

(No Model.)

4 Sheets—Sheet 1.

H. AIKEN.
LOADING APPARATUS.

No. 530,296.

Patented Dec. 4, 1894.

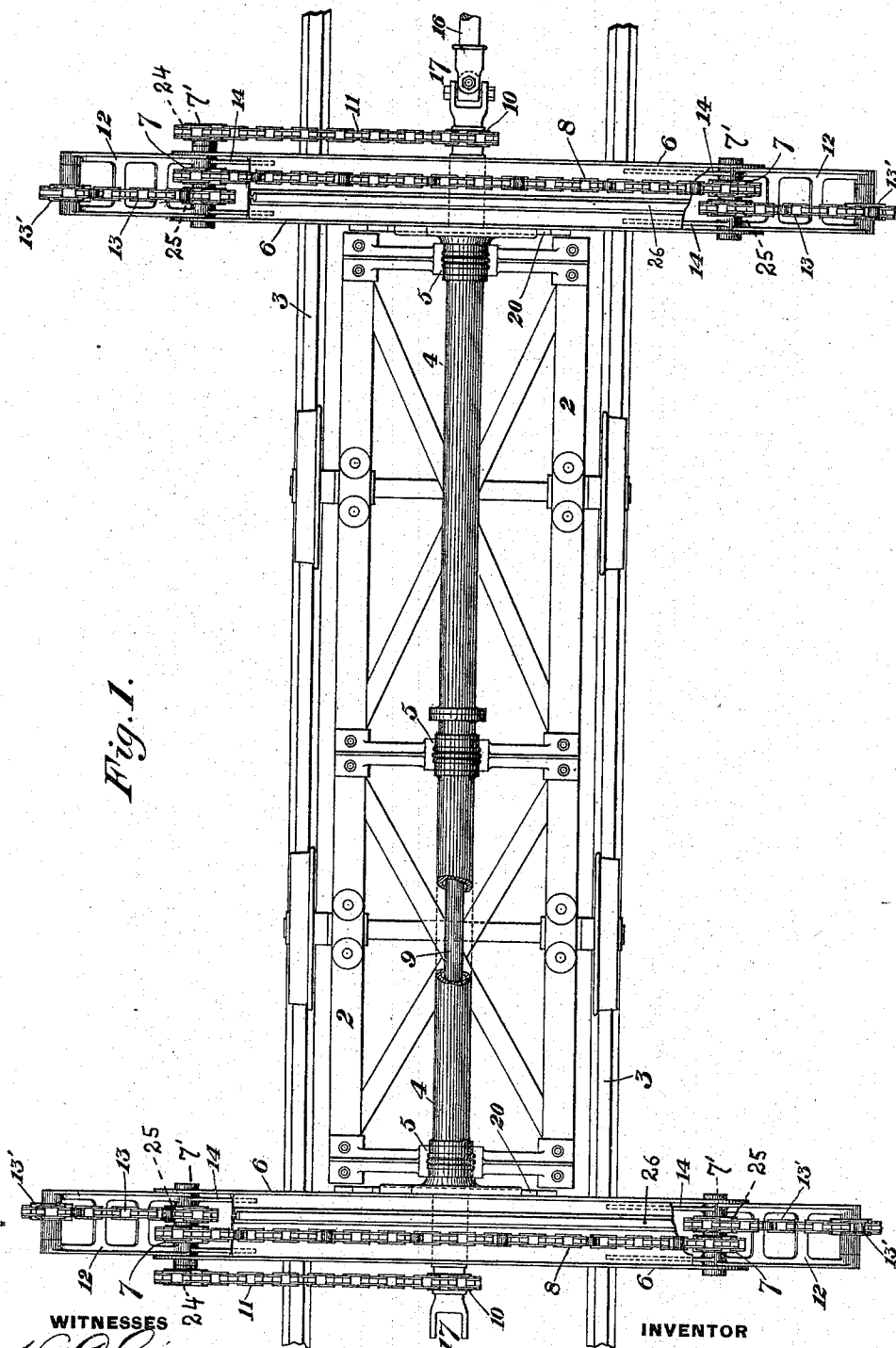


Fig. 1.

WITNESSES

N. L. Gill
W. B. Corwin

INVENTOR

Henry Aiken
by *W. B. Russell & Sons*
his Attorneys.

(No Model.)

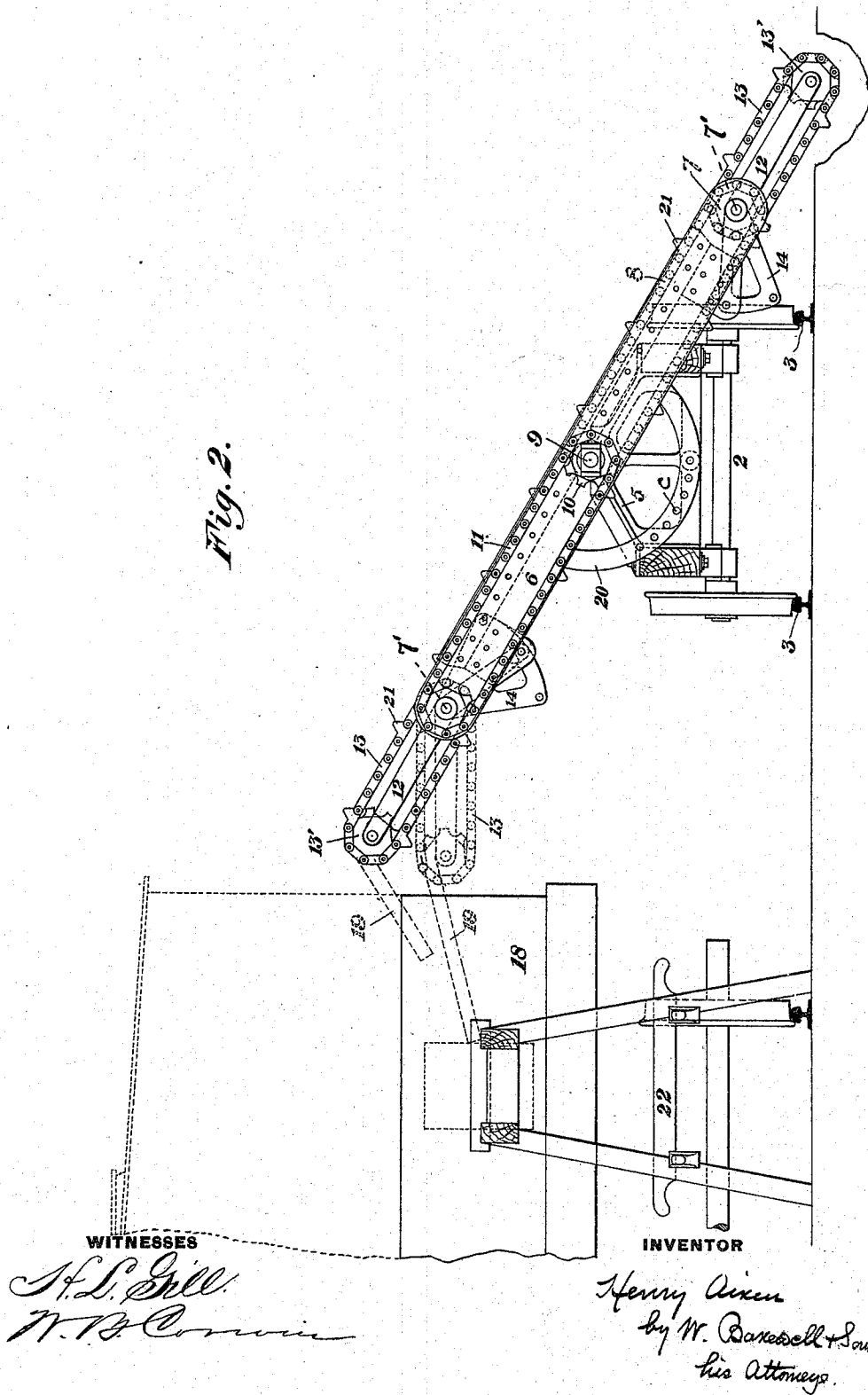
4 Sheets—Sheet 2.

H. AIKEN.
LOADING APPARATUS.

No. 530,296.

Patented Dec. 4, 1894.

Fig. 2.



(No Model.)

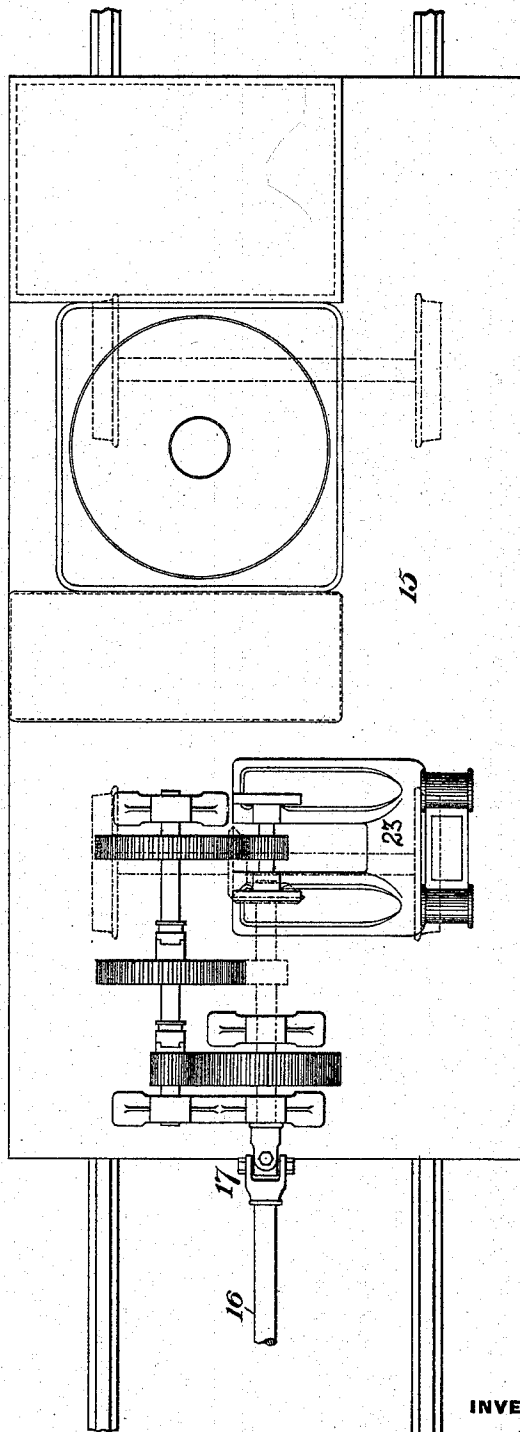
4 Sheets—Sheet 3.

H. AIKEN.
LOADING APPARATUS.

No. 530,296.

Patented Dec. 4, 1894.

Fig. 3.



WITNESSES

A. L. Gill
W. A. Corwin

INVENTOR

Henry Aiken
by W. B. Baxendale & Sons
his Attorneys.

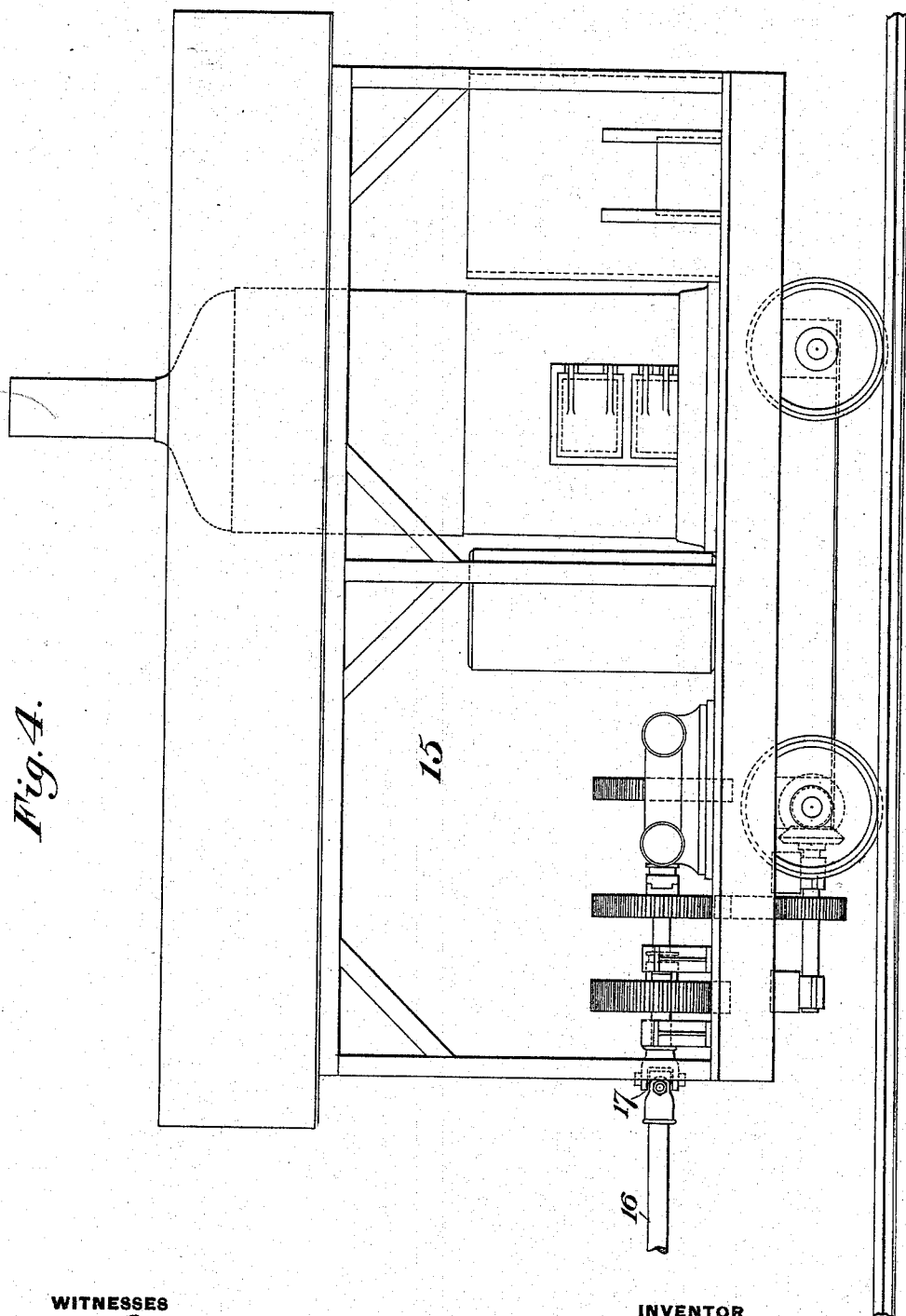
(No Model.)

4 Sheets—Sheet 4.

H. AIKEN.
LOADING APPARATUS.

No. 530,296.

Patented Dec. 4, 1894.



WITNESSES

H. L. Gill
W. B. Corwin

INVENTOR

Henry Aiken
by W. Baxewell & Sons
his Attorneys.

UNITED STATES PATENT OFFICE.

HENRY AIKEN, OF PITTSBURG, PENNSYLVANIA.

LOADING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 530,296, dated December 4, 1894.

Application filed August 15, 1892. Serial No. 443,111. (No model.)

To all whom it may concern:

Be it known that I, HENRY AIKEN, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Loading Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of part of the rail-loading apparatus embodying my invention. Fig. 2 is an end view thereof. Fig. 3 is a plan view of the motor, and Fig. 4 is a side elevation thereof.

Like symbols of reference indicate like parts in each.

My invention relates to improved means for loading rails, beams, &c., upon cars, and in devices whereby such loading device is rendered movable, so that it may be employed at any place where it may be desired.

In the drawings, 2 represents a car-truck, mounted on wheels, and adapted to be moved back and forth on a track 3.

4 is a hollow shaft or pipe which extends lengthwise of the car, and is mounted in suitable bearings or supports 5, in which it can be turned on its longitudinal axis. At the ends of the shaft 4, are frames 6, fixed thereto and projecting radially therefrom to both sides. These frames, which are set parallel to each other, are suitably constructed of metal beams, and constitute the means for supporting the sprocket wheels and chains by which the rails are loaded. They may also be provided with longitudinal rails 26, which afford supporting surfaces on which the beams or rails being loaded are carried by the action of the sprocket chains and spurs hereinafter described.

The sprocket-wheels 7 are fixed to shafts 7', journaled at the ends of the frames, and in each frame the endless sprocket-chains 8 connect the wheels as shown. They derive their power from a shaft 9 (driven as hereinafter explained), which extends axially through the shaft 4, and is provided with end sprocket-wheels 10, connected with a sprocket-wheel 24 on one of the shafts 7', by driving chains 11. There are also preferably supplemental frames 12, which extend lengthwise from the ends of the frames 6, being connected pivotally to the latter on the axes of the shafts 7',

and are provided with sprocket-chains 13, which connect sprocket wheels 13' at the ends of the frames 12 with sprocket wheels 25 on the shafts 7', and derive their motion from the latter. These supplemental frames are adjustable radially on their pivots at the ends of the frames 6, and when adjusted are held by braces 14, as indicated by dotted lines in Fig. 2, so as to adapt the device for receiving rails from and delivering them to places at different levels as hereinafter explained. The inclination of the main frames 6 and their sprocket-chains can also be varied by turning the hollow shaft 4 in its bearings on the car. There may also be a supplemental frame at one end only of the frame 6, though I prefer to have one at each end, as shown.

The driving shaft 9 derives its rotary motion from a motor 23, which is situated preferably on a separate car 15, a driven shaft of the motor being connected with the shaft 9 by an intermediate shaft 16, having universal joints 17. The shaft 16 may thus be made to serve both as the means of transmitting rotary motion to the shaft 7, and as the coupling link connecting the cars 2 and 15.

The car 15 may be used as a locomotive engine by connecting its axles with the motor by suitable gearing, as shown in Fig. 4.

When the apparatus is to be used, the cars are moved along the track until the sprocket-chain car 2 is brought opposite to the railway car 18 to be loaded. Then the frames 6 and 12 are set at the proper inclination, so that the ends of the lower supplemental frames shall be at the place from which the rails are to be taken, and that the ends of the upper supplemental frames shall be at the car into which the rails are to be delivered, or can be connected therewith by delivery arms 19. When adjusted at the proper inclination, the frames 6 are held by suitable devices, such as segments 20 and locking-pins, which pass through holes *c* in the segments and in the frame of the car. The driving shaft 9 being then set in rotation by means of the motor, causes the sprocket-chain to travel, and rails or beams piled upon their lower ends are carried by spurs 21 thereon up to the car, into the side of which they are discharged. In cases where the rails are to be received not from the floor as shown in Fig. 1, but from an elevated ta-

ble, the lower supplemental frames may be turned, so as to project from the frames 6 at the proper angle to effect this. Where the railway cars are of such construction that the rails cannot be introduced at the side, but must be put lengthwise into the end of the car, I use the loading device to deliver the rails upon rollers set on frames 22, which I place at the ends of the cars, and when on the rollers, the rails can be pushed into the car by the workmen.

It will be understood by those skilled in the art, that the apparatus is of great utility and is the means of saving much labor in the disposition of the product of rolling mills.

Within the scope of the invention as defined in the claims, variations can be made in the construction and arrangement of the parts of the apparatus.

I claim—

1. A loading apparatus comprising a car, parallel frames supported pivotally on bearings on the car and adjustable thereon to vary their inclination, sprocket wheels at the ends of the frames, sprocket chains connecting them, and an adjustable end-frame or frames mounted pivotally on the axis of said sprocket

wheels, and having sprocket-chains driven thereby; substantially as described.

2. In a loading apparatus, the combination of sprocket-chain frames, a hollow shaft connecting them and rotary to vary their inclination, and a power shaft extending through said hollow shaft; substantially as and for the purposes described.

3. In a loading apparatus, the combination of sprocket-chain frames, a hollow shaft connecting them and rotary to vary their inclination, and a power shaft extending through said hollow shaft, a car supporting said parts, a second motor car, and an intermediate power and draft shaft; substantially as and for the purposes described.

4. The combination of a car, sprocket-chains mounted thereon, a second motor car, and an intermediate power and draft shaft; substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 9th day of August, A. D. 1892.

HENRY AIKEN.

Witnesses:

H. M. CORWIN,
W. B. CORWIN.