S. MELLINA.

MOTIVE POWER.

No. 192,180. Patented June 19, 1877.

Fig: 1

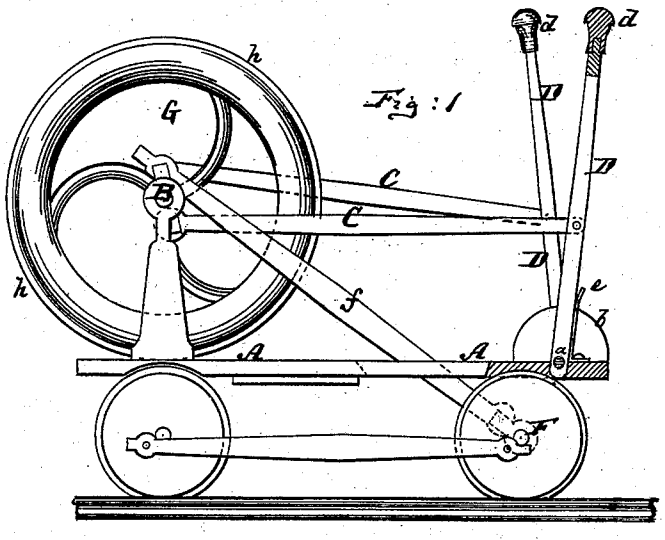



Fig: 2

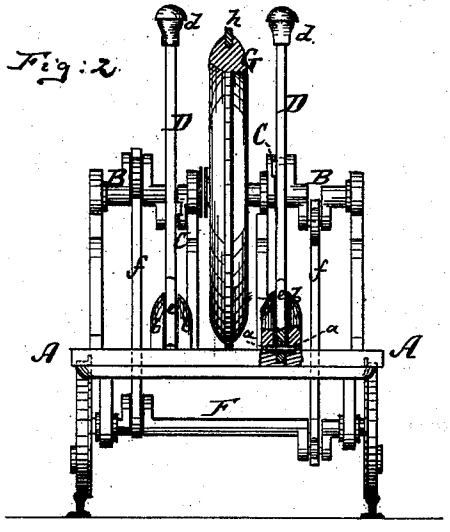
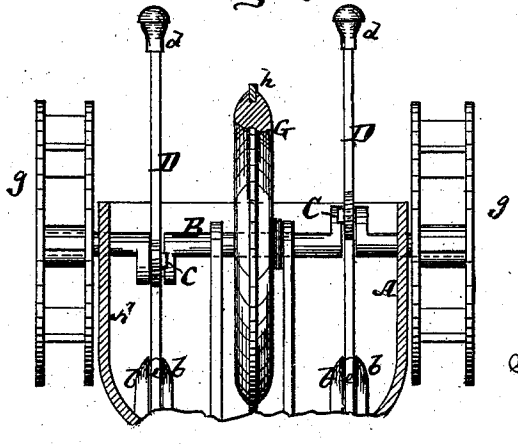



Fig: 3




Witnesses:
J. C. Tunbridge
A. V. Briesen

Inventor
Salvatore Mellina
by his attorney
A. V. Briesen

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

SALVATORE MELLINA, OF NEW YORK, N. Y.

## IMPROVEMENT IN MOTIVE POWERS.

Specification forming part of Letters Patent No. **192,180**, dated June 19, 1877; application filed May 16, 1877.

*To all whom it may concern:*

Be it known that I, SALVATORE MELLINA, of New York city, in the county and State of New York, have invented a new and Improved Motive Power, of which the following is a specification:

Figure 1 is a side view, partly in section, of my improved motive power. Fig. 2 is an end view of the same. Fig. 3 is an end view of a modification thereof.

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

This invention relates to a new arrangement of hand-lever and of its connections, in a motive power for propelling vehicles, such as railway-cars, canal-boats, or for other purposes.

The invention consists in a new manner of hanging and guarding the hand-levers, and in the new combination of parts constituting the propelling-vehicle, all as hereinafter more fully described.

In the drawing, the letter A represents the supporting-frame of the motive power, the same being either the platform of a car, as in Figs. 1 and 2, the deck of a vessel, as in Fig. 3, or other suitable apparatus. In standards which project from this frame A is hung the crank-axle B, which, by rods *c c*, connects with the operating hand-levers D D. These levers are, by pins *a a*, hung in the frame A, each lever being guarded and flanked by two projecting cheek-pieces *b b*, which, being placed over the pins *a*, hold them in place on the frame A, and constitute, therefore, parts of the bearings of the same. At the same time the cheek-pieces *b b* serve to steady the levers in their vibrating movements on the pins *a*, and prevent them from being laterally displaced. The upper end of each lever D carries a weight, *d*, which aids in throwing the lever toward the crank-axle B in imparting motion to the latter, and thus, by the weights on the levers, the main part of the labor—to wit, that of turning the crank-axle B—is reduced. The weights *d* also counteract the tendency of the levers to remain at rest during their effective strokes, and cause them to finish and complete their strokes. In addition to the weights *d*, a spring, *e*, may be applied against the outer edge of each lever, to assist in throwing the same toward the shaft B.

The crank-shaft B may, by suitable rods *f f*, be connected with the axle F of a railway-car, as in Fig. 1, to propel said car whenever the levers D are vibrated; or, if the machine is used on a boat, paddle-wheels *g* may be mounted upon the shaft B, as in Fig. 3, or other means be employed for utilizing the rotation of the shaft B in the desired manner.

G is a fly-wheel, mounted upon the shaft B to aid in overcoming the dead-center, and to equalize the rotation of the shaft. This fly-wheel I propose to make of wood, and to groove it on the outer edge, and to sink a heavy metal ring, *h*, into said groove, as indicated in the drawing. By this construction the ring *h* is firmly and properly retained in position, and the cheap wooden wheel is rendered even more effective than one made entirely of metal, inasmuch as the proportionate weight at the rim is greater than in an iron wheel.

I claim as my invention—

1. The combination of the hand-lever D, having pins *a*, with the frame A and cheek-pieces *b b*, the cheek-pieces serving to hold the pins *a* to the frame and to guide and steady the lever, substantially as herein shown and described.

2. In a propelling-vehicle, the combination of the platform A having uprights with the axle B carrying the fly-wheel G, and with the operating-rods C and weighted hand-levers D, which are pivoted to the platform A and guided between the cheek-pieces *b*, substantially as and for the purpose herein shown and described.

The foregoing description of my invention signed by me this 8th day of May, 1877.

SALVATORE MELLINA.

Witnesses:

ERNEST C. WEBB,
CHAS. E. DILLINGHAM, Jr.,
JAMES BROOKS.