

R. R. Asgood,

Dredger.

No. 104,757.

Patented June 28. 1870.

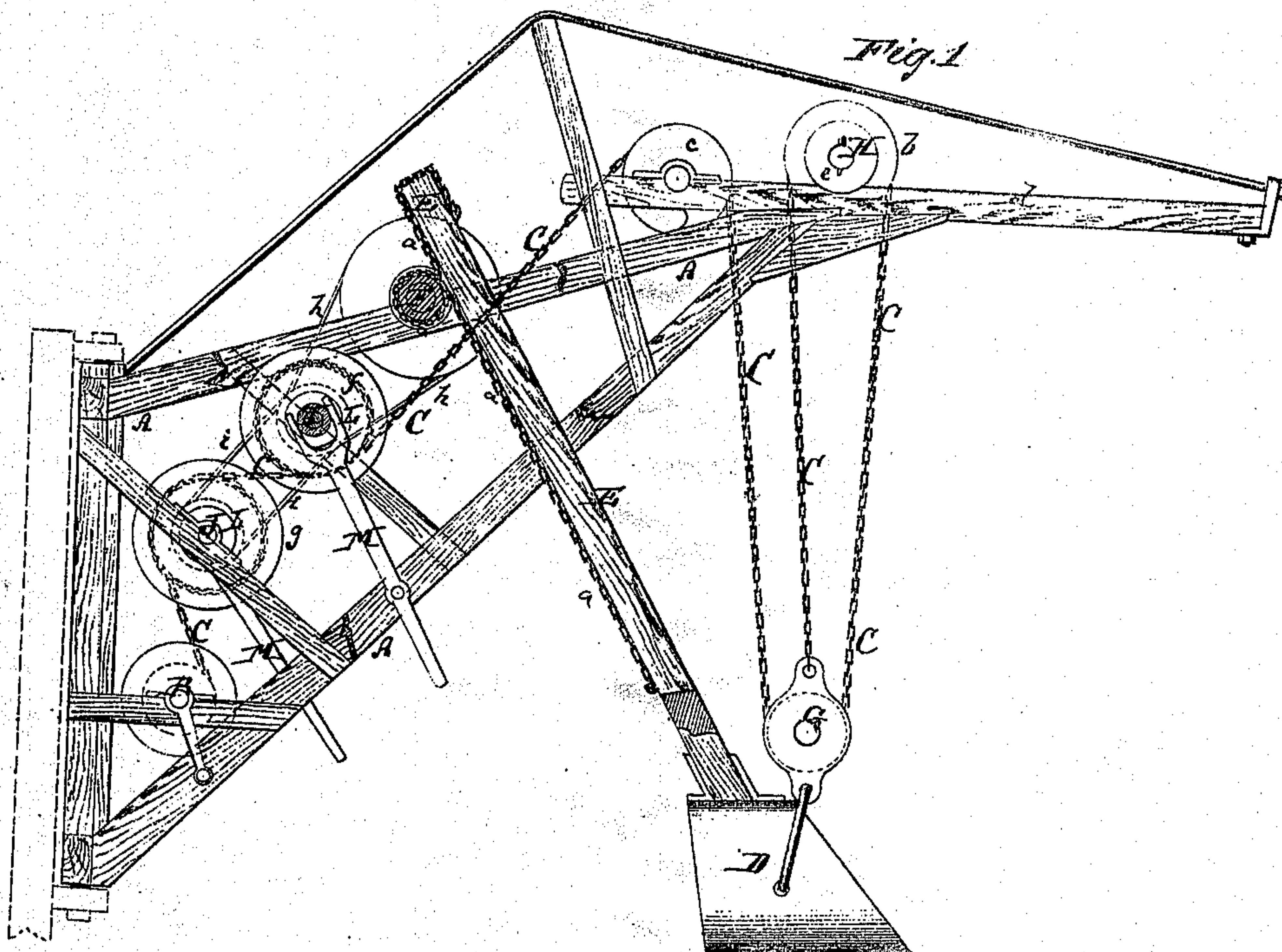
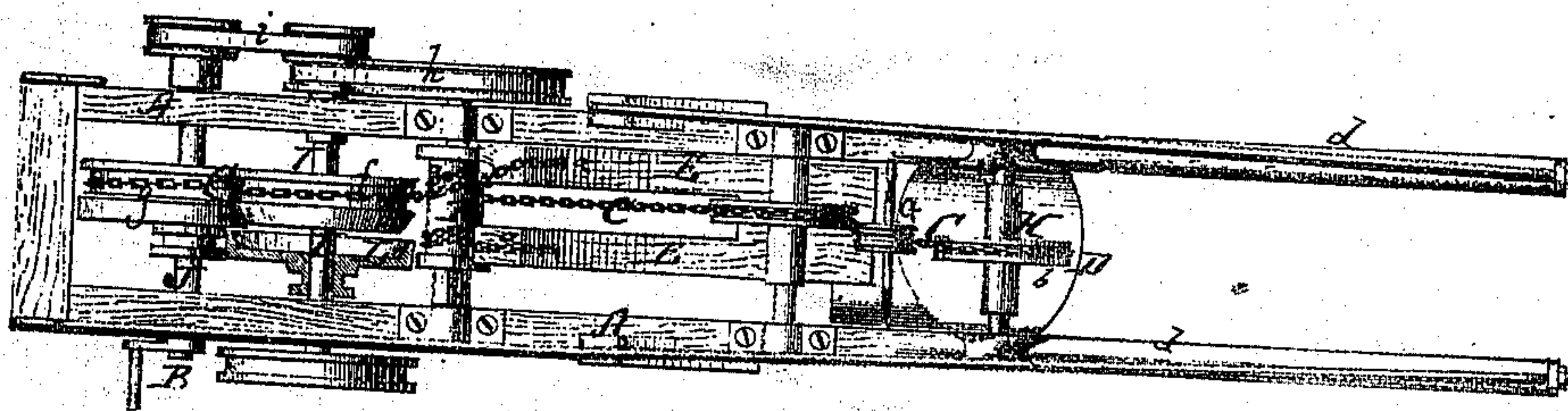


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

RALPH ROBERT OSGOOD, OF TROY, NEW YORK.

IMPROVEMENT IN DREDGING-MACHINES.

Specification forming part of Letters Patent No. 104,757, dated June 28, 1870.

To all whom it may concern:

Be it known that I, RALPH ROBERT OSGOOD, of Troy, in the county of Rensselaer and State of New York, have invented a new and Improved Dredging-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side elevation, partly in section, of my improved dredging-machine. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to dredging-machines; and it consists, first, in suspending the load by means of pulleys and a chain fastened to the driving-shaft, so that the carriage will be always kept in a perpendicular line with the scoop by the weight of the load; second, in the arrangement of a pair of loose clutch-pulleys between the driving and winding shafts, to reverse the motion of the winding-shaft.

A in the drawings represents the frame of my improved dredging-machine. It is pivoted or otherwise secured to a boat or other apparatus.

B is the driving or main shaft, hung in the lower part of the frame. To it is secured one end of a chain, C, which is the elevating-chain.

D is the scoop or scraper secured to a shank or arm, E, of suitable length. The inner or upper end of the shank E rests on a shaft, F, which is hung in the frame A. The shank has either teeth formed on it that mesh into a pinion on F, or a chain, a, is secured with both ends to opposite ends of the shank and is wound once around the shaft F, as shown.

To the scoop is secured a sheave-block, G. The end of the chain C is secured to this block, passes over a roller, b, which is hung on or forms part of a carriage, H, then down over the block G, and up again over a pulley, c, and thence to the shaft B. The carriage H rests on the rails d d that project outward from the frame A. It is supported by wheels e, or may, if desired, slide on the rails. Whatever be the position of the scoop the carriage will always

be directly over it, as the weight of the scoop will tend to straighten the chain which connects it with the carriage. The scoop will therefore always be directly suspended from above, and all the lateral strain usually produced on the frame A by the varying inclination of the elevating-chain is prevented.

The chain C passes between the pulley c and shaft B, under a roller, f, and over another roller, g. The roller f is hung loose upon a shaft, I, which is, by means of a belt, h, or its equivalent, connected with the shaft F.

The roller g is hung loose upon a shaft, J, which is, by a belt, i, or its equivalent, connected with I, or with F direct. On each shaft I and J is provided a sliding clutch, L, for locking the loose roller to said shaft. Whenever, by the clutch, one of the rollers is locked to its shaft it will impart motion to the shaft F, as motion is given to such roller by the chain C. The motion of the shaft F is reversed, according to the roller f or g with which it is in gear, the said rollers being revolved in opposite directions by the chain C. The rotation of the shaft F will cause the arm E to be drawn in or out, according to the direction of motion. Thus while the scoop or scraper is elevated or lowered it can simultaneously be drawn in or moved out by the shaft F, and every degree of motion can therefore be obtained.

Suitable levers, M, can be used to operate the clutches.

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

1. In combination with the dipper-handle and scoop, the traveling sheave and chain, the sheave moving on suitable ways, so as to be always above, or nearly above, the scoop which it supports, as set forth.

2. The wheels f and g, hung loose upon their respective shafts, which are connected with the shaft F to revolve the same in opposite directions when the wheels f g are locked by clutches, as set forth, for the purpose specified.

RALPH ROBERT OSGOOD.

Witnesses:

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