

(No Model.)

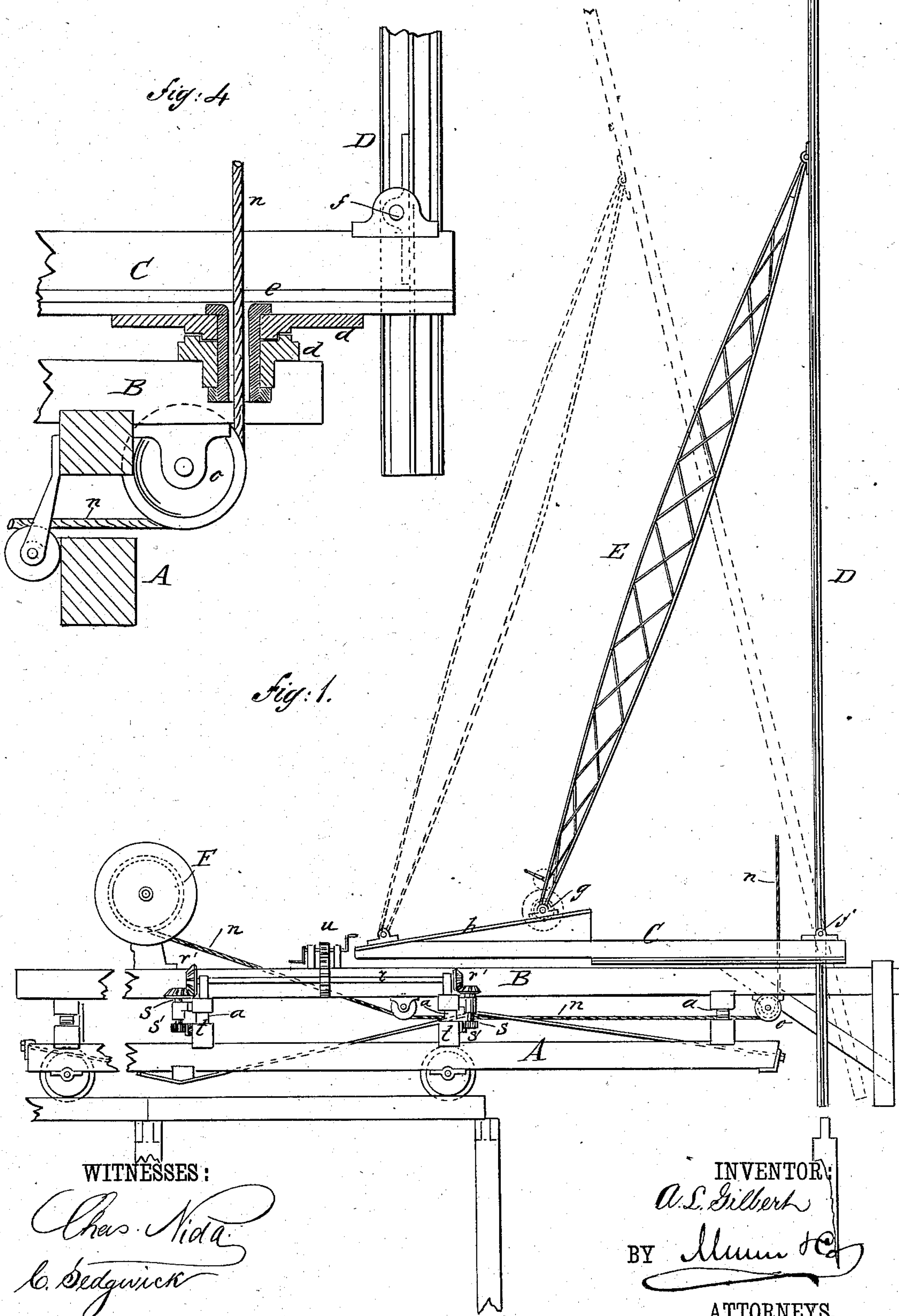
3 Sheets—Sheet 1.

A. L. GILBERT.

PILE DRIVER.

No. 254,955.

Patented Mar. 14, 1882.



WITNESSES:

Chas. Nida
C. Sedgwick

INVENTOR:

A. L. Gilbert

BY

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ATTORNEYS.

(No Model.)

3 Sheets—Sheet 2.

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Fig. 5.

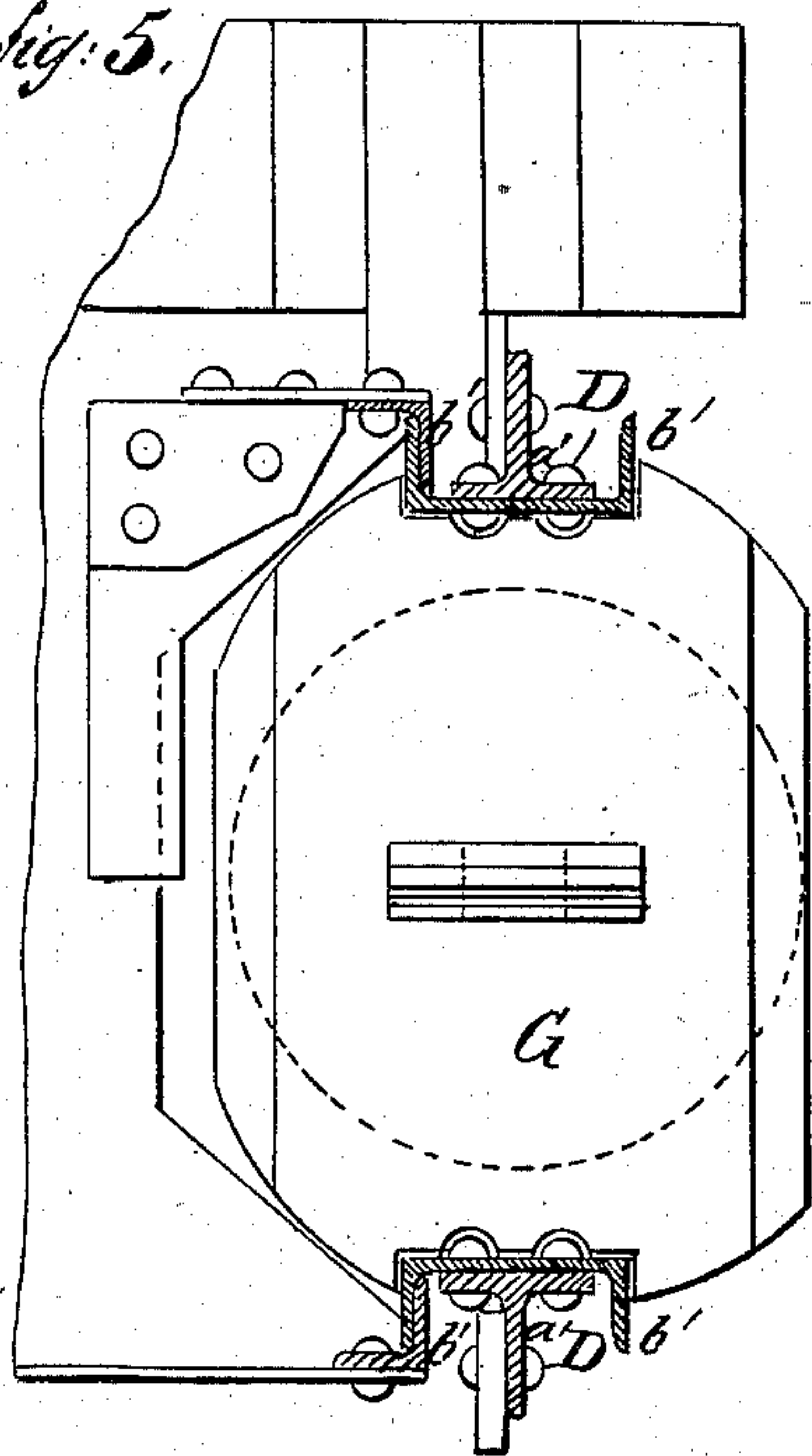
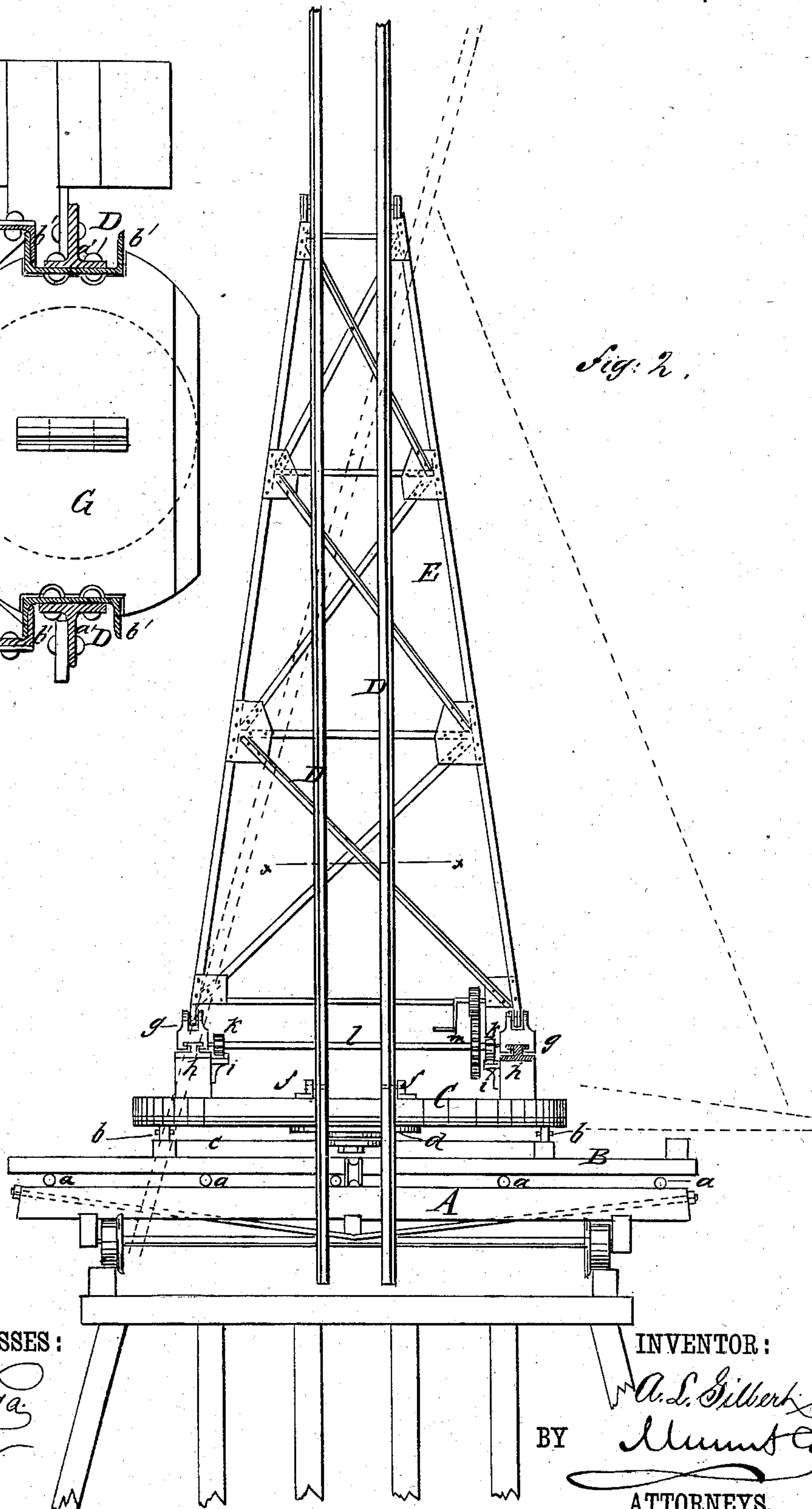


Fig. 2.



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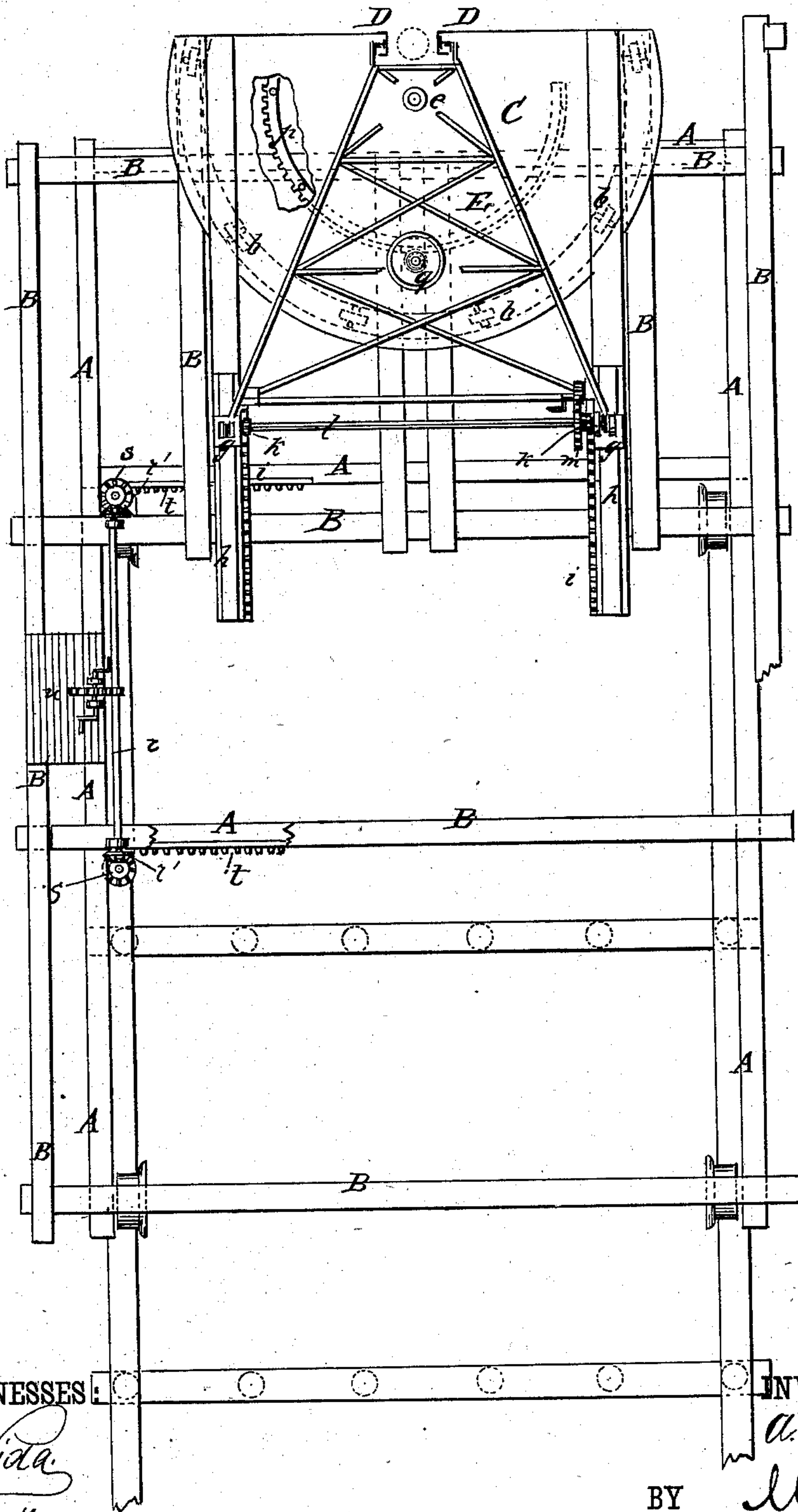
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Fig. 3.



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INVENTOR:

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UNITED STATES PATENT OFFICE.

ANDRUS L. GILBERT, OF ALBANY, NEW YORK.

PILE-DRIVER.

SPECIFICATION forming part of Letters Patent No. 254,955, dated March 14, 1882.

Application filed December 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, ANDRUS L. GILBERT, of Albany, in the county of Albany and State of New York, have invented a new and useful Improvement in Pile-Drivers, of which the following is a full, clear, and exact description.

My improvement relates to pile-drivers used in the construction of railroads; and the invention consists in the construction and arrangement of parts, having the object to facilitate continuous work and the driving of inclined piles, as hereinafter described and claimed.

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

Figure 1 is a side elevation of my improved pile-driver. Fig. 2 is a front elevation. Fig. 3 is a plan view. Fig. 4 is a detail section at the pivot of the turning platform, and Fig. 5 is a horizontal section on line *x x* of Fig. 2.

A is a truck or platform car, on which is a platform, B, supported by rollers *a*, so that it may be moved transversely of the car. On platform B is the turn-table C, supported by rollers *b* on the circular track *c*, and supported at its center by a box, *d*, and pivot-tube *e*, on which the table turns.

D D are the guide-leaders of the pile-driver proper, hung by side pivots, *f f*, near their lower ends to the forward edge of table C, and braced at the rear by an A-frame, E, which extends from the top of the leaders to the turn-table. The upper ends of frame E are pivoted to the leaders, and the lower ends are pivoted to slide-blocks *g g*, that are upon flanged slideways *h h* on table C, so that the blocks *g* can be moved to set the leaders D at the inclination required. The slideways *h* are set inclined, so that a greater inclination of the leaders is obtained by a shorter movement of the blocks. The ways *h* are provided with racks *i i*, which are engaged by pinions *k k* on a cross-shaft, *l*, carried by blocks *g*. The shaft also carries a larger gear-wheel, *m*, which is fitted for being revolved by a crank and gear, so as to effect the movement of blocks *g* in either direction, as desired.

It will be seen that the leaders, braces, and other parts described are all carried by the turn-table C, and the table being turned to

either side, the leaders are brought into position for driving battering-piles at the inclination required, and the rows of piling can be completed at once. The hoisting-rope *n* of the hammer leads from the winding-drum F, along beneath platform B, to a friction-pulley, *o*, and thence upward through the hollow pivot of the table. This permits the table to be turned to either side and the inclined leaders thus brought sidewise to the direction of the roadway, so that the hammer shall be supported by both leaders.

To turn the table C, I provide on platform B rack-segments *p*, and the table is fitted with a vertical shaft, *q*, carrying a pinion engaging the rack. A hand-wheel is fitted on shaft *q*, for its convenient operation.

The platform B is provided at one side with a shaft, *r*, at the ends of which are bevel-gears *r'*, engaging similar gears on short vertical shafts *s*, that carry pinions *s'*, meshing into racks *t*, fixed on the cross-timbers of car A. A crank and wheel at *u* on platform B are provided for revolving shaft *r*, and thus moving the platform sidewise with its imposed parts.

The construction of the leaders D is shown most clearly in Fig. 5. In order to reduce weight they are constructed of T angle-irons *a'*, to which are riveted channel-bars *b'*, that form the guides for the hammer G. This construction is substantial and much lighter than the cumbersome wooden leaders generally employed.

The car will carry an engine for driving the winding-drum, and in operation the car is moved forward to project the platform B in front, and then by transverse adjustment of the platform the leaders are brought to place to drive the straight piles in succession. The leaders are then set at the required inclination and the table turned first to one side and then to the other to drive the inclined piles in line with the straight piles. The work of driving is thus completed as the machine is advanced.

I am aware that a turn-table of a crane in a dredging-machine has been supported upon a hollow pivot, through which the hoisting-chain from the upper to the lower sheave passes, and I therefore do not claim such; but

What I do claim, and desire to secure by Letters Patent, is—

1. In a pile-driver, the combination, with the turn-table C, the leaders D, and the brace-frame E, provided with the pivoted slide blocks *g*, of the inclined ways *h*, substantially as shown and described, whereby a greater inclination of the leaders is obtained by a shorter movement of the blocks, as set forth.
2. In a pile-driver, the combination, with the turn-table C, the leaders D, and the brace-frame E, and the pivoted blocks *g*, of the inclined ways *h*, provided with racks *i*, the shaft *l*, the pinions *k*, and means for operating said shaft, substantially as and for the purpose set forth.
3. In a pile-driver, the turn-table C, carrying adjustable pivoted leaders, and sustained on a hollow pivot through which the hammer-rope passes, substantially as shown and described.
4. In a pile-driver, the combination of shaft *r*, bevel-gears *r'*, shafts *s*, pinions *s'*, and racks *t* with the platform B and car A, substantially as shown and described.
5. In a pile-driver, the leaders formed of T-plates *a'* and angle-plates *b'*, substantially as shown and described.

ANDRUS LEWELLING GILBERT.

Witnesses:

CHAS. HILTON,

H. J. RICHARDS.