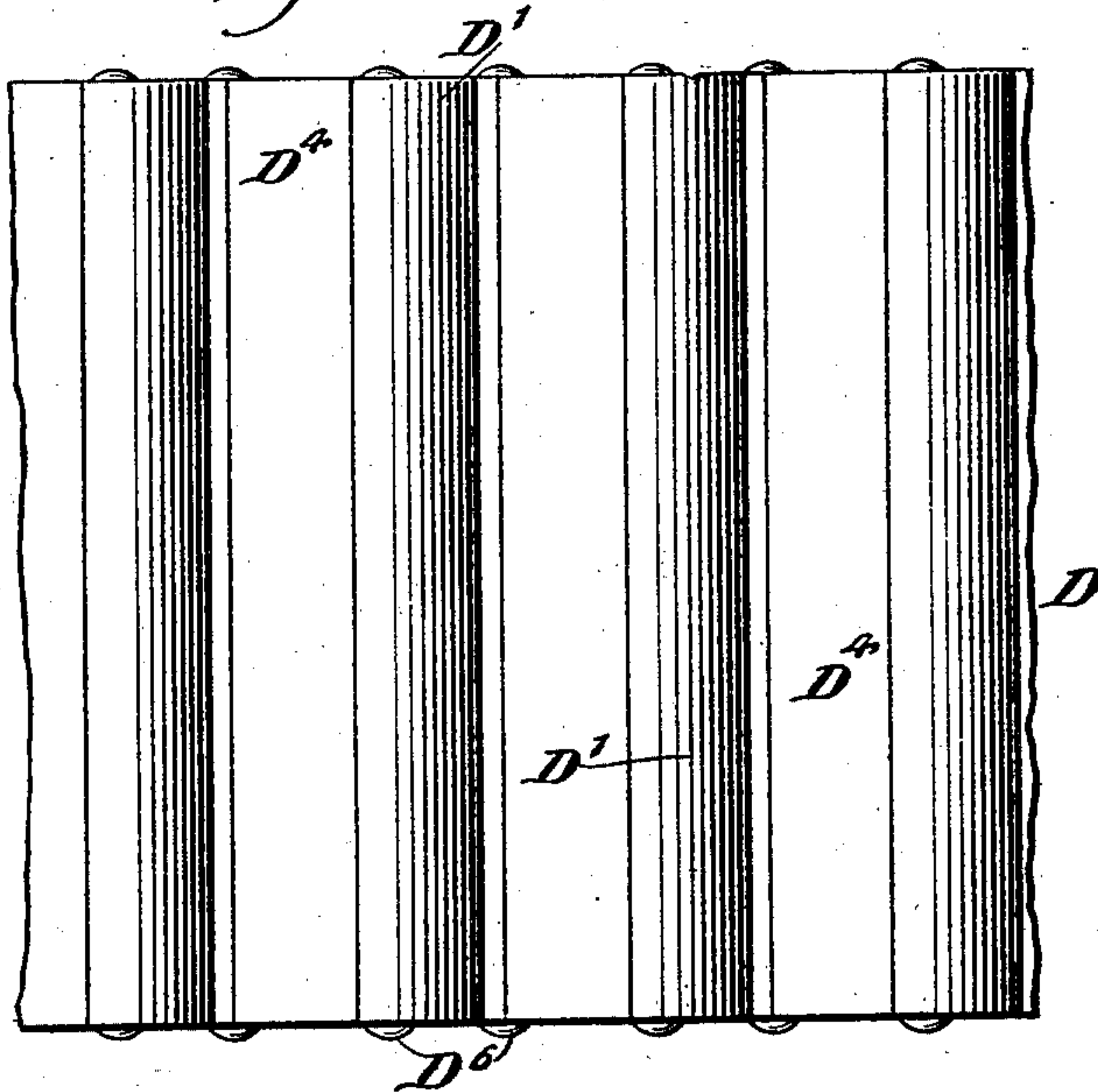
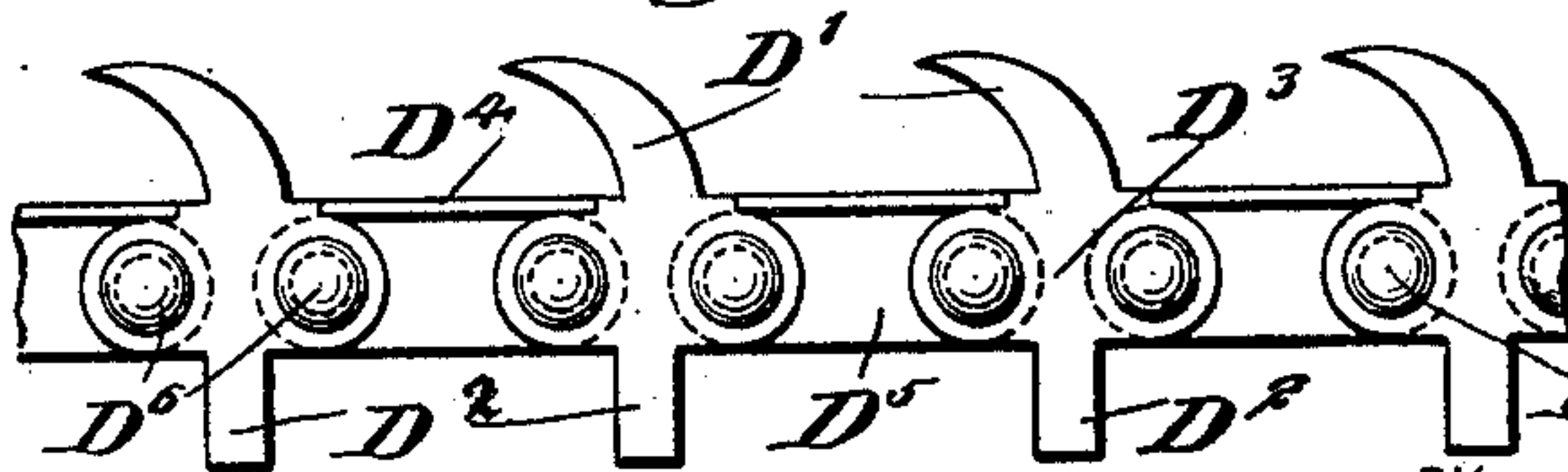


Fig. 5.



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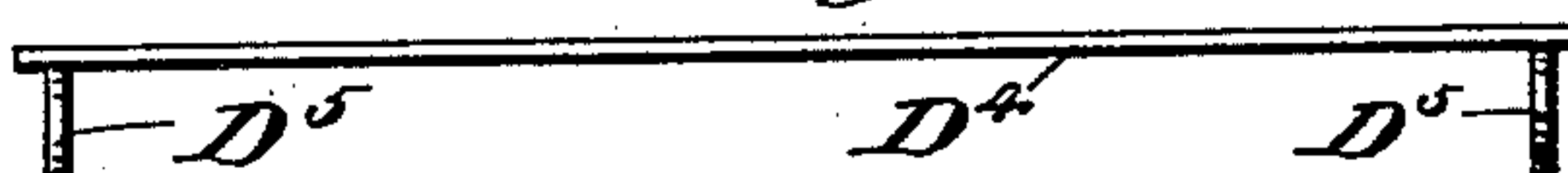
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Fig. 3.



UNITED STATES PATENT OFFICE.

JOAQUIN JENÉ, OF BUENOS AYRES, ARGENTINA.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 671,280, dated April 2, 1901.

Application filed April 4, 1899. Renewed March 5, 1901. Serial No. 49,901. (No model.)

To all whom it may concern:

Be it known that I, JOAQUIN JENÉ, a subject of the King of Spain, and a resident of Buenos Ayres, Argentina, have invented a new and useful Improvement in Street Sweepers and Sprinklers, of which the following is a full, clear, and exact description.

My invention relates to street-sweepers, and has for its object to provide a sweeper carrying a propelling-engine; also, means for sprinkling the streets and gathering the sweepings into a receptacle, so that the machine may be termed an "automobile combined street sweeper, sprinkler, and dirt-cart."

The invention will be fully described hereinafter and the features of novelty pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved machine. Fig. 2 is a sectional plan on line 2 2 of Fig. 1. Figs. 3, 4, and 5 are detail views of the conveyer for the sweepings, Fig. 3 being a plan of one of the side plates or links of the conveyer, Fig. 4 a plan of a portion of the conveyer, and Fig. 5 a side elevation thereof; and Fig. 6 is a detail elevation of a tension device for the chains.

The machine comprises a suitable wheeled frame carrying a boiler V with heaters V', the steam generated being led by means of any suitable distributing device—such as the chest N', containing slide-valves operated by rods N² and eccentrics N³—into the cylinders N, the piston-rods of which, M', are connected with cranks L' on the transverse drive-shaft L. On the said shaft are rigidly secured the five sprocket-wheels O O O' P P'. The wheels O O, by means of sprocket-chains H² and sprocket-wheels C', drive the rear axle G. The sprocket-wheel O', by means of the chain H³, sprocket-wheel O², and train of pinions A⁵ A⁴ A³ A² A', drives the windrow-brush A, which is disposed obliquely at the front end of the frame immediately in the rear of the front wheels F. A chain H⁴ passes from the wheel P to the sprocket-wheel P², on the shaft of which is the pinion B³, from which is driven, by means of the pinions B² B', the lifting-brush B, arranged parallel to the rear axle,

and therefore at an angle to the sweeping-brush or windrow-brush A. It will be readily understood that the brush A sweeps up the dirt and crowds it toward its right-hand end, (which is its rear end,) to be there taken up by the lifting-brush B and thrown over the apron K on the upper run of the conveyer D. This conveyer is carried by the wheels or toothed rollers J³ and E, of which the latter engages teeth D² on the inner surface of the conveyer-chain D. On the same shaft as the roller E is mounted a pinion E', in mesh with a gear-wheel E³, rotating in unison with the sprocket-wheel E², which is driven from the sprocket-wheel P' by the chain H⁵. The conveyer D on its outer face has teeth D', curved toward the upper end of the conveyer, so as to better hold the sweepings while they are being carried up. A casing C is preferably used to cover the conveyer, the rear end of said casing having an opening leading into the top of the receptacle X', the opening being directly under the rear (upper) end of the conveyer D. It will be seen that the sweepings cannot escape at any side.

When the sweeping apparatus is not in operation, the sweeping-brush A, the lifting-brush B, and the lower end of the conveyer D are raised. A shaft S³ carries a hand-wheel S⁴ and is adapted to screw up or down in the frame when rotated, said shaft by such movement being adapted to swing the lever S on its fulcrum S', and thus raise or lower the brush A and pinion A', which are journaled in said lever, said lever being forked, as shown in Fig. 1, each member of the fork receiving one end of the brush A. By turning the hand-wheel T² the screw-shaft T' is raised or lowered in the frame, and as the lower end of said shaft carries the frame T⁴, in which are located the bearings for the lifting-brush B, said brush may be raised or lowered by turning the hand-wheel T². The frame T⁴ slides in vertical guides P⁴.

The furnace W, arranged under the boiler, may be constructed for burning liquid fuel mixed with air, W' being the wick-tubes. The outlet-tube W² is controlled by a damper which may be worked by a lever V⁴, carrying a handle within the driver's reach.

X and X² are water-receptacles, one to supply the boiler with water and the other con-

connected with the sprinkling-pipe U' by pipes U. Adjacent to the driver's seat Y' is a lever for starting and stopping the engine and various other mechanisms for controlling the engine and the supply of water to the sprinkling-pipe, (such parts being of any approved construction and for this reason not shown in the drawings.) The steering-wheel Z', by means of the shaft Z and chains Z², controls the front axle F'.

The receptacle X' is preferably removable, and a suitable derrick X⁵ is provided for raising said receptacle so as to swing it over a cart into which the sweepings may be dumped.

In order that the movement of the vehicle-body upon its usual springs may not affect the tension of the various sprocket-chains, I provide the device shown in Fig. 6, in which the chain is engaged by rollers c, carried on bolts g, mounted to slide in alining slots m of the frame-bar b, secured to the body of the carriage. The bolts are connected by toggle-links e, pivotally connected at l and controlled by a spring h in such a manner as to hold the rollers c against the chain H, and thus prevent the latter from becoming slack.

The conveyer D, as shown in Figs. 3, 4, and 5, consists of blocks D³, having the downwardly-extending projections or teeth D² to engage the toothed rollers J³ and E, and the upwardly-extending teeth D', curved toward the delivery end of the conveyer to hold the sweepings, as described. The sweepings rest on the transverse top plates D⁴, secured to the side links D⁵, which are pivoted to the blocks D³ at D⁶.

It will be observed that the dirt will be moistened by the sprinkling-pipe U before it is swept by the brush A, and I thus bring the

dirt into a condition in which it will be gathered readily without throwing up dust.

While I have shown my improved sweeper as propelled by a steam-engine, it will be obvious that any other motive power may be used, such as electricity, or the sweeper may be drawn by horses.

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

1. In a street-sweeper, the combination, with the sweeper-frame, means for sweeping the dirt, and a dirt-receptacle, of a conveyer arranged to gather the sweepings and to convey them to the dirt-receptacle, said conveyer consisting of blocks having projections overhanging toward the delivery end of the conveyer, links or side plates connected pivotally with said blocks to form a chain and having cross-plates to support the sweepings, and means for actuating the conveyer.

2. In a street-sweeper, the combination with the sweeper-frame, means for sweeping the dirt, and a dirt-receptacle, of a conveyer arranged to gather the sweepings and to convey them to the dirt-receptacle, said conveyer consisting of blocks having on their outer side projections overhanging toward the delivery end of the conveyer, and tooth-like projections on the inner side, links or plates connected pivotally with said blocks to form a chain and having cross-plates to support the sweepings, wheels having notches to receive the projections on the inside of the conveyer, and means for operating said wheels.

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Witnesses:

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