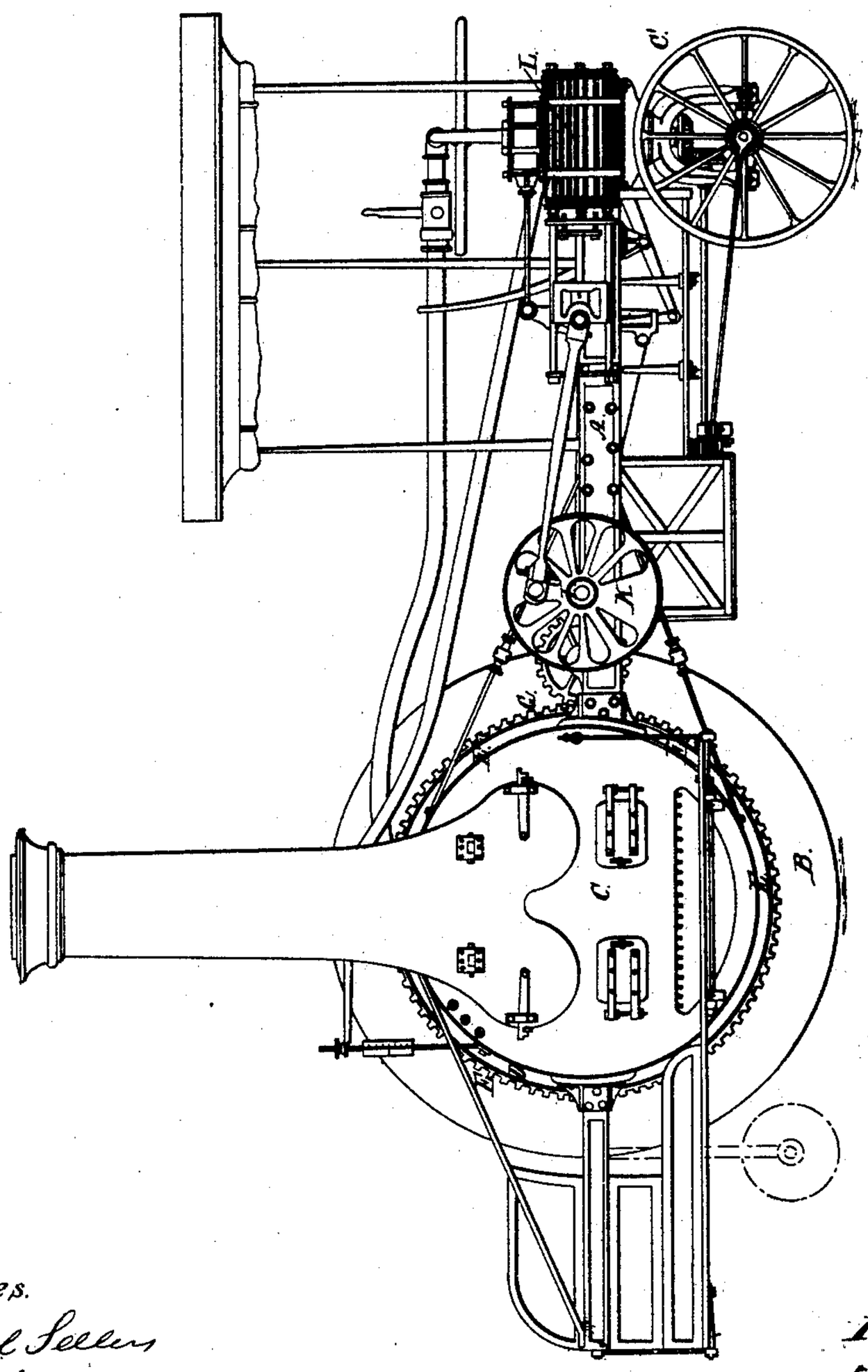
2 Sheets—Sheet 1

J. F. HOLLOWAY.

STEAM TRACTION ENGINE.

No. 28,475. Patented May 29, 1860



Witnesses.
Gew Enol Sellers
F. H. Sellers

Inventor.
J. F. Holloway

2 Sheets—Sheet 2.

J. F. HOLLOWAY.

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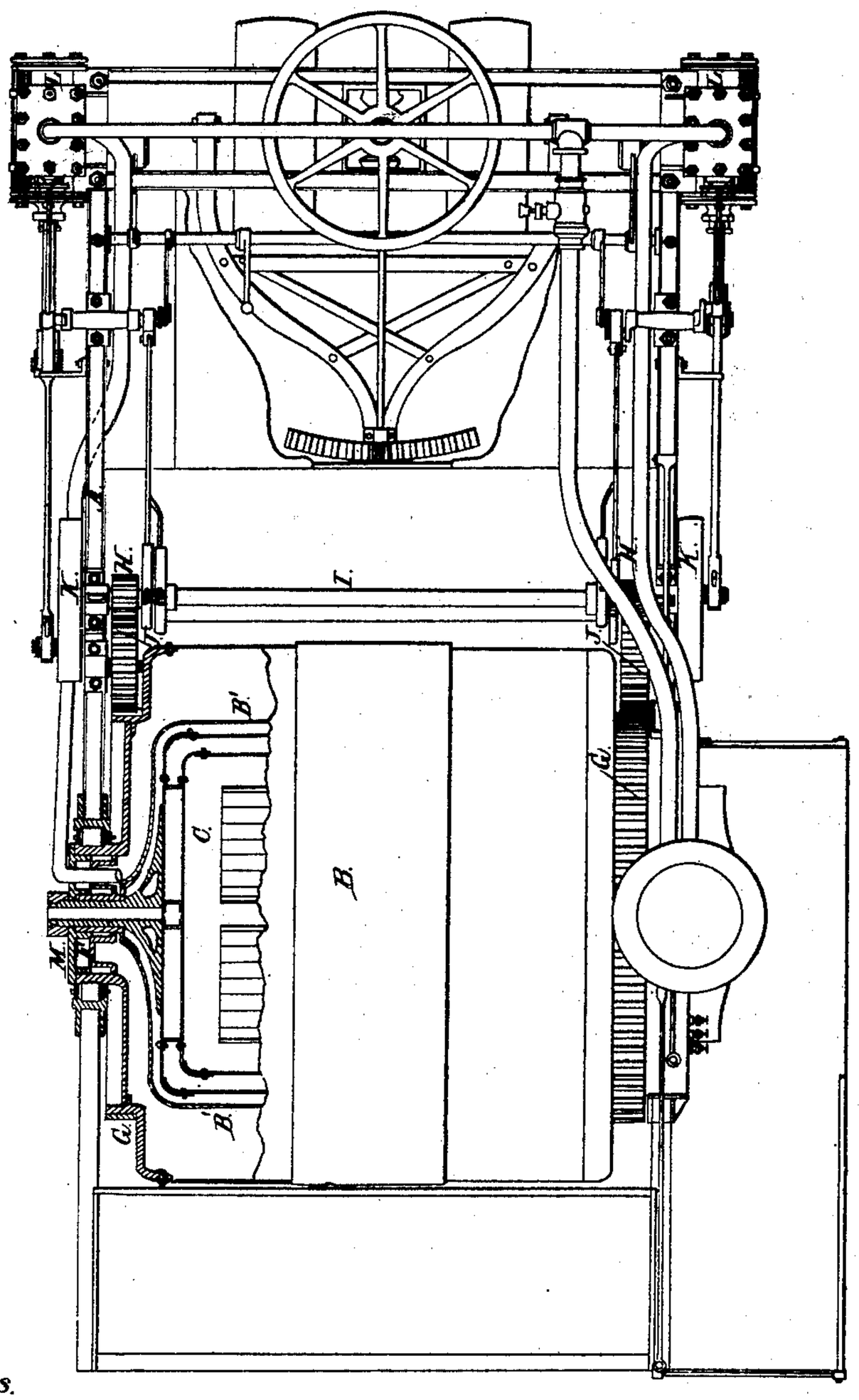

Witnesses.
Geo Enol Sellers
F. H. Sellers

Inventor.
J. F. Holloway

UNITED STATES PATENT OFFICE.

I. F. HOLLOWAY, OF SALINE MINES, ILLINOIS.

STEAM TRACTION-ENGINE.

Specification of Letters Patent No. 28,475, dated May 29, 1860.

To all whom it may concern:

Be it known that I, I. F. HOLLOWAY, of Saline Mines, in the county of Gallatin and State of Illinois, have invented a new and Improved Traction-Engine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Sheet No. 1, shows a side elevation of my invention, and Sheet No. 2, a plan or top view of ditto, partly in section.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a simple, economical and efficient traction engine, chiefly for ordinary use, such as the drawing of gang plows, in the cultivation of land, or the hauling of wagons over prairies and over common roads, and for like purposes.

The invention consists in a novel arrangement of the boiler, and driving wheel or drum, substantially as hereinafter fully shown and described, whereby several advantages are obtained over all other engines of a similar kind that have passed under my observation.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a frame which is supported near its back part by a driving wheel or drum B, and on its front part by a wheel or wheels C′. The drum B, may be constructed of iron, it is hollow, and within it the boiler C, which may be of any suitable construction, is placed.

The boiler C, has upon its outer surface, at one end, a circular band or track D, upon which, friction wheels E, bear. These wheels E, may have their axes attached to the inner side of the head of the drum B, or they may travel upon a track on the inner periphery of the drum opposite and corresponding to the track or band around the boiler; any suitable number of friction wheels being employed. The other end of the boiler C, is connected with the frame A, by a bearing F, as shown in the plan view, in sheet No. 2. The front end of the boiler C, is permanently connected to the frame A, and the drum B, is made to rotate around it by means of the gearing G, G, at each end, which gearing is connected with pinions H, H, on a shaft I, by means of intermediate wheels J, J.

The shaft I, is placed transversely on the frame A, and at each end a pulley and a crank K are attached, the two cranks being at right angles with each other. The shaft I, is driven by steam cylinders L, L, one at each side of the frame A, the cross heads, connecting rods, and valve-operating mechanism being of ordinary construction.

The drum B, has an inner shell B′, with a tight head on one end, the other end being closed by a stationary head M, which fits into the space between the inner and outer shell at a point where they are brought near the center of the boiler, and which head is packed to prevent the escape of water or exhaust steam. The head M is attached to the frame A, and has openings in it to allow the passage of the exhaust steam into and out from the space between the two shells, and also for the eduction pipe of the supply pump to pass through.

The space between the inner shell B′ and the outer shell B″ is used as a tank to contain the water for supplying the boiler, said water being heated by the exhaust steam passing into it while it is agitated by the revolutions of the drum B, the water, while the drum is revolving, being carried up its sides, and serving to condense a portion of the exhaust steam, this effect being obtained both by the contact of the steam with the water and with the drum, the latter being cooled by revolving in contact with the earth.

The wheel or wheels C′, at the front of the frame A, may be turned by any proper mechanism in order to guide the engine.

From the above description, it will be seen that a driving wheel or drum having a good bearing surface is obtained, and that the greater portion of the weight or pressure of the device is at the bottom of the drum B, giving the latter great traction or propelling power. By having the water tank between the boiler and drum, the water is simply rolled along as in a cask instead of being carried in a tank on the frame as usual, and much weight and friction is thereby dispensed with at points where it is not required and applied at such a place as to be of essential service. A space being allowed between the boiler and tank the radiation of

heat from the former is prevented, as a complete jacket is obtained thereby for the boiler.

I do not claim broadly the placing of the boiler of a traction engine within a driving wheel or drum irrespective of the arrangement herein shown and described; but—

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

1. The putting of the boiler C, within a driving wheel or drum D, when placed upon friction wheels or bearings within or upon said drum, substantially as described, so that the wheel or drum shall revolve around the boiler.

2. The inner shell B′, of the driving wheel or drum B, in connection with the stationary head M, for the purpose of forming a tank-heater, condensor and jacket substantially as described.

I. F. HALLOWAY.

Witnesses:
GEO. ENOL SELLERS,
F. H. SELLERS.