

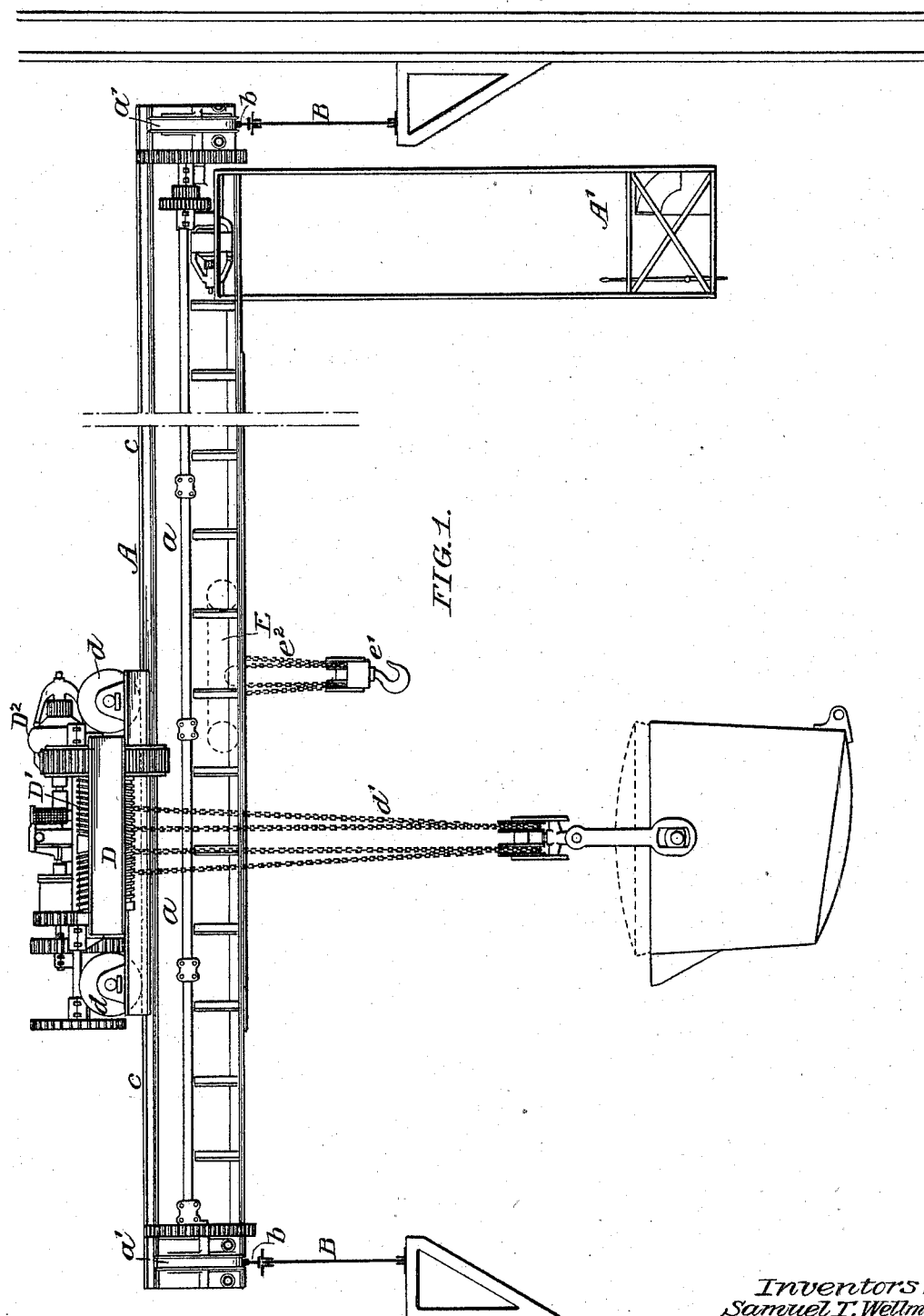
(No Model.)

2 Sheets—Sheet 1.

S. T. & C. H. WELLMAN.
CRANE.

No. 582,106.

Patented May 4, 1897.



Witnesses:

Will. A. Barr
Charles H. Barr

Inventors:
Samuel T. Wellman
and
Charles H. Wellman
by their Attorneys
Howson & Howson

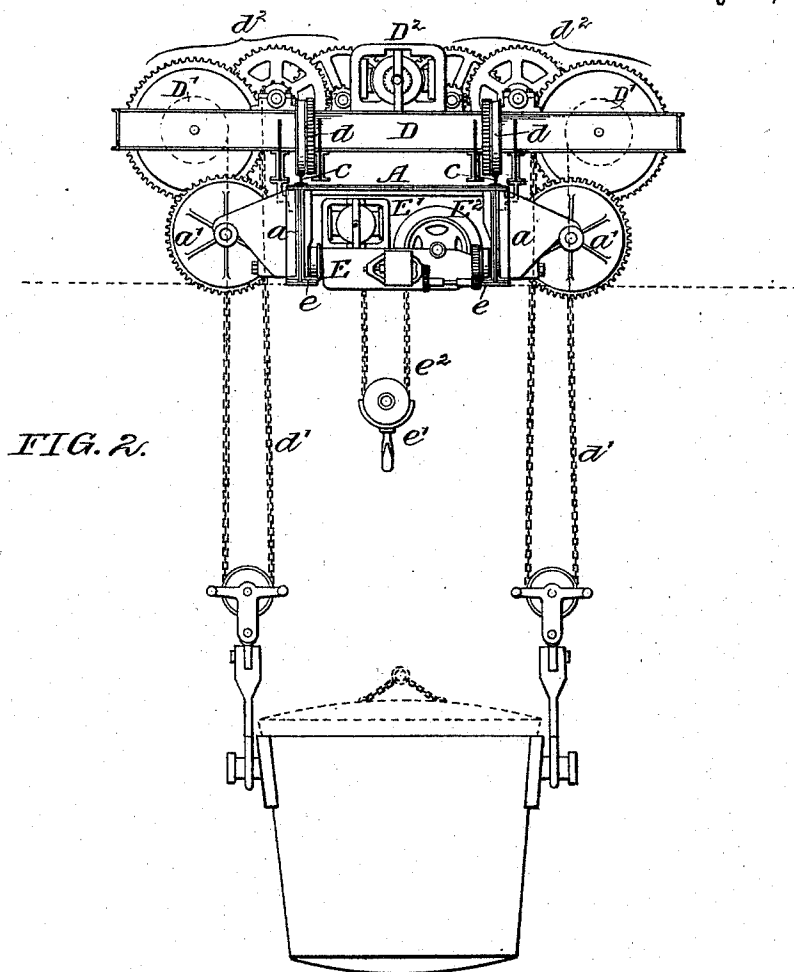
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UNITED STATES PATENT OFFICE.

SAMUEL T. WELLMAN AND CHARLES H. WELLMAN, OF UPLAND,
PENNSYLVANIA.

CRANE.

SPECIFICATION forming part of Letters Patent No. 582,106, dated May 4, 1897.

Application filed September 4, 1895. Serial No. 561,443. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL T. WELLMAN and CHARLES H. WELLMAN, citizens of the United States, and residents of Upland, Delaware county, Pennsylvania, have invented certain Improvements in Cranes, of which the following is a specification.

The object of our invention is to so construct a traveling crane that two trolleys, each complete in itself, may be mounted on the same frame and so arranged one in respect to the other that one can be moved past the other if necessary, and also so arranged that a load can be suspended from the two trolleys.

A further object of our invention is to so mount the main trolley that it will overhang the frame and will take a double hold upon the article to be hoisted. The second or auxiliary trolley can be used to take a hold upon the object at a third point or can be used for tipping the object if necessary.

Our invention is especially applicable to cranes used for open-hearth and foundry purposes, where it is necessary to carry a ladle or other object by trunnions and to uncover or tip the ladle at a given point.

In the accompanying drawings, Figure 1 is a side view of our improved crane. Fig. 2 is a transverse sectional view.

A is the main frame of the crane, consisting of two girders *a a* and cross-braces. This frame has trolley-wheels *a'*, supported by tracks *b b* on the girders B, elevated the proper distance from the ground or floor in any suitable manner.

The crane in the present instance is driven by electricity and has a main shaft driven by a motor, and this main shaft has gear-wheels at each end, which mesh with wheels on the shafts of the trolley-wheels *a' a'*.

A' is the cage for the operator, containing the switch mechanism and from which the motors can be controlled to drive the crane or trolleys in one direction or the other.

The main trolley D has flanged wheels *d d*, adapted to rails *c c* on the upper portion of the beam A. This trolley is constructed of beams, as shown, and these beams extend beyond each side of the frame a distance sufficient to allow for the bearings of the over-

hanging drums D' D', around which the elevating chains or ropes *d'* pass. Suspended by these chains are hooks or other devices by which the ladle or other device to be lifted is supported.

D² is the motor, geared to both drums through two trains of gears *d² d²*, the trains of gears being so arranged that when the motor is operated the chains will be raised or lowered in unison, so that if, for instance, a ladle is engaged by the hooks, as shown in the drawings, it can be raised evenly. By overhanging the main trolley it does not interfere with the mechanism within the frame.

It will be understood that the gearing and the style of motor carried by the trolley D may be varied according to circumstances.

Within the beam A are rails *ee*, in the present instance mounted on the lower flange of the girders *a a*, and adapted to these rails is a trolley E, having a motor E' and chain-drum E², which is suitably geared to the motor, and from this drum depends the chain *e²*, having in its loop the hook *e'*. The auxiliary trolley E can travel along the beam independently of the main trolley D, and as the main trolley overhangs the beam it will not interfere with the working of the auxiliary trolley. By this arrangement a ladle can be carried by the main trolley, as indicated in Fig. 2, and so engaged by the hooks depending from the auxiliary trolley that its lid can be removed or the ladle can be tipped, and when it is necessary to carry an object at three points the auxiliary trolley can be used for this purpose in combination with the main trolley.

It will be understood that the two trolleys can be used independently, one at one end of the beam and the other at the opposite end, and when necessary the auxiliary trolley can carry a load over the load suspended from the main trolley without interfering with the operation of the other trolley.

We claim as our invention—

1. The combination in a crane, of the frame having two tracks on different planes, with a trolley adapted to the upper track, hoisting mechanism thereon extending over one side of the said frame and a trolley adapted to travel on the lower track and having hoisting

mechanism, the said trolleys being so arranged that they can travel one past the other, substantially as described.

2. The combination in a crane, of the frame, the main trolley, mounted on top of the frame and having overhanging drums, chains and hooks suspended from such chains at each side of the frame, with an auxiliary trolley having hoisting mechanism, said auxiliary trolley being within the frame of the crane, substantially as described.

3. The combination in a crane, of the frame, means for moving said frame, a main trolley mounted upon and overhanging the upper portion of the frame, chains and drums adapted to the overhanging portions of the trolley, with an auxiliary trolley adapted to travel in the space between the plates of the frame and having a drum and chain and so arranged as

to engage with an object suspended from the main trolley, substantially as described.

4. The combination in a crane, of the frame, a trolley mounted thereon and overhanging the frame at each side, hoisting drums and chains suspended from each side, a motor with a train of gears connecting the motor with each drum, said gears being equal so that the two chains will be hoisted in unison, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SAMUEL T. WELLMAN.
CHARLES H. WELLMAN.

Witnesses:

FRED C. BENNER,
FRANK E. BECHTOLD.