(No Model.) 4 Sheets—Sheet 1.

W. STEPHENSON.

TRACTION ENGINE.

No. 603,821. Patented May 10, 1898.

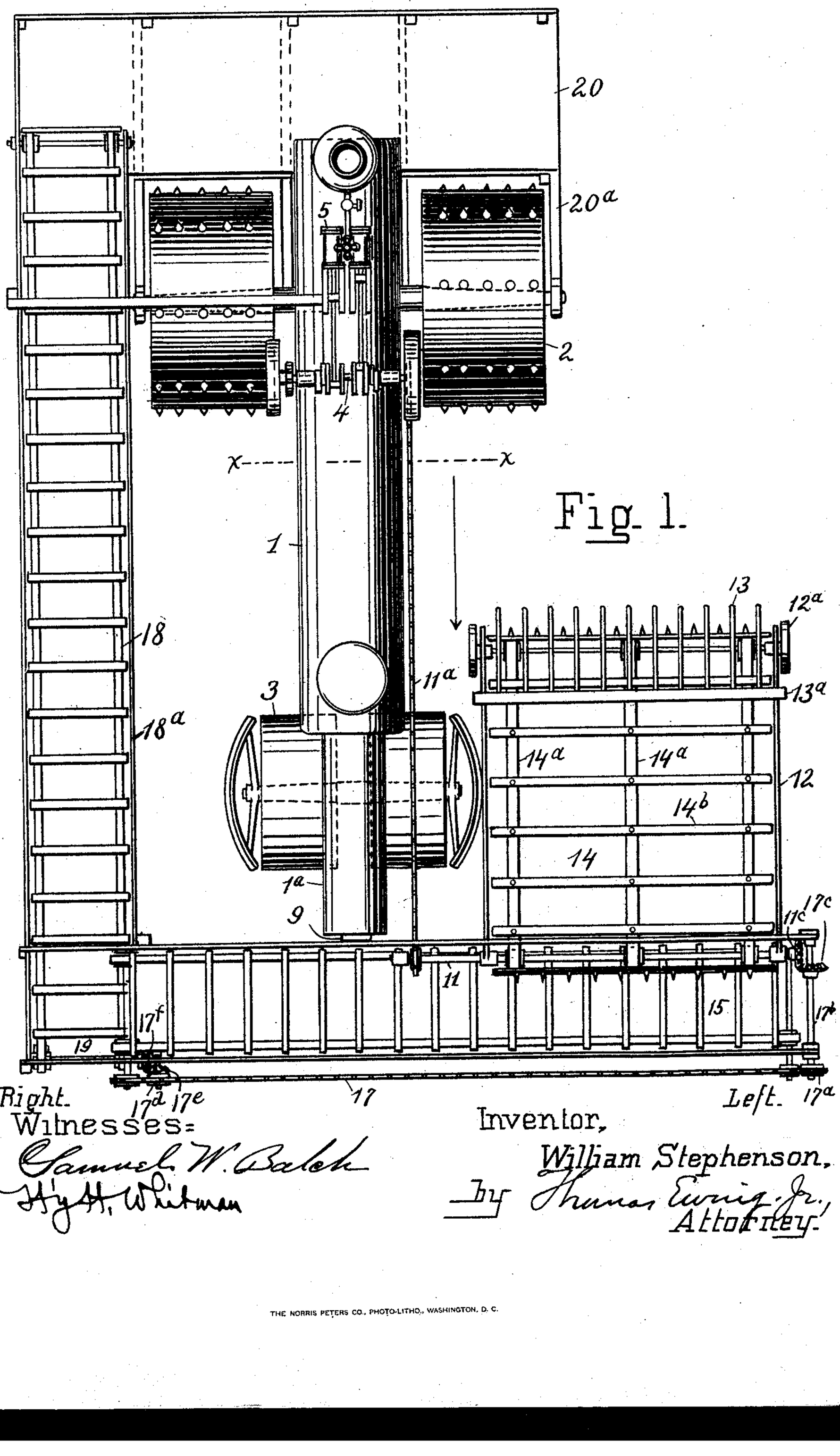

Fig. 1.

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(No Model.)

4 Sheets—Sheet 2.

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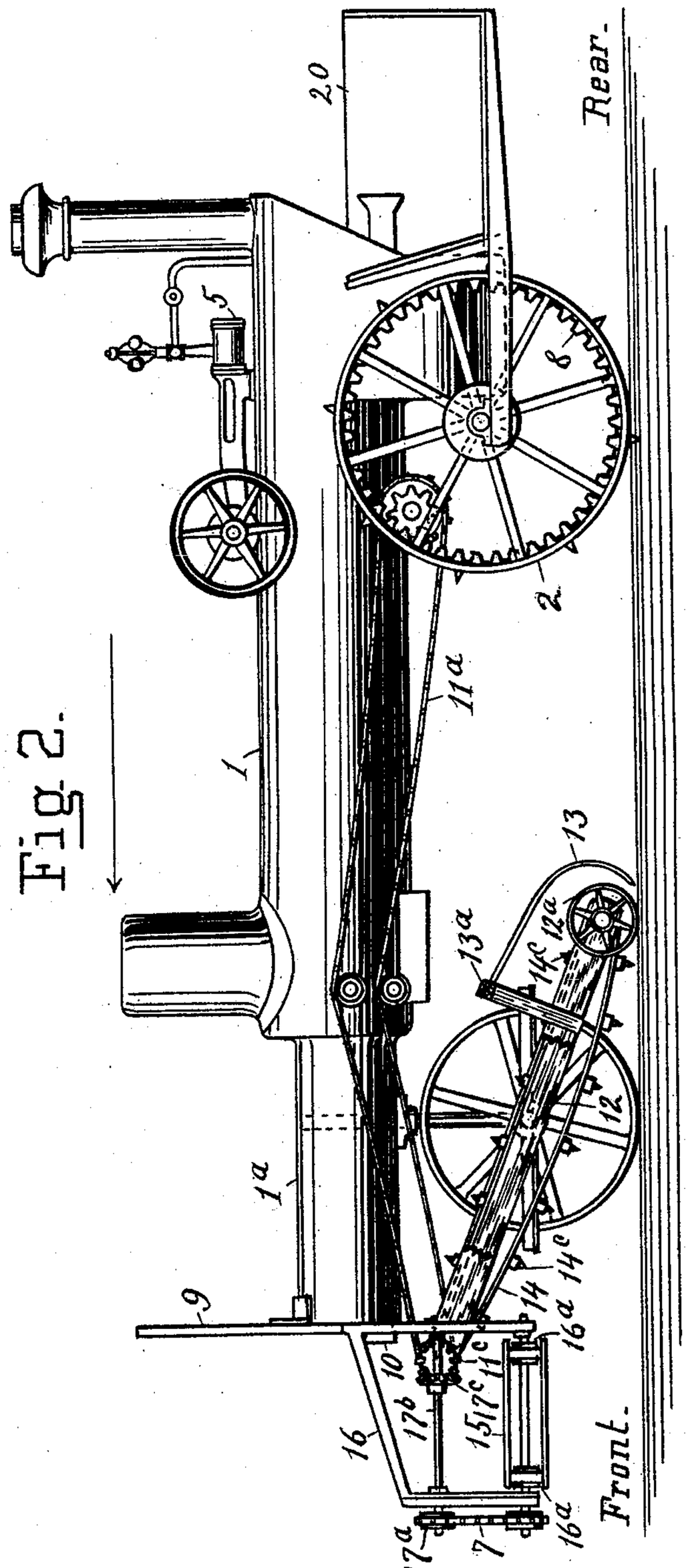

Fig. 2.

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(No Model.) 4 Sheets—Sheet 3.

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TRACTION ENGINE.

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Fig. 3

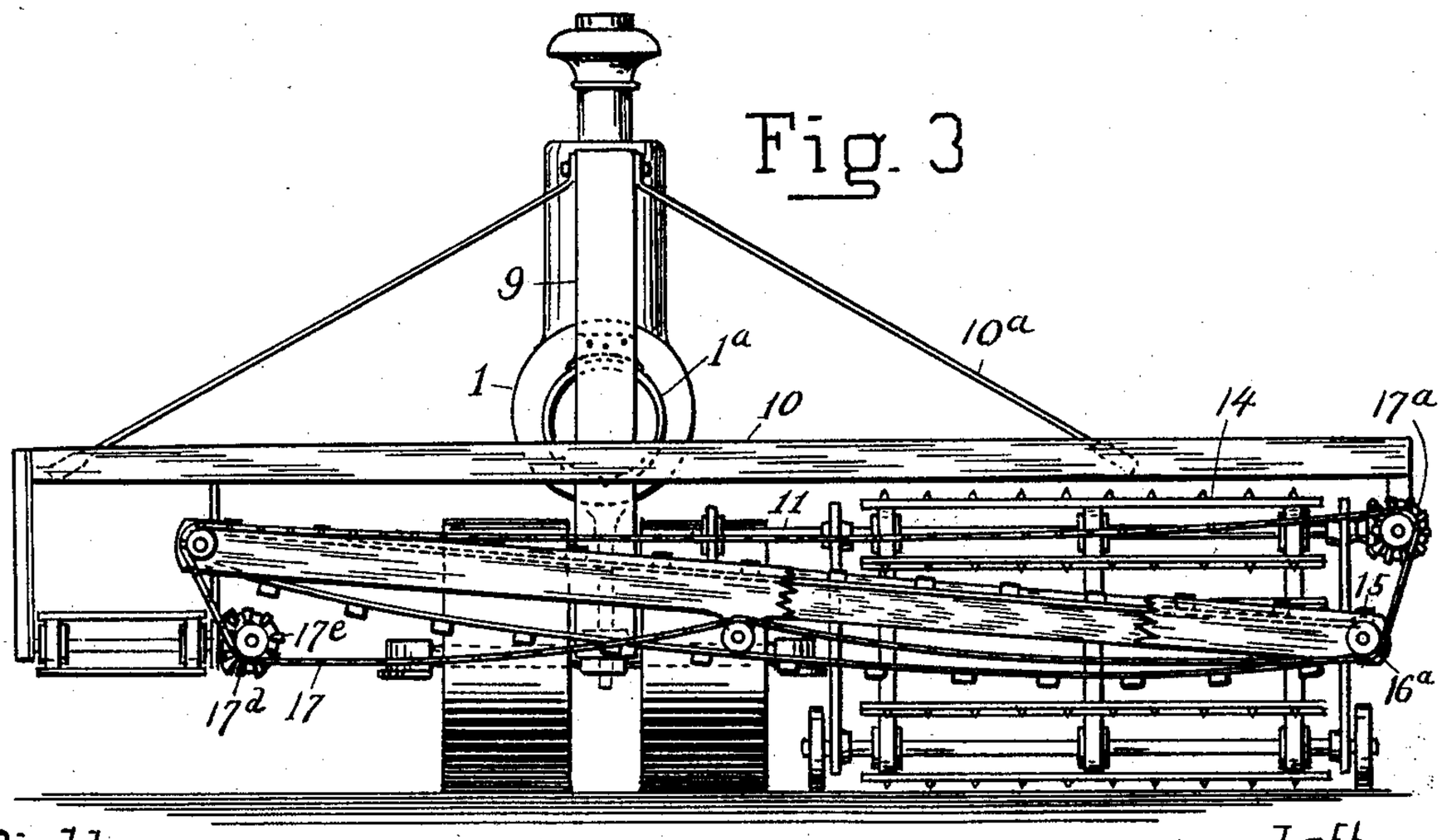
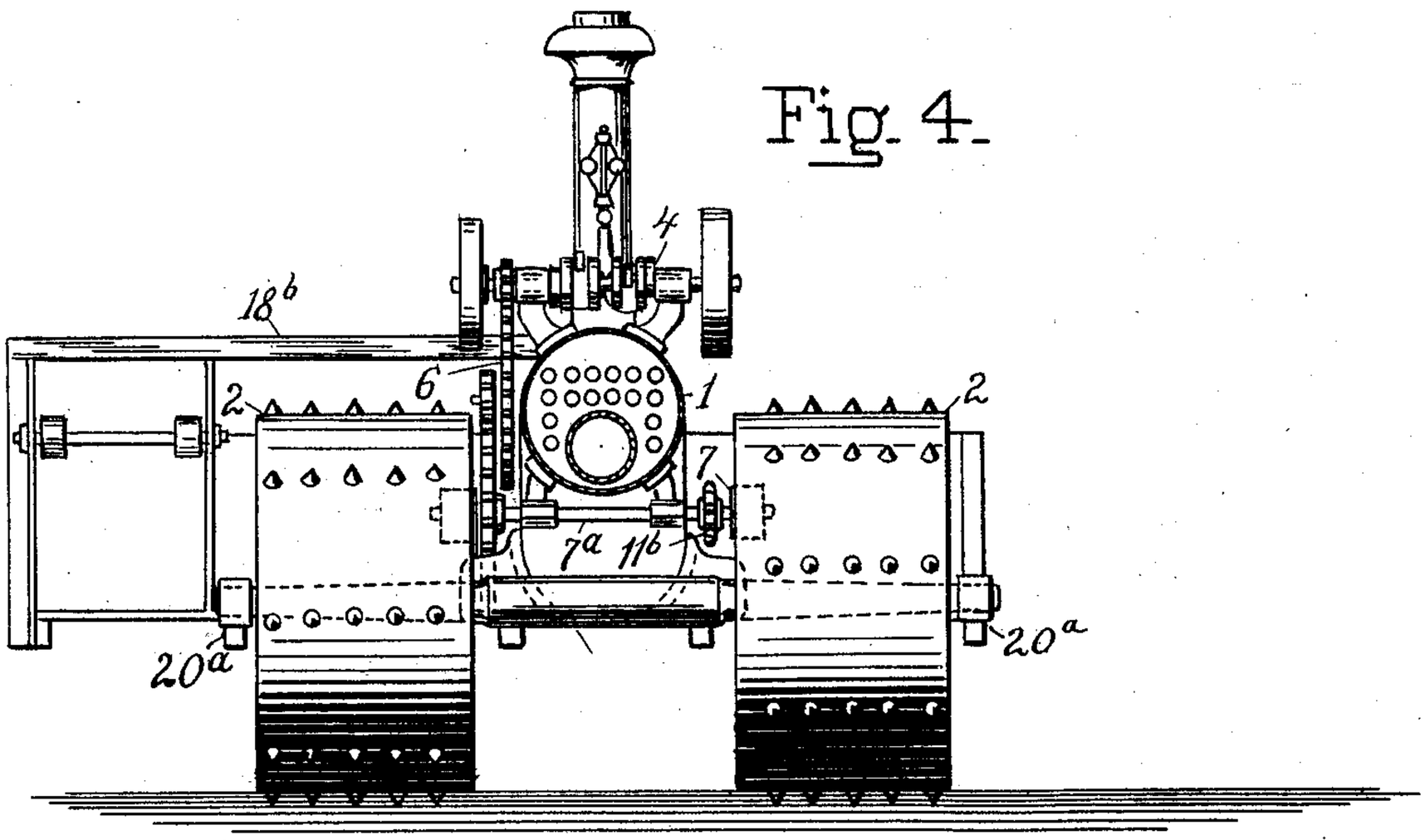


Fig. 4.



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(No Model.) 4 Sheets—Sheet 4.

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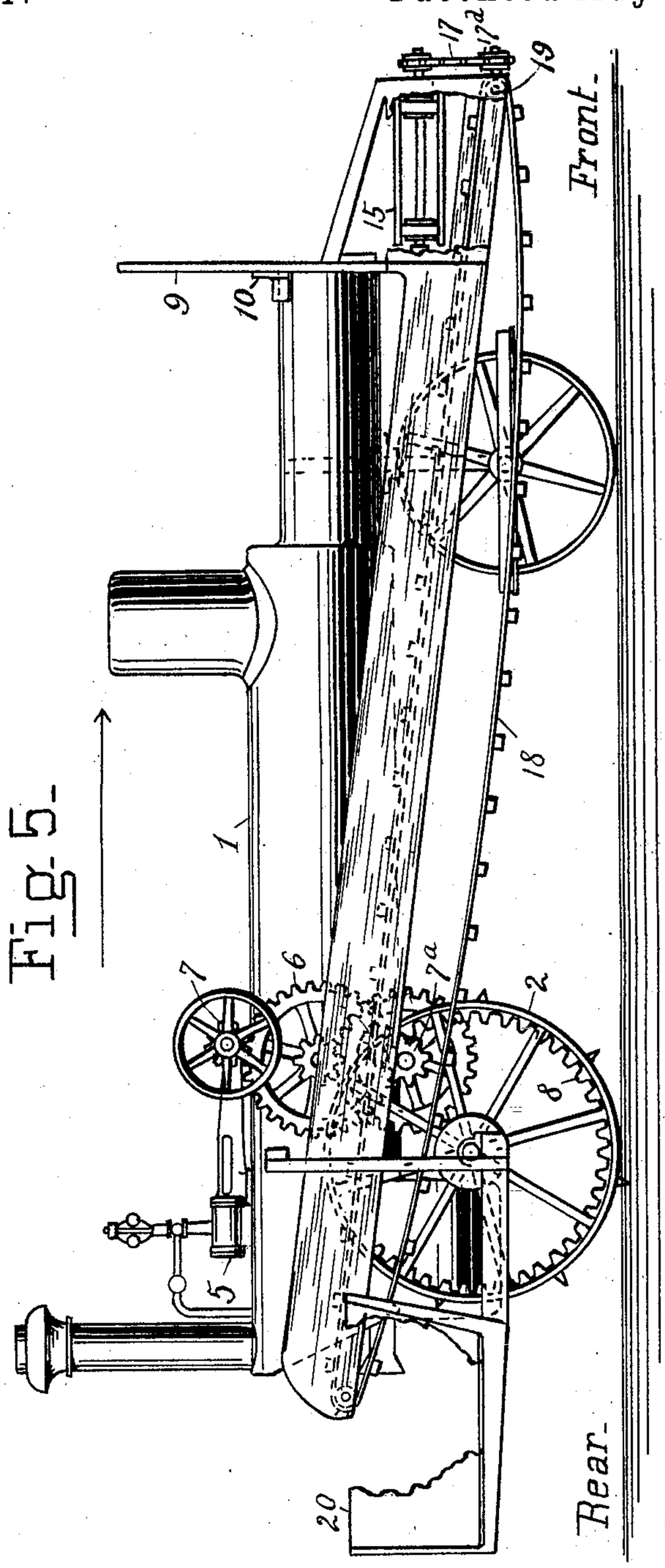
TRACTION ENGINE.

No. 603,821. Patented May 10, 1898.

FIG. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM STEPHENSON, OF MORRIS, CANADA.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 603,821, dated May 10, 1898.

Application filed March 17, 1897. Serial No. 628,039. (No model.) Patented in Canada January 28, 1896, No. 51,157.

To all whom it may concern:

Be it known that I, WILLIAM STEPHENSON, a subject of the Queen of Great Britain, residing at Morris, in the county of Provincher, Province of Manitoba, Dominion of Canada, have invented certain new and useful Improvements in Traction-Engines, of which the following is a specification.

My invention relates to a fuel-gatherer located upon a straw-burning traction-engine and driven thereby, (for which I have obtained Letters Patent in the Dominion of Canada on the 28th day of January, 1896, No. 51,157,) whereby as the engine moves over the ground the fuel-gatherer will pick up and deliver to the traction-engine the necessary fuel therefor; and it consists in the combination, arrangement, and construction of the several parts of which it is composed, as will be hereinafter more fully described and claimed, my combined traction-engine and fuel-gatherer being especially adapted for drawing a gang of plows such as is described in my other application of even date herewith, serially numbered 638,040.

Referring to the accompanying four sheets of drawings, which form a part of this specification, and in which corresponding parts are designated by similar marks of reference, Figure 1 is a plan view of a traction-engine constructed in accordance with my present invention. Fig. 2 is a side elevation thereof, taken from the left side of the engine. The left side is the side toward the left hand of one looking in the direction of motion. The smoke-stack is on the rear end of the engine. Fig. 3 is a front elevation. Fig. 4 is a transverse section taken on line *x x* of Fig. 1. Fig. 5 is a side elevation of the engine, taken from the right side of the engine.

The boiler and straw-burning fire-box 1 are mounted on and between the rear traction-wheels 2 and forward guide-wheels 3. The traction-wheels are driven from the crank-shaft 4, actuated from the cylinders 5, through the gear-wheels 6 and the pinions 7 upon the driving-shaft 7^a, the pinions 7 engaging the internal teeth 8 upon the traction gear-wheels. These parts are preferably, but not necessarily, of the character and construction shown in another of my applications of even date herewith.

A standard 9, supported on the forward end of the extension 1^a of the boiler, carries a transverse beam 10, which projects on each side beyond the wheel-base of the engine. The beam is tied to the top of the standard by rods 10^a. From one end of this beam is supported the shaft 11. This shaft is driven by a link belt 11^a from the sprocket-wheel 11^b, which is mounted on the driving-shaft 7^a.

Upon the shaft 11 is pivoted the forward end of the frame 12, which inclines downwardly therefrom, the rear end thereof being supported on wheels 12^a, running on the ground. The frame also carries a series of rearwardly-extending curved teeth 13, which are supported thereon by the bridge 13^a. The lower ends of the teeth run close to the ground. A traveling apron 14, consisting of a plurality of belts 14^a, connected by slats 14^b and provided with pins 14^c, is mounted within the frame and passes around the shaft 11 and is driven thereby when the engine is running. As the engine moves forwardly over a field with straw the teeth 13 rake up the straw, and as this straw is collected by the teeth it is caught by the pins upon the apron 14. From this apron the straw is dropped upon another apron 15, which runs across the front end of the engine. The latter apron, which may be called a "transverse" apron, is supported on a frame 16, carried on the beam 10. It passes over rollers 16^a, driven by a sprocket-chain 17, to which motion is imparted by the sprocket-wheel 17^a upon the longitudinal shaft 17^b, provided with a miter gear-wheel 17^c, engaging with and driven by the corresponding wheel 11^c on the end of the shaft 11. By this apron 15 the fuel is carried entirely across the front of the engine and is delivered on the opposite side thereof to an apron 18, which may be called a "longitudinal" apron, because it runs along the side of the engine. The apron 18 is driven by a shaft 19 from the sprocket-chain 17 through the sprocket-wheel 17^d and miter gear-wheels 17^e and 17^f, the latter being mounted upon the end of the shaft 19. The shaft 19 is mounted in the forward end of the longitudinal frame 18^a, supported in the beam 10, and on a beam 18^b, projecting laterally from the engine. The belt 18 delivers the straw upon a platform 20,

which is supported at the rear of the engine from the fire-box and brackets 20^a. The brackets are mounted upon the projecting ends of the axle of the driving-wheels. The fuel gathered and carried by the mechanism above described is fed to the fire-box of the boiler and engine such as is described in my application entitled a "Combined traction-engine and thresher."

It will be seen that I have constructed a straw-burning traction-engine which gathers from the ground the necessary fuel. In localities where the usual fuel is expensive this is of great advantage.

In this specification and in the following claim I wish it to be understood that I employ the term "straw-burning engine" in its broadest sense as covering any engine for burning straw, hay, grass, weeds, leaves, &c., and by the words "fuel-gatherer" I mean any device for collecting the straw, hay, grass, weeds, leaves, &c., from the ground as the engine passes thereover.

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

The combination with a wheeled platform, of a straw-burning engine mounted thereon and imparting motion thereto, a transverse shaft projecting from one side of the platform and driven by the engine, a frame pivoted at its forward end to the said shaft, rake-teeth and supporting-wheels upon the depending end of the said frame, an apron mounted on the said frame and passing over the said shaft and driven thereby, a longitudinal apron upon the opposite side of the engine, a sprocket-chain extending across the front of the engine, driven by the transverse shaft and driving the transverse and longitudinal aprons, substantially as described.

Signed by me, at Toronto, Canada, this 29th day of January, 1897.

WILLIAM STEPHENSON.

Witnesses:
WM. LAIDLAW,
FREDK. LEAR.