

(No Model.)

2 Sheets—Sheet 1.

J. L. POTTER.
TRENCH MACHINE.

No. 550,690.

Patented Dec. 3, 1895.

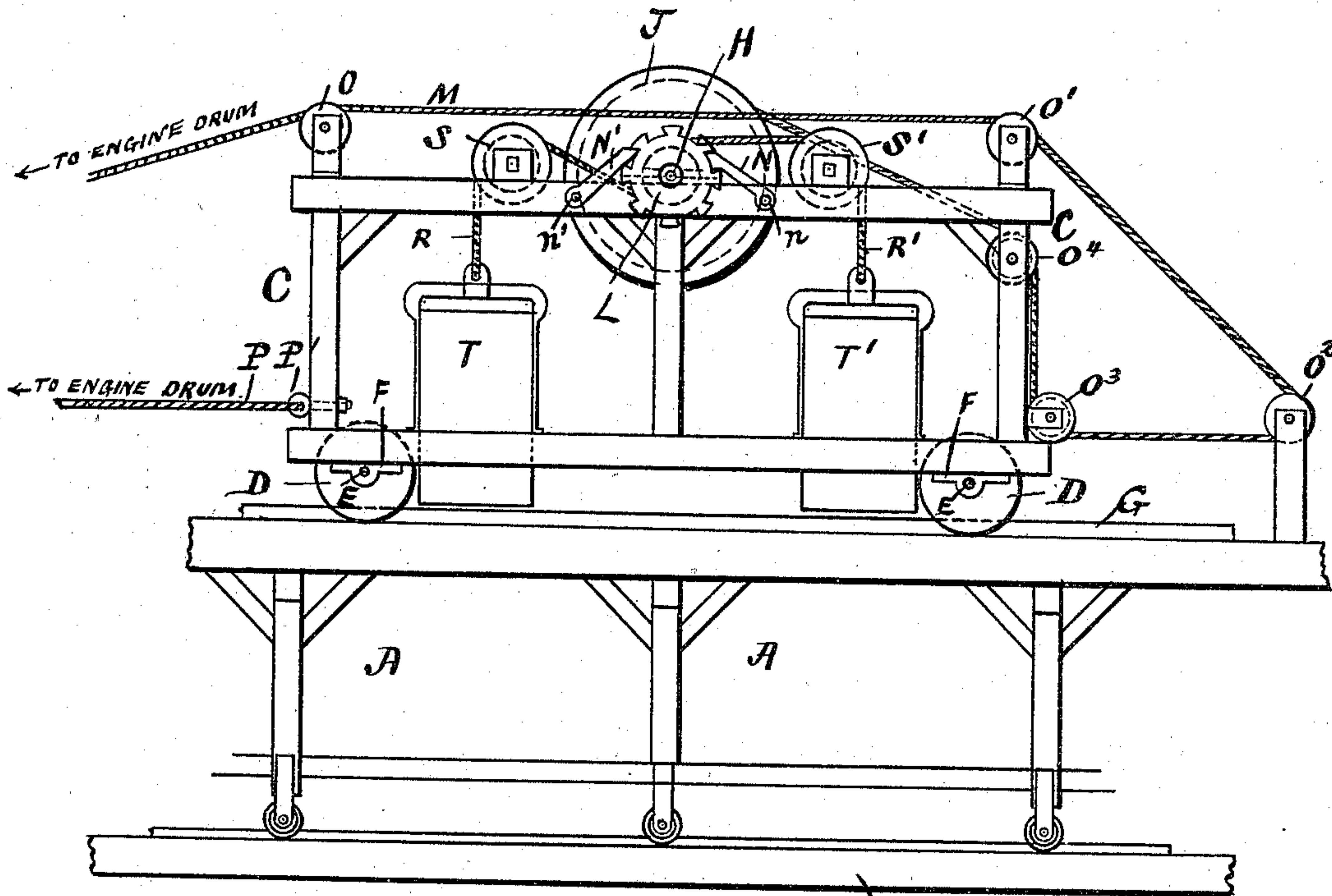


Fig 1. B

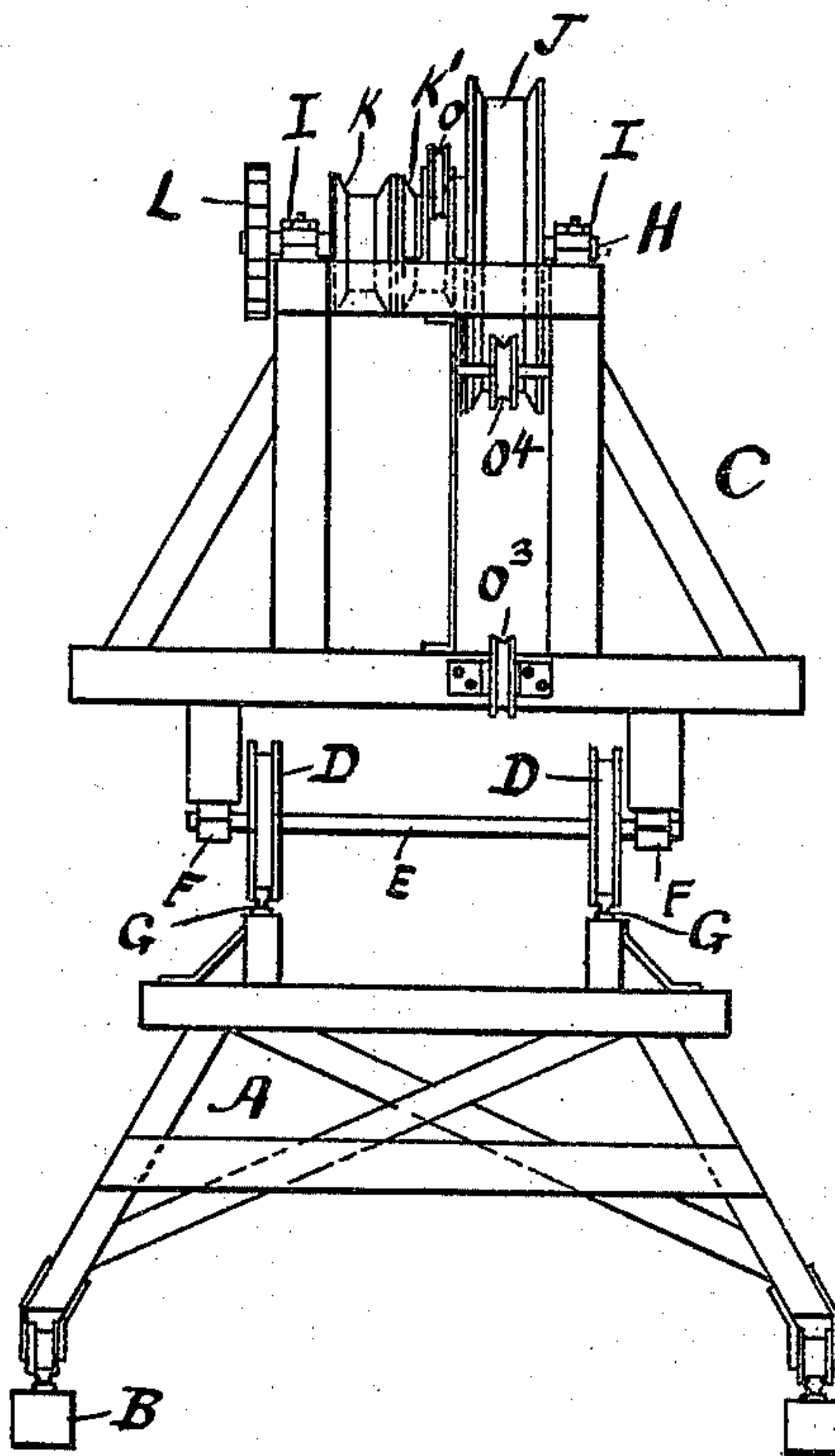


Fig 2.

WITNESSES:

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S. G. Thurman

INVENTOR

Joseph L. Potter.

BY

John S. Thurman
ATTORNEY.

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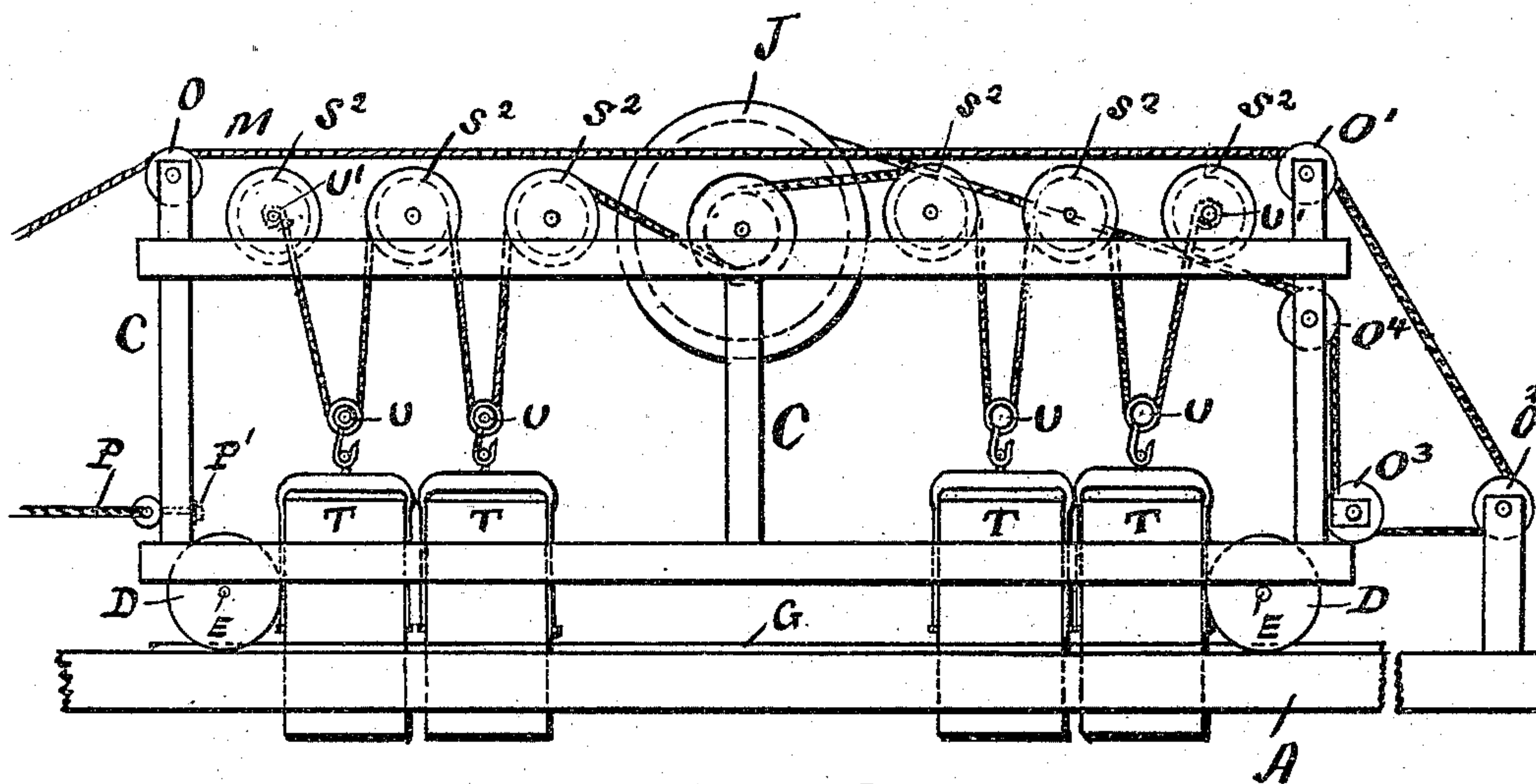


Fig 3.

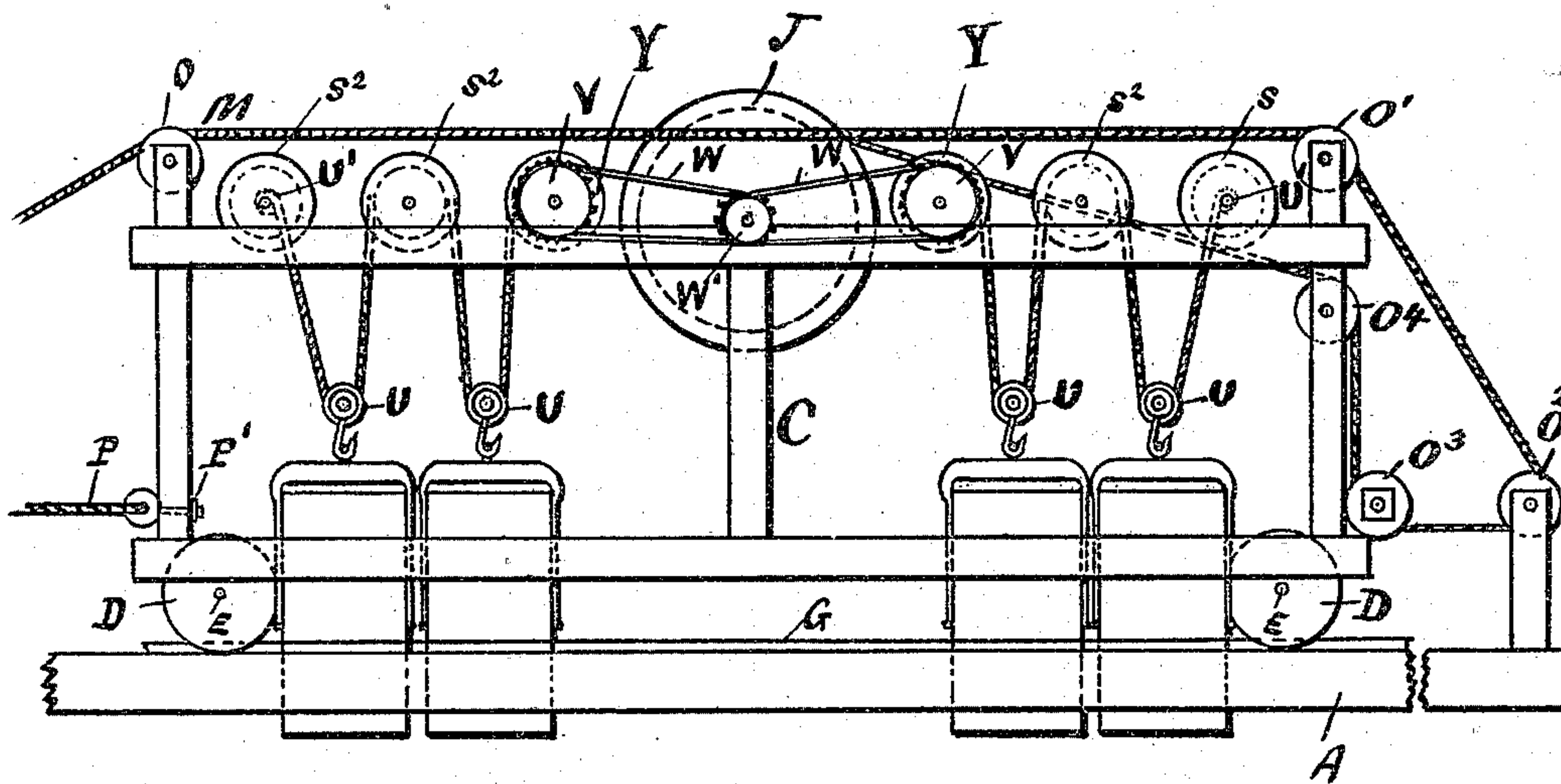


Fig 4.

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UNITED STATES PATENT OFFICE.

JOSEPH L. POTTER, OF INDIANAPOLIS, INDIANA.

TRENCH-MACHINE.

SPECIFICATION forming part of Letters Patent No. 550,690, dated December 3, 1895.

Application filed February 4, 1895. Serial No. 537,249. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH L. POTTER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Trench-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that form of trench-machines for which Letters Patent were granted to me on August 21, 1894, numbered 524,731.

My improvement consists in the hoisting mechanism whereby the capacity of the machine is increased.

Reference is had to the accompanying drawings, which form a part of this specification, in which similar letters of reference indicate the same parts throughout the several views.

Figure 1 is a side elevation. Fig. 2 is an end elevation. Fig. 3 shows a slight modification of my invention operating a series of buckets. Fig. 4 shows a modification of my invention with the buckets operated with a sprocket and chain.

In the drawings, A refers to the horizontal traveling superstructure which travels on the rails on the sleeper B.

C is the frame of the carriage and can be made of any suitable material and is provided with the wheels D, which are secured to the axles E. F is the axle-boxes. This carriage travels longitudinally on the track G.

H is the main shaft and has bearings in the boxes I and is provided with the large drum J and the small drums K and K' and the ratchet-wheel L.

N and N' are the ratchet-wheel pawls, which are pivoted to the beam at n and n', respectively. The pawl N' is to be engaged when the tub is raising for safety, and the pawl N is to be engaged only when the carriage is to travel.

M is the rope or cable with one end attached to the drum of the hoisting-engine

(not shown) and passes up and over the pulley O, then over the pulley O', then down and over the pulley O², then over the pulley O³, then upward and over the pulley O⁴, and then fastened to the main drum J. This cable M moves the carriage longitudinally to the right when the ratchet-wheel L is locked by simply running the drum of the engine and will raise or lower the tubs when the ratchet is released by running the engine in either direction.

The rope or cable P is attached to one of the drums of the engine and the opposite end is attached to the eyebolt P on the carriage. This cable is to pull the carriage to the left, when desired.

It is understood that the two drums of the engine are loose on the shaft and are only operated when the friction-levers (not shown) are engaged therewith.

R and R' are the ropes or cables, with one end fastened to the drums K and K', respectively, then passing over the pulleys S S', respectively, then extending down for a suitable length and the other end attached to the handles on the tubs T and T', respectively. This cable is intended to raise and lower said tubs.

Referring to Fig. 3, I have shown a modification, where a series of tubs can be raised at one time by simply extending the number of pulleys S² and using a hook-block U, as shown. The end of the tub-cable is fastened to the shaft at U'. Fig. 4 shows a further modification. The sprocket-wheel V is operated by the sprocket-chain W, which is driven by the sprocket-wheel W' on the main shaft. This operates the tub-drum Y, which raises or lowers the tubs.

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

1. In combination, the movable trestle, the movable frame mounted thereon, the shaft journaled in said frame, the main and supplemental drums carried on said shaft, the buckets, connecting means for said buckets to the supplemental drum, and the single draft rope for either advancing said frame or raising said buckets, substantially as described.

2. In a trench machine, the combination

with the movable trestle and carriage, of a main drum journaled in said carriage, pulleys also journaled in said carriage on each side of said drum, ropes operated through
5 the said drum connected at their outer ends to the outer pulleys and the tubs swung upon said ropes between each pair of pulleys, substantially as described.

3. In a trench machine, in combination
10 with the movable trestle and carriage, of a shaft journaled in said carriage, the main and supplemental drums mounted thereon, a plurality of pulleys journaled on each side of said

drums in said carriage, ropes secured to said supplemental drums at one end, then pass- 15
ing over the intermediate pulleys and secured at their opposite ends to the outer pulleys and the buckets moving from said ropes between each pair of pulleys, substantially
20 as described.

In testimony whereof I affix my signature
in presence of two witnesses.

JOSEPH L. POTTER.

Witnesses:

WATT. P. DENNY,
A. A. CHAPIN.