

# Worthington's Safety Steam PUMP, AND FIRE ENGINE.

## IN THIS MACHINE, THE SIMPLEST

POSSIBLE combination of steam with a double acting Pump, is attained. The steam piston is attached to one end of the piston rod, and the plunger of the Pump to the other. The steam piston moves back and forth in its cylinder, carrying with it the pump-plunger, and causing it to deliver a

## CONTINUOUS & POWERFUL STREAM,

A moment's reflection will show that the interposition of a  
**Crank, Fly-Wheel,**  
Or other device for producing

## ROTARY MOTION,

would be not only useless, but wasteful; for the reason that the alternate motion of the steam piston is the very one which it is necessary to convey to the Pump. Therefore, when a crank is employed, the rectilinear motion must ultimately be restored in an indirect way. A modification of this simple engine, embracing the advantages of

## Great Steam Expansion and Condensation,

has been very successfully applied to

## CITY WATER WORKS.

Three engines, each capable of delivering

## 500,000 Gallons per Day,

have been used for MORE THAN TWO YEARS at the city of Savannah, to elevate water 120 feet high, through 2,768 feet of 16 inch main; and a contract has just been concluded with the city of Cambridge, Mass., for a similar service. In regard to economy, the reports show as good a result as has been attained in this department. The undersigned offers the following names and places in this vicinity for reference.

**U. S. NAVY.** All the Steamers; Navy Yards at Brooklyn and Washington; Mints at Philadelphia and California; Assay Office, New York; Hospital at Brooklyn.

**LINE OF STEAMSHIPS AND BOATS.** Collins'; Bremen; Havre; U. S. Mail Co.; Pacific Mail Co.; Vanderbilt's; Nicaragua; Savannah; Charleston; Norfolk & Richmond; Baltimore; Fall River; Stonington; Norwich; Union Ferry Co. New York; Jersey City Ferry

**SUGAR REFINERIES.** Messrs. Booth & Edgar; Howell & Co.; Greer, Turner & Co.; D. Harris; Boston Refinery; Bristol Refinery.

**FACTORIES, &C.** Litchfield & Co., Oil; Hecker's Mills; Lowell Bleachery; Thompsonville Carpet Co.; Globe Print Works; American Print Works; Lowell Manufacturing Co.; Atlantic De Laine Co.; Pacific Mills; Wamsutta Mills; Warren Manufacturing Co.; Hayward Rubber Co.; N. E. Car Spring Co.; Union White Lead Co.; Atlantic Forge; Burdon's Machine Shop; Cooper's Glue Factory.

**GAS WORKS.** New York. Brooklyn; Buffalo; New Haven; Washington; Baltimore. Alexandria; Jersey City; Knoxville; Savannah; Portsmouth; Cumberland; Toronto.

**IRON WORKS.** Peter Cooper's; Glendon; Albany; Hudson; Poughkeepsie; Leesport; Manhattanville; Rensselaer; Green Mountain; Barnum; Richardson & Co.; Mount Savage; Port Henry; Stockbridge.

**MINES.** Bethlehem Zinc; Reed Gold; Penn. Coal Co.; Forrestdale.

**QUARRIES.** Shaler & Hall; Middlesex; Middletown; Russ & Reid.

**R. R. STATIONS.** Long Island; Erie; Hudson River; Chicago & Miss.; Cleveland & Penn.

**HOTELS.** St. Nicholas; Aster House; Howard's; Merchant's; Irving; New York.

**DISTILLERIES IN NEW YORK.** Ely; Johnson & Lazarus; Barnard; Betts.

**PUBLIC INSTITUTIONS.** Asylums at Utica; Trenton & Raleigh; Naval Hospital; City Hospital, Brooklyn.

**FOUNTAINS, &C.** Greenwood Cemetery; Messrs. D. F. Manice, J. A. Parry.

**WRECKING PURPOSES.** New York Board of Underwriters; Buffalo Mutual; Amer. Trans. Co.; Oswego N. Western; Milwaukee; Boston Relief Co.

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d&w 1y.

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