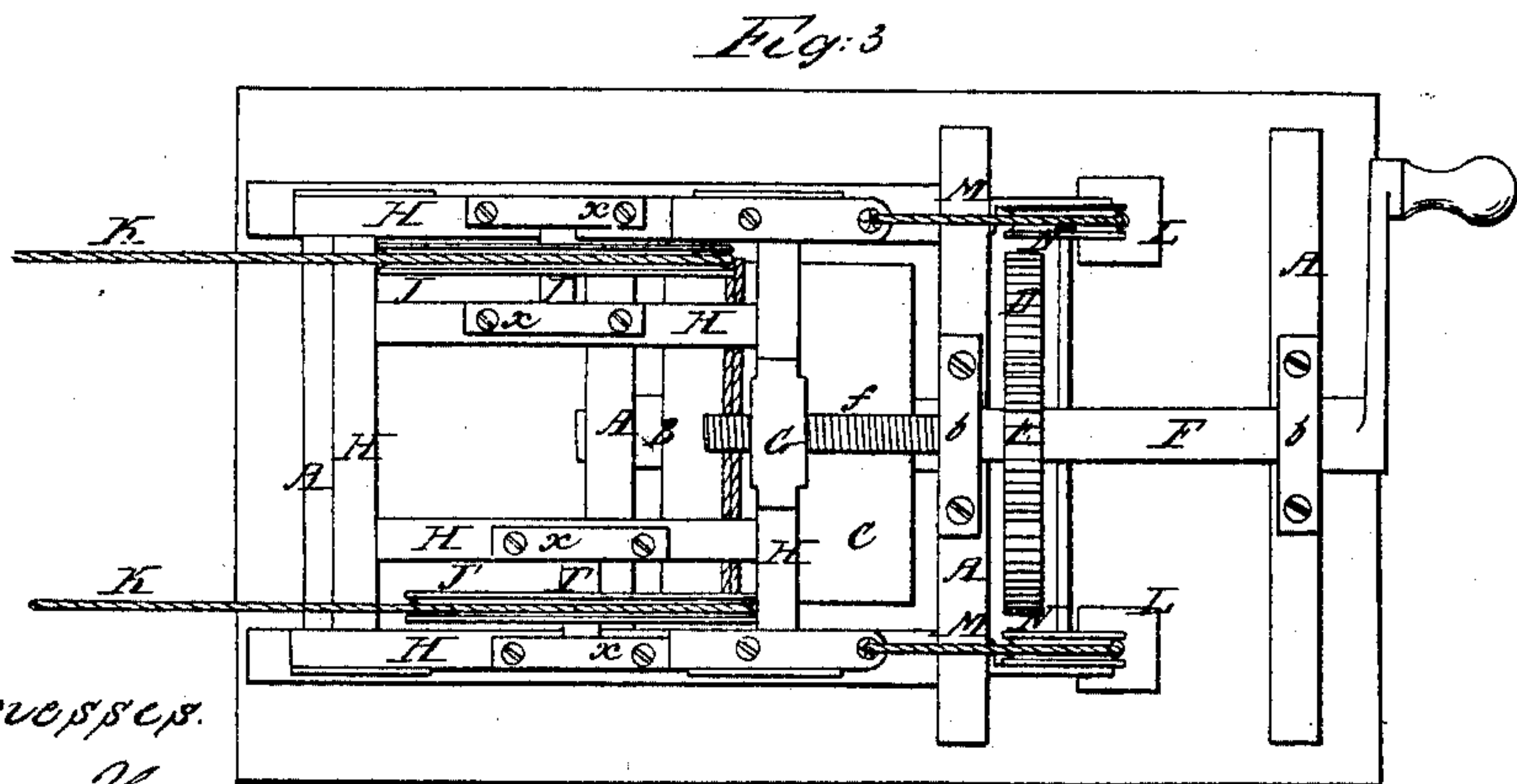
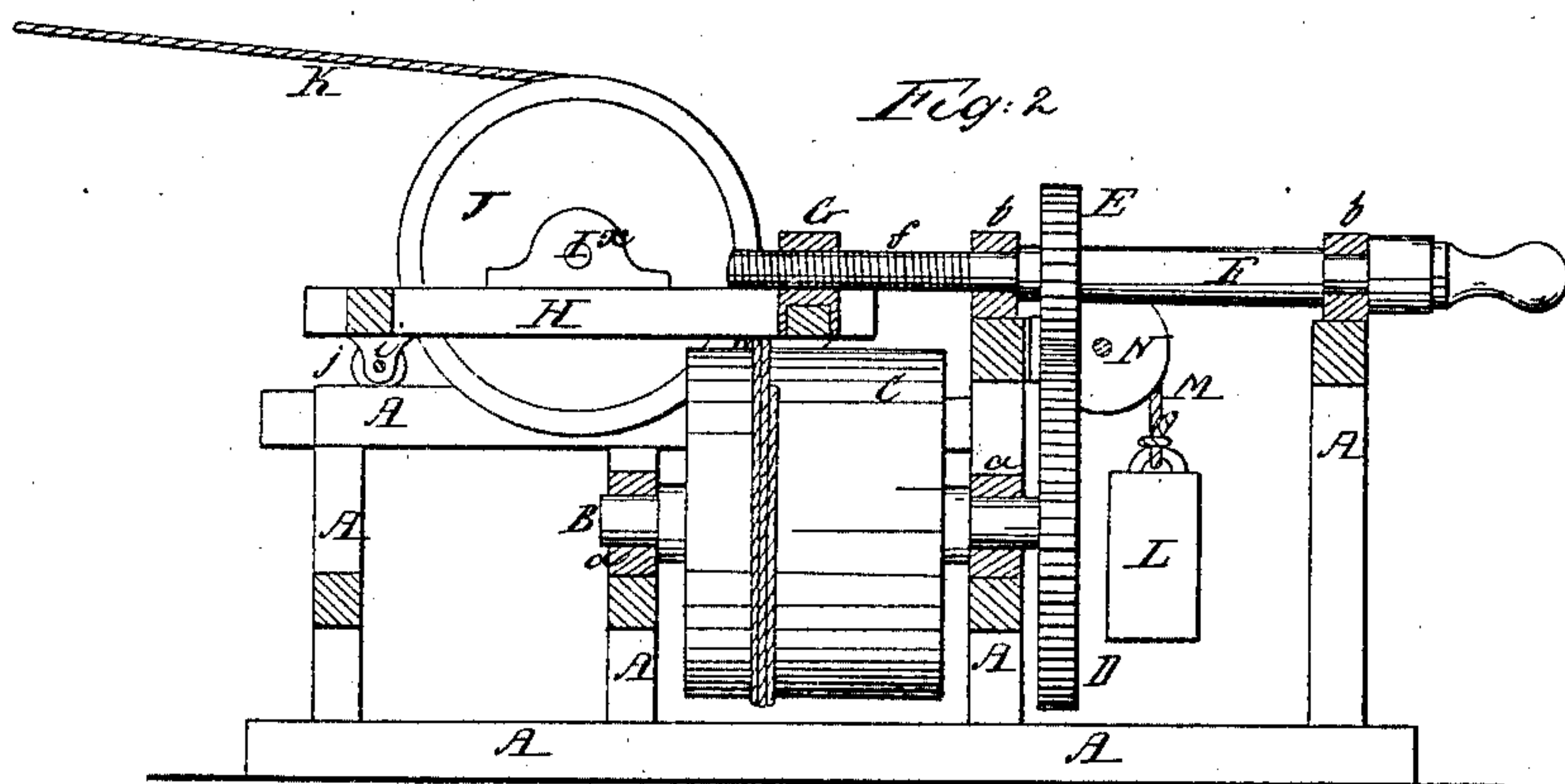
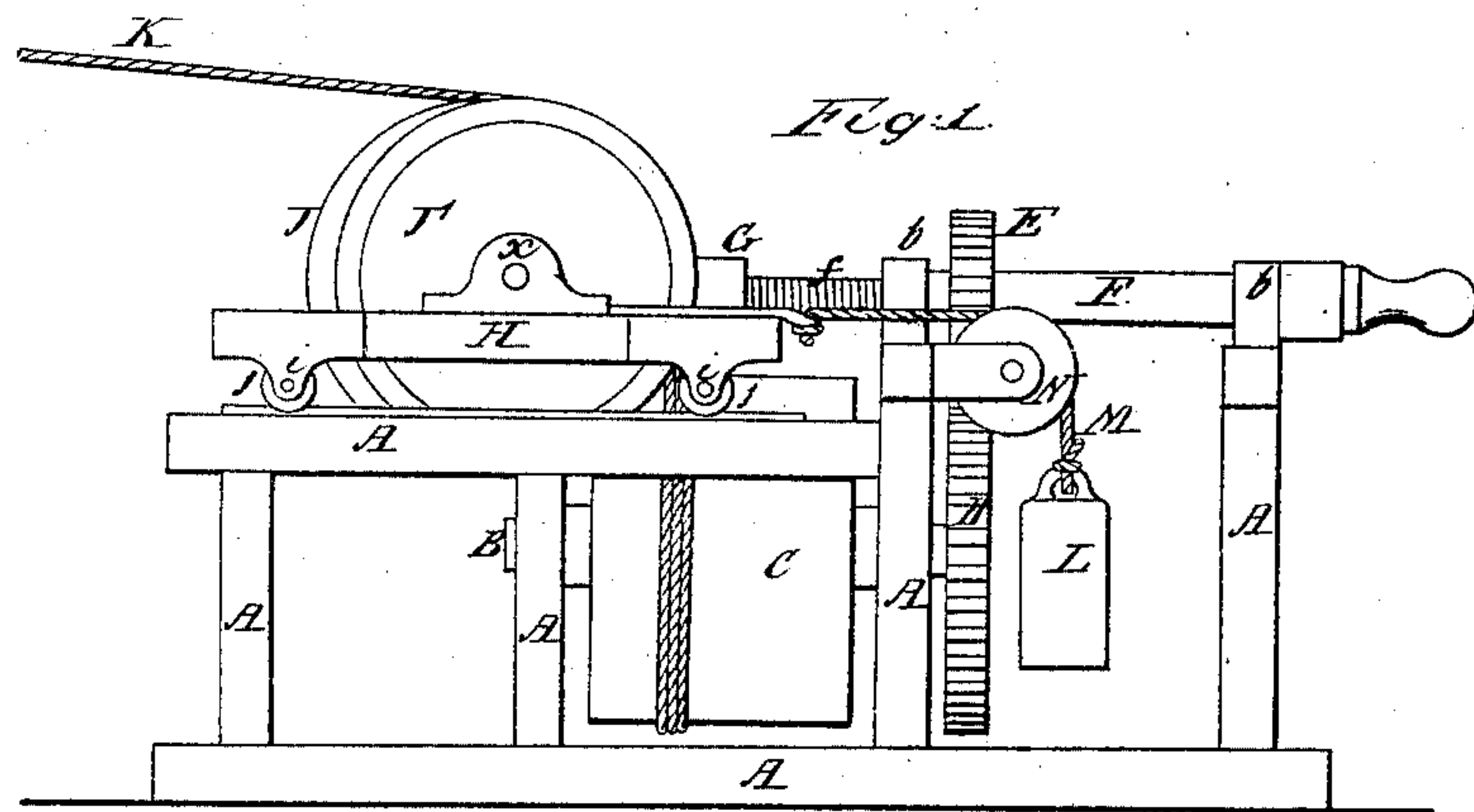


*J. L. Pott,*

*Elevator.*

*N<sup>o</sup> 26,921.*

*Patented Jan. 24, 1860.*



*Witnesses.*  
*Henry Howson*  
*Horace See*

*Inventor*  
*John L. Pott*



# UNITED STATES PATENT OFFICE.

JOHN L. POTT, OF POTTSVILLE, PENNSYLVANIA.

## HOISTING APPARATUS.

Specification of Letters Patent No. 26,921, dated January 24, 1860.

*To all whom it may concern:*

Be it known that I, JOHN L. POTT, of Pottsville, Schuylkill county, Pennsylvania, have invented a new and useful Improvement in Hoisting Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to improvements in that class of hoisting apparatus in which a large drum is used for receiving the folds of the rope the latter being attached to two trains of cars on the tracks of an inclined plane, and my invention consists of a sliding frame with grooved pulleys combined with a hauling drum, and so actuated by a screwed shaft or its equivalent as to control the position of the folds of the rope on the drum and prevent them from rubbing against each other, as fully described hereafter thereby preserving the rope from the attrition to which it is subjected in ordinary hoisting apparatus.

In order to enable others skilled in this class of machinery to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawing which forms a part of this specification, Figure 1, is a side view of my improved hoisting apparatus; Fig. 2, a sectional view of Fig. 1, and Fig. 3, a ground plan.

Similar letters refer to similar parts throughout the several views.

A is the framework of the apparatus, and in suitable boxes *a a* attached to this frame turns a shaft B to which is secured the drum *c*. To one end of the shaft B is secured a cog wheel D gearing into a pinion E on the driving shaft F which turns in suitable boxes *b b* secured to the frame A. On the projecting portion *f* of the shaft F is cut a screw adapted to a similar screw cut in the inside of the block G, which is firmly secured to one end of the frame H, the latter being furnished on the under side with brackets *i*, and each bracket having a flanged pulley *j* adapted to rails on a frame A, so that the frame H can slide longitudinally on the frame A, the position of the former on

the latter being controlled by the screwed end *f* of the shaft F.

In suitable bars *x x* attached to the movable frame H, turn the two shafts I and I', the former being furnished with a grooved pulley J, and the latter with a similar pulley J'. These pulleys revolve in planes at right angles to the plane in which the drum *c* revolves, and the pulleys are so situated that (viewed from above) the groove of the pulley J coincides with the periphery of the drum on one side of the latter and the groove of the pulley J' with the periphery of the drum on the opposite side, as best observed on reference to Fig. 3. It will be observed that one pulley is situated a little in advance of the other, the object of this will be rendered apparent hereafter.

K represents the hauling rope passing over the pulley J down to the drum *c* around which it is coiled two, three, or more times upward from the opposite side of the drum and over the pulley J', the two lengths of rope passing over guide pulleys at the head of the inclined plane and thence to the train of cars, one end of the rope being secured to one train and the other to the other train, so that one train ascends one track of the inclined plane simultaneously with the descent of the other on another track of the same plane.

Wire ropes are for the most part used in the coal districts for hauling purposes as being preferable on account of their durability and economy. When used in connection with ordinary hoisting apparatus, wire ropes are subjected to much wear and friction owing to one fold rubbing against the other as the rope passes around the drum, the constant attrition having a tendency to sever the wire strands so that the rope in a comparatively short time becomes unfit for use and dangerous. My improvement has been especially designed to obviate this evil.

As the shaft F and drum *c* revolve the frame H is caused to traverse the rails on the frame A by the action of the screwed end *f* of the shaft F on the block G, and the pulleys J and J' will guide the rope so that the folds will traverse from one end of the drum to the other, according to the direction in which it may be turned. Now



the pitch of the screw threads on the projecting end *f* of the shaft *F* and the speed of this shaft are so proportioned to the speed and diameter of the drum, and to the thickness of the rope, that as the drum revolves the frame *H* with its pulleys *J J'* will traverse at the proper speed to so direct the rope to the drum that one fold cannot come in contact with the other, thus preventing the attrition of one fold against the other and obviating the evils resulting therefrom.

As there is always more or less outward strain on the sliding frame *H* I use a counter weight *L* at one end of a rope *M* which passes over a pulley *N*, the opposite end of the rope being attached to the frame *H*.

Without confining myself to the precise

form and construction of the within described frame work, which may be modified to suit the situation it has to occupy—

I claim as my invention and desire to secure by Letters Patent—

The sliding frame *H* with its pulleys *J* and *J'* combined with the drum *G* and so actuated by the screwed shaft *F* or its equivalent, as to control the position of the folds of the rope around the drum, in the manner and for the purpose specified.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHN L. POTT.

Witnesses:

HENRY HOWSON,

CHARLES D. FREEMAN.