

A. Sims,
Paul and Ratchet.

N^o 83,558.

Patented Oct. 27, 1868.

Fig: 1.

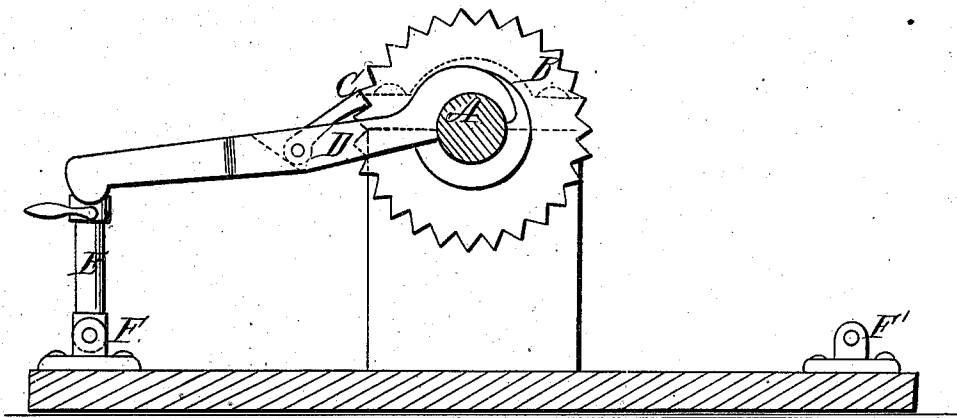
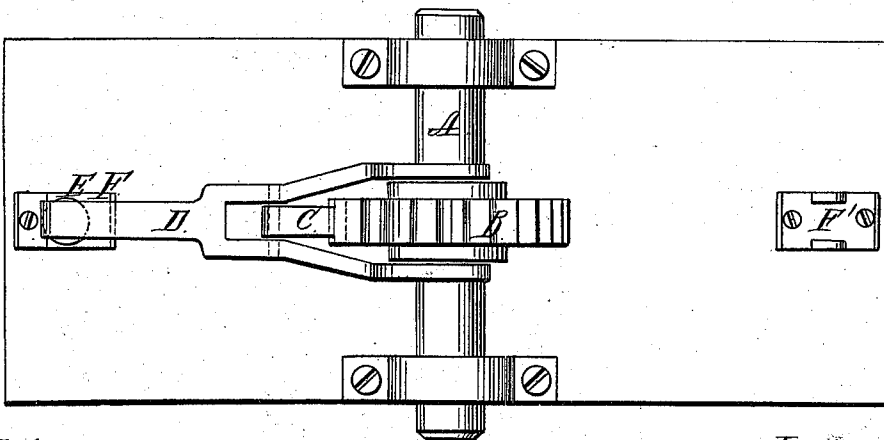


Fig: 2.



Witnesses:
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United States Patent Office.

ALFRED SIMS, OF BROOKLYN, NEW YORK.

Letters Patent No. 83,558, dated October 27, 1868.

IMPROVEMENT IN JACK FOR TURNING SHAFTING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ALFRED SIMS, of Brooklyn, in the county of Kings, State of New York, have invented a new and improved Jack for Turning Shafts of Engines, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a sectional side elevation of this invention.

Figure 2 is a plan or top view thereof.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of a lever-pawl, and a hydraulic or other jack, in combination with a ratchet-wheel, mounted on the shaft of a steam-engine or other machine, in such a manner that, by the action of the jack on the lever-pawl, a revolving motion can be imparted to the shaft, and that the shafts of steam-engines on vessels, or of other engines or machines, can be turned with little trouble or expense.

It is a well-known fact that the shafts of steam-engines on such vessels, which are laid up in the navy-yards or in other places, have to be turned from time to time, to prevent them from rusting in their bearings. Heretofore this object has been effected with great difficulty, and the combined effort of a number of men was required to effect the desired purpose.

By my invention, the operation of turning said shaft is materially simplified, and it can be effected by one man with the greatest ease and facility, as will be readily understood from the following description of the drawings, in which—

A represents the shaft, on which is mounted a ratchet-wheel, B. The teeth of this ratchet-wheel are radial, so that they serve to turn the shaft equally well in either direction, and they are subjected to the action of a pawl, C, which is hung in a lever, D. One

end of this lever is bifurcated, and provided with hooks or eyes, so that it can be made to straddle the ratchet-wheel, and to bear on the shaft A, as shown in the drawing. The other end of said lever rests on the end of the plunger or follower of a hydraulic or other jack, E, which is hinged in a bracket, F, secured to the bed-plate, which also supports the bearings of the shaft A, or fastened in any convenient place, at a suitable distance from said shaft.

By operating the jack E, one man is enabled to impart to the shaft A an intermittent revolving motion, and the shaft of a propeller-engine, or of a paddle-wheel engine, or of any other engine or machine, can be turned with equal facility.

If desired, a second bracket, F', may be secured on the opposite side of the shaft A, so that, by changing the position of the jack and of the lever-pawl, the shaft can be turned in the opposite direction. If the lever-pawl is not used, it is readily raised clear of the shaft, so that it will create no friction when the shaft is running.

If desired, this mechanism can also be used for starting an engine from its dead-centres, the same as a device for which a patent was granted to me, July 9, 1867. The pawl may be counterbalanced, so that it will disengage as soon as relieved from the strain of the ratchet-wheel, and thereby any accidents will be prevented which might arise if the shaft should, from some cause, be turned forward and then backwards while the pawl is in gear with the ratchet-wheel.

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

The lever-pawl C D and jack E, in combination with the ratchet-wheel B, mounted on the shaft A, substantially as and for the purpose described.

ALFRED SIMS.

Witnesses:

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