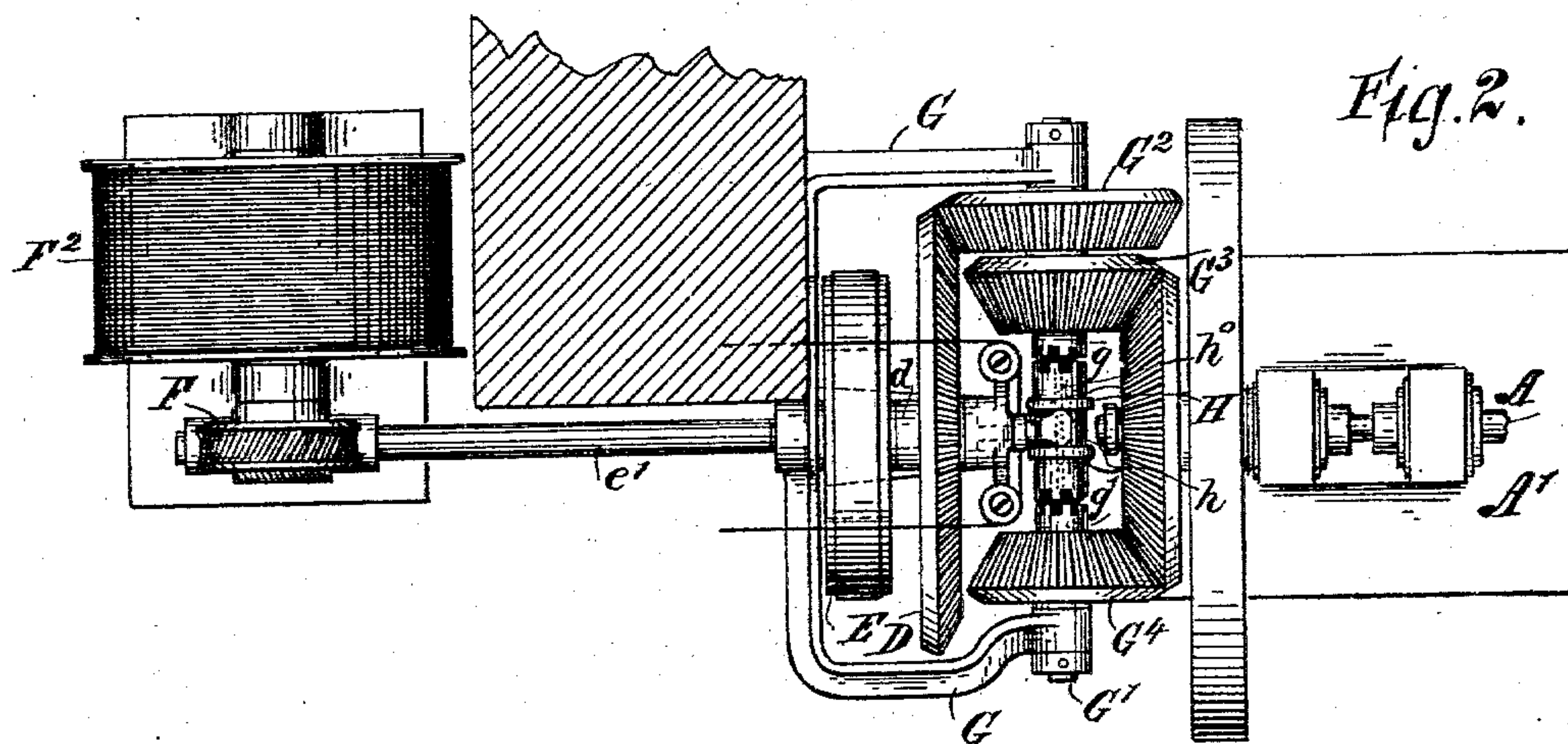
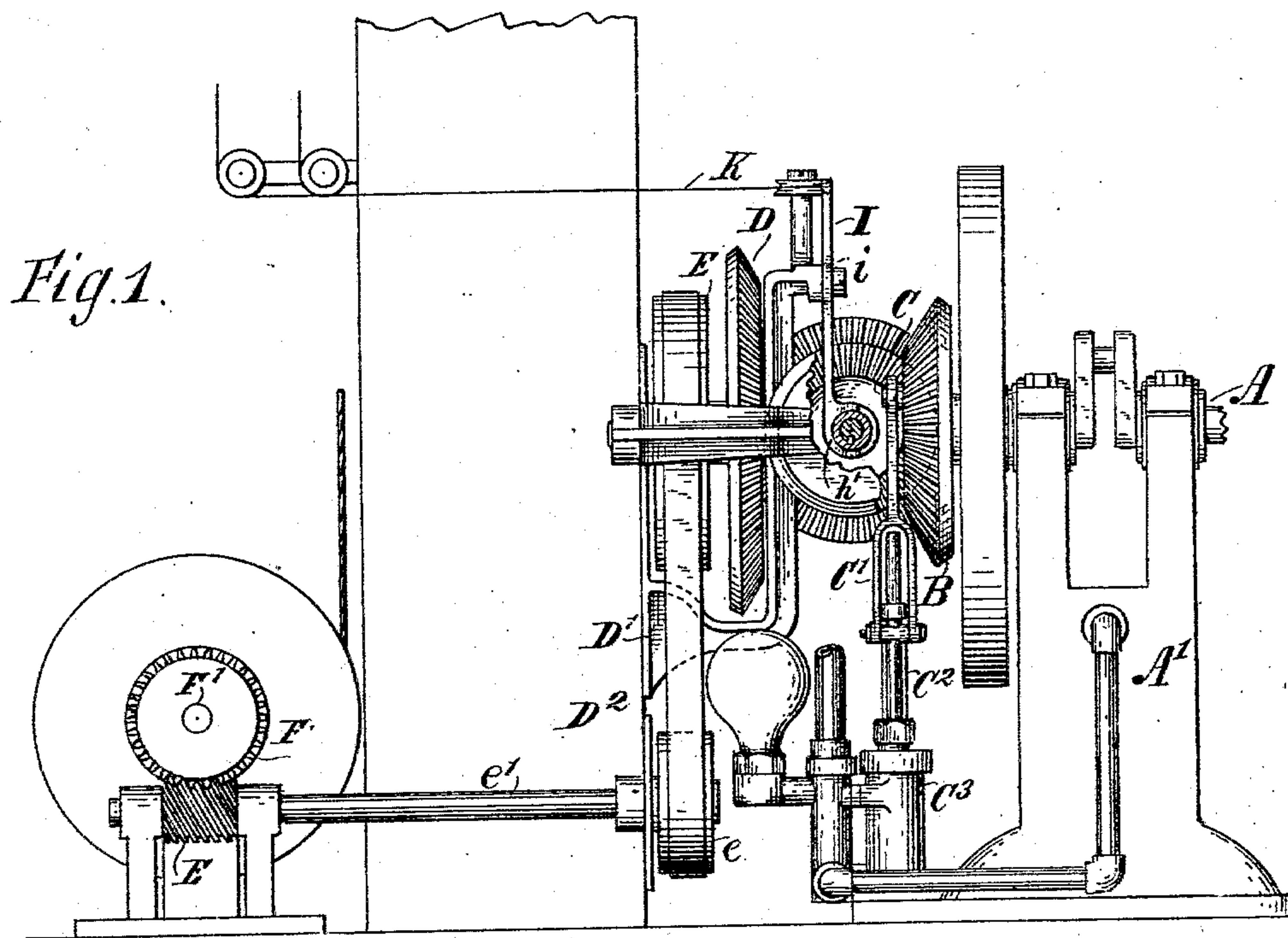


(No Model.)

F. MAYER.
DEVICE FOR TRANSMITTING POWER.

No. 548,650.

Patented Oct. 29, 1895.



Witnesses
Geo. Wadman
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Inventor.
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UNITED STATES PATENT OFFICE.

FRANZ MAYER, OF NEW YORK, N. Y.

DEVICE FOR TRANSMITTING POWER.

SPECIFICATION forming part of Letters Patent No. 548,650, dated October 29, 1895.

Application filed March 9, 1895. Serial No. 541,201. (No model.)

To all whom it may concern:

Be it known that I, FRANZ MAYER, of New York, in the county and State of New York, have invented certain new and useful Improvements in Devices for Transmitting Power, of which the following is a specification.

My invention relates to devices for transmitting power, and is particularly directed toward the production of a mechanism by which power may be transmitted from a prime mover—for instance, a steam-engine or a shaft or pulley operated thereby—for a plurality of distinct and independent purposes.

It further embodies, in a mechanism of the type described a system or method of transmission in which each apparatus operated from the prime mover may be controlled, as regards its motion, independently of and in no way affecting the motion of any other connected apparatus, as well as independently of the prime mover, the shaft, or the pulley.

I will describe a device for transmitting power embodying my improvement and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a device for transmitting power embodying my improvement, certain parts being removed to better show other parts. Fig. 2 is a plan view of Fig. 1.

Similar letters of reference designate corresponding parts in both the figures.

A designates the driver. It is here shown as comprising the crank-shaft of a vertical reciprocating engine A'.

B designates a bevel-wheel secured to the end of shaft A.

I have in the present instance shown a pump and an elevator or hoist as being operated from the shaft A, each controllable independently of the other and of the driving-shaft A; but I do not wish to be confined to these two specific constructions, as power may be transmitted from the shaft for other purposes without departing from the spirit of my invention.

C is a crank-pin secured to the outer face of the bevel-wheel B, with which a connecting-rod C' engages. The opposite end of the connecting-rod C' may be attached to the piston-rod C² of a pump C³.

D is a bevel-wheel arranged opposite the

wheel B. The shaft *d*, to which the wheel D is secured, is shown as being journaled in a suitable bracket D', secured to a support D². The shaft *d* is in the present instance provided with a pulley E, the latter constituting a driver for a driven pulley *e*, secured to a shaft *e'*. A worm E' is affixed to a shaft *e'* and engages with a worm-wheel F, carried by the shaft F' of a drum F². The drum F² may constitute the hoisting-drum of an elevator or hoist. The bracket D', I have shown as being provided with side extensions G G, in which is journaled a shaft G'. G² is a bevel-wheel rigidly secured to the shaft G' and meshing with the bevel-wheel D.

G³ and G⁴ are bevel-wheels loosely mounted upon the shaft G' and each meshing with the bevel-wheel B on opposite sides of the latter. The bevel-wheels G³ and G⁴ are provided with hubs *g* and *g'*, respectively, whose adjacent edges are notched or provided with teeth constituting a clutch member.

H is a sleeve having a sliding fit upon the shaft G', but compelled to rotate therewith by a feather or spline *h*⁰, projecting from the shaft G' and fitting into a corresponding slot in the sleeve. The sleeve is provided at opposite edges with teeth which may engage on one side with the teeth on hub *g* and on the opposite side with the teeth on hub *g'*. It is evident by this construction that if the sleeve H is moved along the shaft G' to engage with the teeth upon the hub *g* the shaft *d* will be driven in one direction, while if it is moved to engage with the teeth upon the hub *g'* the shaft *d* will be driven in the opposite direction.

The sleeve H is provided with a circumferential groove *h*, in which fits a forked piece *h'*, formed upon or attached to the end of a lever I, pivoted at the point *i* to the bracket D' or an appurtenance thereof. By shifting this lever in one direction the shaft *d* is driven in one direction, while if the sleeve is shifted in the opposite direction the motion of the shaft *d* is reversed.

K is a rope or cord attached to the upper end of the lever I and passing over suitable guide-pulleys. It serves the purpose of shifting the lever from side to side.

It will be seen that by my improvement power may be derived from a shaft A and applied continuously for any purpose, while at

the same time by intermediate mechanism power may be derived from the same shaft and applied to an entirely different purpose, and yet when so applied for this latter purpose the apparatus so operated will be completely under control as regards direction of movement.

Having described my invention, what I consider as new, and desire to secure by Letters Patent, is—

1. The combination with a driving shaft and a bevel wheel secured thereto, of a shaft G' extending transversely to the driving shaft, a bevel wheel rigidly secured to the shaft G', bevel wheels G³, G⁴ loosely fitted to the shaft G', and meshing with the bevel wheel secured to the driving shaft, a driven shaft, a bevel wheel secured thereto and meshing with the bevel-wheel rigidly secured to the shaft G' and means for causing the shaft G' to rotate at will with either of the wheels G³, G⁴, substantially as specified.

2. The combination with a driving shaft and a bevel wheel secured thereto, of a shaft G' extending transversely to the driving shaft, a bevel wheel rigidly secured to the shaft G', bevel wheels G³, G⁴ loosely fitted to the shaft G' and meshing with the bevel wheel secured to the driving shaft, a driven shaft, a bevel wheel secured thereto and meshing with the bevel wheel rigidly secured to the shaft G', and a clutch for engaging either of the bevel wheels G³, G⁴ with the shaft G' and thereby cause this shaft to rotate in either one direction or the other, substantially as specified.

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

FRANZ MAYER.

Witnesses:

L. G. KURTZ,

EDWARD SCHORN.