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E. EVANS.

MEANS FOR CONTROLLING GAS ENGINES.

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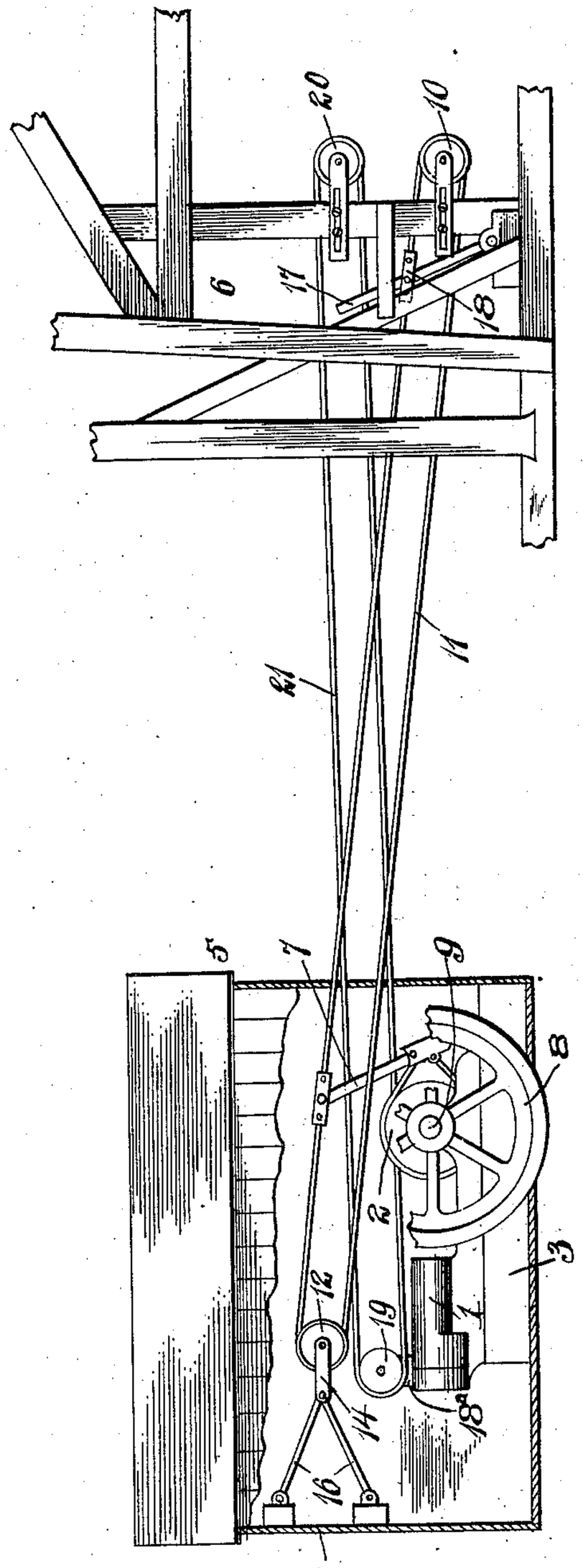

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UNITED STATES PATENT OFFICE.

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MEANS FOR CONTROLLING GAS-ENGINES.

No. 845,732. Specification of Letters Patent. Patented Feb. 26, 1907.

Application filed August 11, 1905. Serial No. 273,781.

To all whom it may concern:

Be it known that I, EVAN EVANS, a citizen of the United States of America, residing at Butler, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Means for Controlling Gas-Engines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in means for controlling gas-engines.

The invention aims to provide positive and reliable means for effecting the perfect control of a gas-engine, the means devised by me being particularly adapted for controlling gas-engines such as are used in connection with oil-well rigging and having a special type of clutch mechanism which is employed for imparting a rotary motion to a belt-pulley or other rotating body in a reverse direction without regard to the direction of rotation or operation of the gas-engine.

The essential features of the present invention (one of which is an improvement upon a patent granted to myself and W. A. Gerner July 25, 1905, No. 795,499, which is wholly generic to the present case) are necessarily susceptible to structural change without departing from the scope of the invention; but the preferred embodiment of the invention is illustrated in the accompanying drawing, which shows a diagrammatic elevation of a part of an oil-well rigging and a part of the gas-engine in connection with which my present improvement is shown in diagrammatic form.

In the drawing I have illustrated a gas-engine 1 and a clutch mechanism 2, the latter shown only conventionally and being of a form shown in detail in the patent heretofore referred to. The gas-engine is mounted upon a suitable froundation or base 3.

Gas-engnies or other type of engines used in connection with oil and gas well drilling are usually located in what is termed an "engine-house," designated in the drawing herewith as 5, and which house is located a considerable distance from the derrick 6.

The form of clutch shown in the patent heretofore referred to embodies a brake-band, and in the present invention I connect this brake-band to a lever 7, the movement of which in one direction tightens the brake-band upon a ring or annulus carried by the fly-wheel 8 of the engine and at the same time through the medium of mechanism fully described in the aforesaid Letters Patent retracts the clutch-shoes. An opposite movement of the lever 7 releases the brake-band and at the same time throws the clutch-shoes into operative position, whereby to positively connect the pulley of the clutch mechanism to the drive-shaft 9 of the engine and cause these parts to rotate in unison.

To control and operate this mechanism from the derrick 6 is the broad object of my present invention, and to accomplish this I provide in the derrick 6 an adjustable pulley 10. An endless cord or cable 11 passes over said adjustable pulley 10 and over a pulley 12 in the engine-house 5. The pulley 12 is supported in a bracket 14, which may be supported from the rear wall 15 of the engine-house by a cable or bracket 16, as clearly shown in the drawing.

The upper end of the lever 7 is attached to one of the strands of the endless cable 11, whereby as said cable is actuated the lever 7 will be moved to actuate the mechanism, as heretofore described. The pulley 10 is preferably adjustably mounted in order that it may be adjusted to keep the cable 11 in a taut condition, which will serve to keep the pulley 12 in the extended position shown in the drawing.

Pivotally mounted in the derrick 6 at any suitable point is a lever 17, this lever being connected to one of the strands of the cable 11, as at 18. By this construction it will be observed that the operator in the derrick by moving the lever 17 in the desired direction can control the clutch mechanism of the gas-engine from his position in the derrick, the movement of the lever in one direction tending to retract the clutch-shoes, and the opposite movement of the lever tending to throw the clutch-shoes into operation. As this construction permits the attendant or operator in the derrick controlling the clutch, it is also desirable that he have control of the engine from the same point of vantage, and to accomplish this I provide the controlling-valve 18^a (shown conventionally) with a pulley 19 and in the derrick provide a pulley

20, which is adjustably mounted in the same manner as the pulley 10. Over these pulleys 19 and 20 passes a cable 21, which may be actuated by hand by the operator in the derrick, whereby to open or close the controlling-valve of the engine, as may be desired.

What I claim is—

1. The combination with a derrick, a gas-engine located at a point removed from the derrick and having a clutch mechanism, of a pulley mounted in the derrick, a second pulley mounted adjacent to the gas-engine, a lever connected to the clutch mechanism of the gas-engine, an endless cable passing over said pulleys and having the outer end of said lever connected to a portion of the cable, and a lever pivoted in the derrick and also connected to a portion of said cable for moving the same on its pulleys to actuate the clutch mechanism of the gas-engine.

2. The herein-described means for controlling clutch mechanism of a gas-engine at a point remote therefrom, comprising a pair of distantly-located pulleys, an endless cable passing over said pulleys, a lever connecting one portion of said cable to said clutch mechanism, and an actuating-lever also connected to the cable adjacent one of said pulleys for actuating said cable.

3. The herein-described means for controlling gas-engine mechanism at a point remote therefrom, comprising a pair of distantly-located pulleys, one located adjacent the gas-engine and the other remote therefrom, an endless cable passing over said pulleys, and means connected to said cable and operating to actuate the controlling mechanism of said gas-engine.

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

EVAN EVANS.

Witnesses:
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