

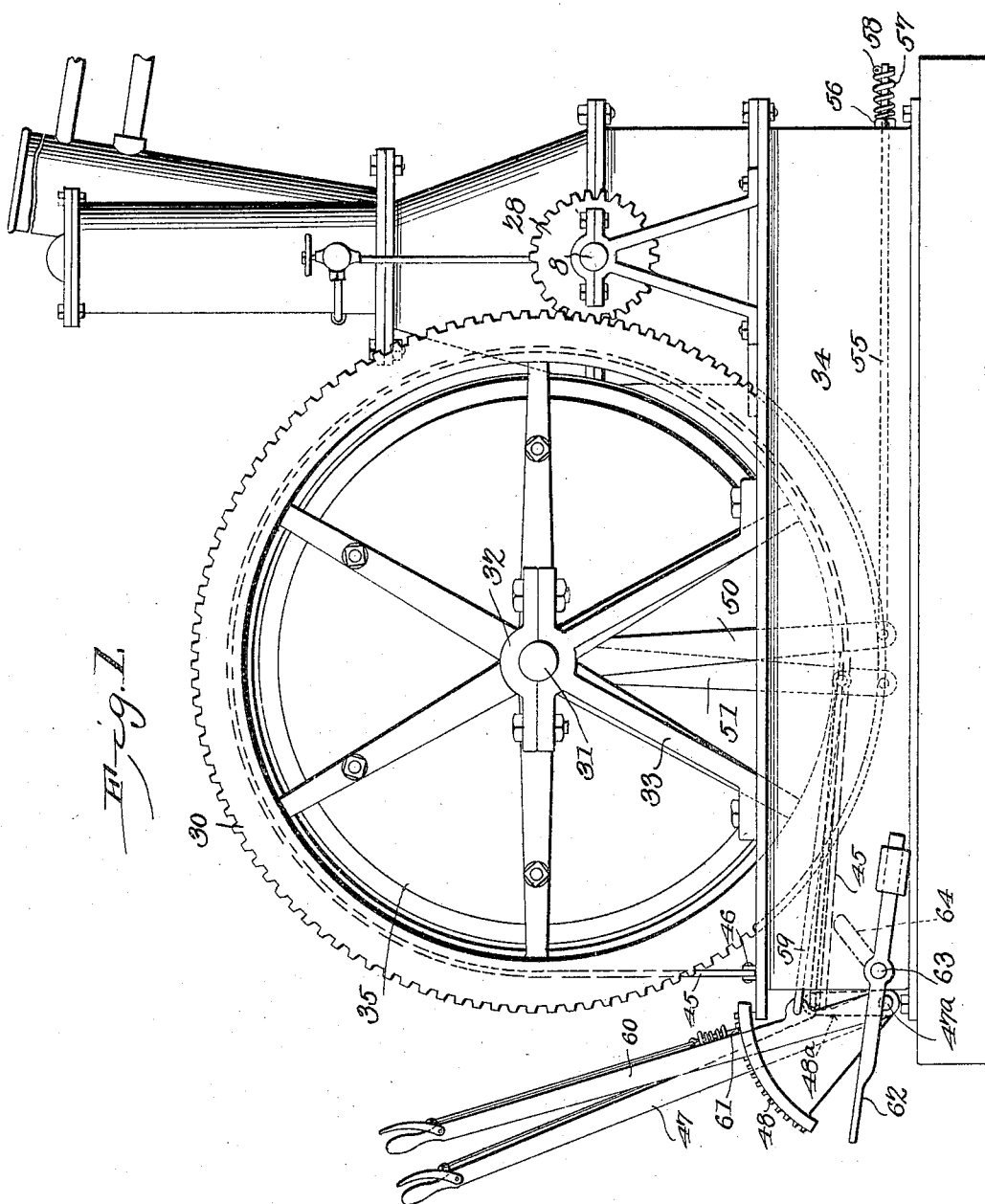
No. 801,838.

PATENTED OCT. 17, 1905.

R. W. BASOM.
HOISTING MACHINE.

APPLICATION FILED SEPT. 21, 1904.

2 SHEETS—SHEET 1.



Witnesses:

E. J. Stewart

R. M. Elliott

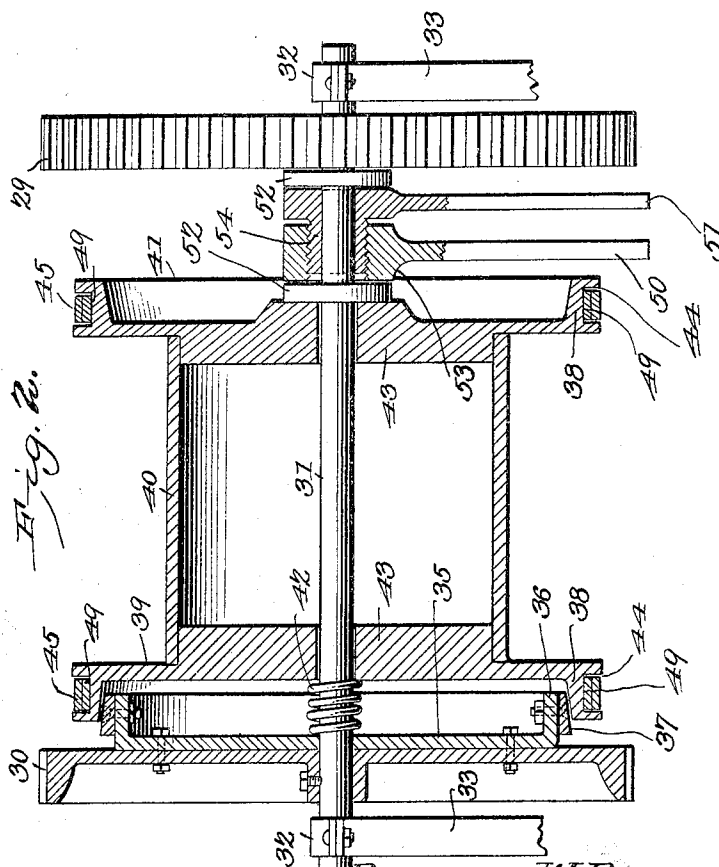
Ransford W. Basom, Inventor,
by *C. A. Snow & Co.*
Attorneys.

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UNITED STATES PATENT OFFICE.

RANSFORD W. BASOM, OF GALENA, KANSAS.

HOISTING-MACHINE.

No. 801,838.

Specification of Letters Patent.

Patented Oct. 17, 1905.

Application filed September 21, 1904. Serial No. 225,388.

To all whom it may concern:

Be it known that I, RANSFORD W. BASOM, a citizen of the United States, residing at Galena, in the county of Cherokee and State of Kansas, have invented a new and useful Hoisting-Machine, of which the following is a specification.

This invention relates to hoisting-machines.

The object of the invention is to simplify the construction and render the machine more efficient, to place the hoisting mechanism positively under control of the operator, and to improve the brake mechanism of the drum in such manner that with the output of comparatively small amount of energy the drum may be controlled and caused to run slowly, rapidly, and be positively checked or stopped when so desired.

With the above and other objects in view the invention consists in the novel construction and combination of parts of a hoisting-machine, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in elevation, showing the manner of connecting the engine with the hoisting-drum. Fig. 2 is a view in vertical longitudinal section through the hoisting-drum.

The engine shown in Fig. 1 is constructed and operated in the same manner as that shown in a patent granted to me February 10, 1891, No. 445,967.

The drive-shaft 8 of the machine carries at each end a pinion 28, one only being shown, which mesh with two gears 29 and 30, mounted upon a shaft 31, which is supported in suitable journals 32, carried by brackets 33, mounted upon a base 34, upon which the engine is also supported. The gear 29 is of the ordinary construction; but gear 30 carries on its inner side a disk 35, which may be either bolted to the gear, as shown in Fig. 2, or be cast integral therewith. The disk is provided with a peripheral flange 36, upon which are bolted a series of wooden blocks 37, the outer faces of which are beveled and which constitute the locking-face of a pair of clutch members, the other member being formed by the flange 38 of one of the heads 39 of the winding-drum 40, the other head 41 being of the same construction. The inner face of the flange 38 is beveled opposite to that of the

face 37, so that when the two are brought into contact with each other a positive clutching action ensues, which will lock the drum upon the shaft and cause it to rotate therewith. The two clutch members 37 and 38 are normally held separated by a coiled spring 42, which is mounted upon the shaft 31 between the head 39 and disk 35, as clearly shown in Fig. 2.

The spool consists of strips or staves, which are secured to the periphery of the hubs 43 of the two heads.

The outer face of the flange 38 is provided with a peripheral channel 44, in which is disposed a band-brake 45, one end of each of which is secured to the base 34 at 46 and the other end of one of which is secured to a lever 47 upon a shaft 47^a, supported upon the base. This shaft carries an arm 48^a rigid therewith, and to which the end of the other brake-band is secured, as shown in Fig. 1. Each brake-band has secured to its inner side a plurality of wooden blocks 49, which are adapted to bear against the inner wall of the groove, and thus effectively lock the drum against rotation without wearing the same away by friction.

Depending from the shaft 31 between the head 41 of the drum and the gear-wheel 29 are two arms 50 and 51, the said arms being held spaced from the head and the gear-wheel by washers 52. The arm 50 has an internally-threaded head 53, which is engaged by a threaded extension 54, projecting laterally from the arm 51. The arm 50 is held against rotation by a rod 55, one end of which is connected with the lower end of the arm, as shown in Fig. 3, and the free end of which projects through the rear end of the base and has loosely mounted thereon a washer 56, against which bears a coiled spring 57, carried by the projecting end of the rod and held in position thereon by a cotter-pin 58. The function of the spring is to permit arm 50 to have a slight yielding movement to prevent breakage under strain. The arm 51 is mounted for rotation upon the shaft and has connected with it one end of a rod 59, the other end of which is connected with a lever 60, pivoted upon the base and having a spring-pressed latch 61 to engage with the teeth of the rack-bar 48 to hold the lever at any desired adjustment. The function of this lever is to rock the arm 51 and cause its threaded extension by engagement with the head of the

arm 50 to force the drum laterally upon the shaft 31 and against the stress of the spring 42, and thus cause the two clutch elements 37 and 38 to interlock and effect rotation of the drum. This arrangement is absolutely positive, and sufficient pressure may be exerted upon the drum to cause the clutch members to be effective in holding the drum for driving under any desired strain, and immediately upon the lever 60 being shifted the spring 42 will automatically force the drum to its normal position, and thus release the clutches.

If preferred, a foot-lever 62 may be employed in lieu of the hand-lever mechanism for operating the brake and which is mounted upon a shaft 63, supported by the base, the said shaft being provided with a shoe 64, which when the foot-lever is depressed will engage with the band-brake and cause the band-brake to engage the wall of the groove 49 with sufficient force to stop the rotation of the drum when the frictional contact between the clutch elements is comparatively light.

The arrangement of the brake mechanism and drum-shifting devices will be found thoroughly effective in use for the purposes designed and being simple of construction will not be liable to get out of repair from long-continued use.

All the improvements herein described are of utility and will in a practical and thoroughly satisfactory manner perform the several functions for which they are designed.

Having thus described the invention, what is claimed is—

1. In a hoisting-machine, a shaft provided at each end with a gear-wheel, a clutch element carried by one of the gears, a spool loosely mounted upon the shaft and carrying a second clutch element, an arm loosely mounted upon the shaft and having a threaded extension, a second arm engaging the extension, means to permit the latter arm to have a slight yielding movement, and means for oscillating the first-named arm to impart lateral movement to the drum.

2. A hoisting-machine comprising a shaft, a spool loosely mounted thereon and having a band-brake combined with each end thereof, a lever for simultaneously operating both bands, a gear fixed to the shaft and carrying a clutch element, a second clutch element combined with the spool, an arm loosely mounted on the shaft and having a threaded extension, an arm engaging at one end with the threaded extension and having its other end held against oscillation, and means for vibrating the first-named arm.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RANSFORD W. BASOM.

Witnesses:

JOHN FITZGERALD,
J. H. LENNON.