J. R. TELLER.

PLATFORM ADJUSTER.

APPLICATION FILED APR. 6, 1910.

1,016,047.

Patented Jan. 30, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

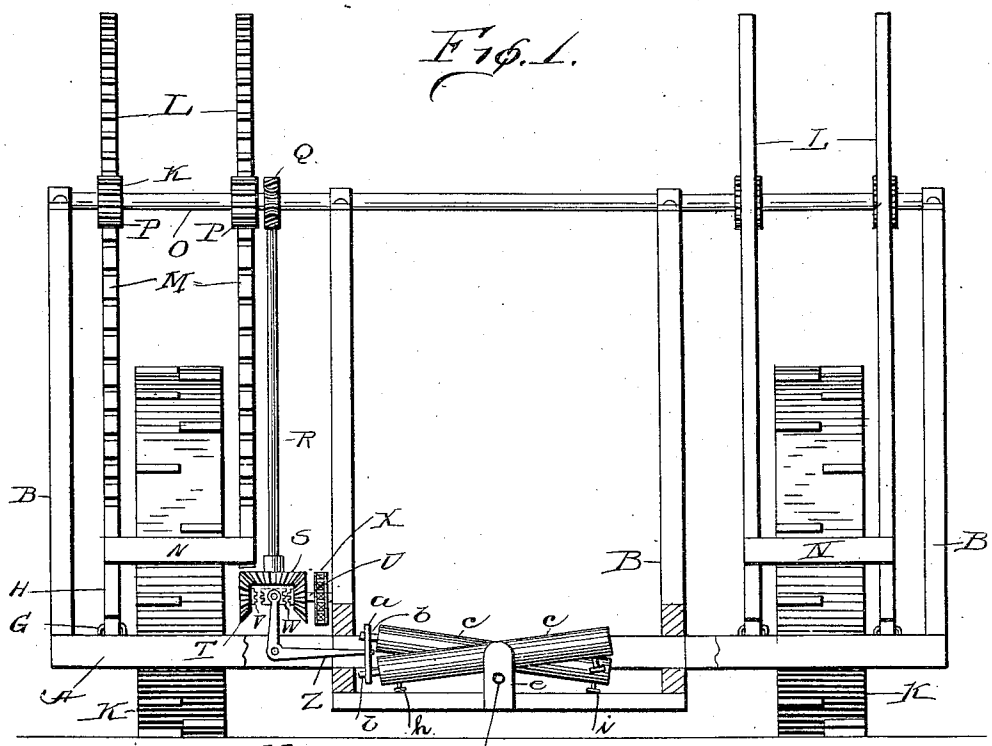
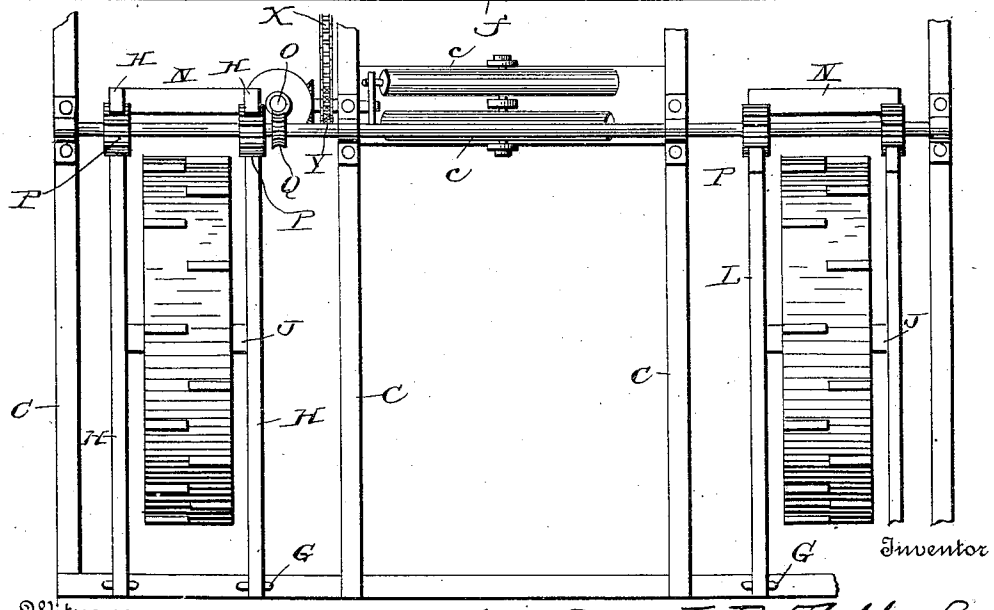


Fig. 2.



Witnesses

J. M. Fowler Jr.

M. E. Moore

Inventor

J. R. Teller.

By Jno. N. Moore

Attorney

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2 SHEETS—SHEET 2.

Fig. 3.

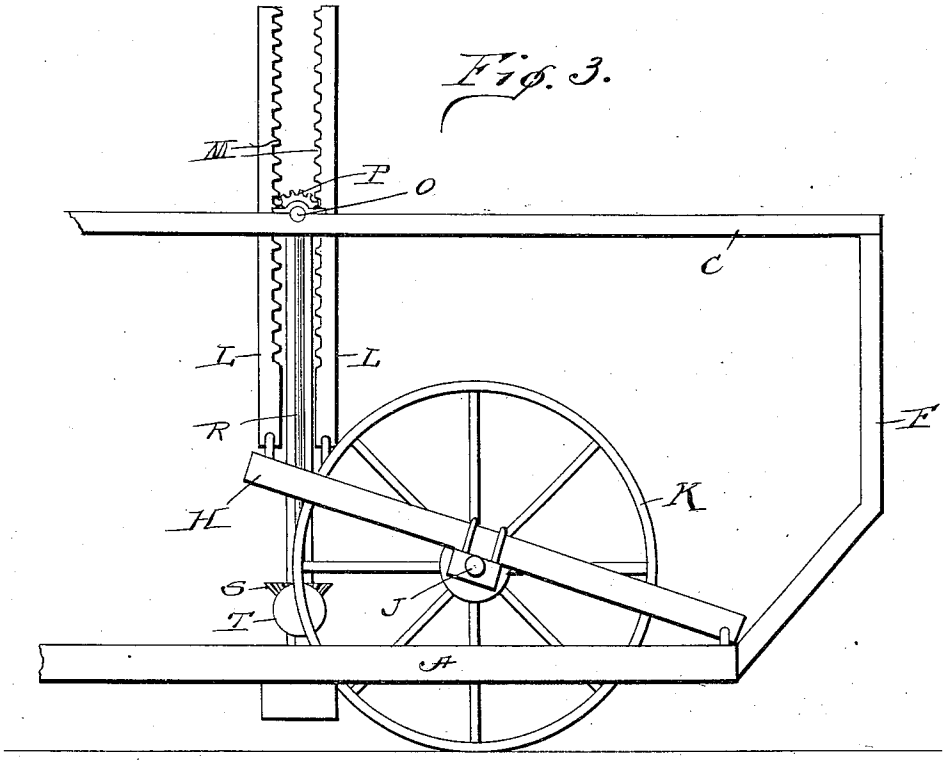
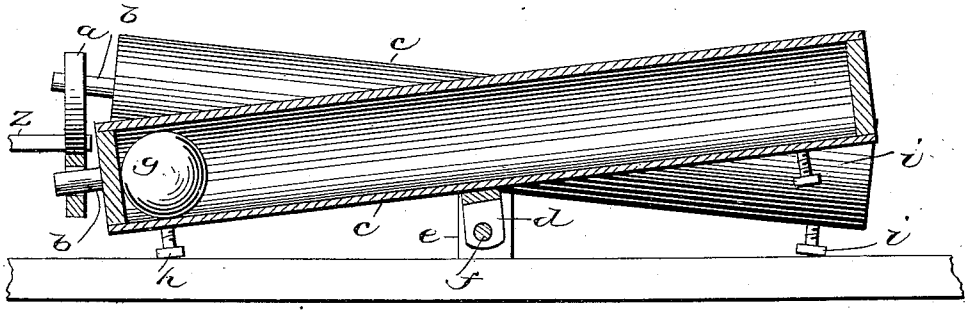


Fig. 4.



Witnesses

J. M. Fowler Jr.

M. E. Moore

Inventor

J. R. Teller.

By Wm. V. Moore.

Attorney

UNITED STATES PATENT OFFICE.

JAMES R. TELLER, OF STOCKTON, CALIFORNIA.

PLATFORM-ADJUSTER.

1,016,047. Specification of Letters Patent. Patented Jan. 30, 1912.

Application filed April 6, 1910. Serial No. 553,819.

To all whom it may concern:

Be it known that I, JAMES R. TELLER, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Platform-Adjusters, of which the following is a specification.

My invention relates to improvements in platform adjusters, and the object of my invention is the provision of an improved automatic clutch shifter adapted to be operated by the disturbance of the equilibrium of the machine upon which it is secured, the further object of my invention being the provision of a clutch shifter especially adapted for use on side hill harvesters for automatically insuring the frame thereof being in correct position and preventing the leaning thereof.

To attain the desired object my invention comprises a pair of shifting members adapted to throw a clutch into and out of operative position, said members being shifted or operated by the moving of the frame carrying the same out of its correct position and thus disturbing the equilibrium thereof, the invention further residing in the novel combination of parts and features of construction substantially as hereinafter described and as shown in the accompanying drawings.

Figure 1 represents a rear elevation of the harvester frame with my improvement applied thereto, part being broken away. Fig. 2 represents a top plan view of the structure shown in Fig. 1. Fig. 3 represents a side elevation thereof, and, Fig. 4 represents an enlarged detailed view partly in section of the improved equilibrium restoring device employed in my invention.

In the drawings, in which similar characters of reference are employed to denote corresponding parts in the several views, the letter A designates the lower bar of the frame, B the upright members and C the upper bars, while secured to the rear bar F by the U-bolts G are the lever members H having journaled intermediate their length the shafts J of the traction wheels K of the harvester, while the other ends of said members H are pivotally secured to the lower ends of the members L, the members H and L being secured in pairs at each side of the machine and the latter being formed with teeth or racks M and having braces N secured thereto to retain them in spaced relation.

Extending transversely of the frame and having its ends journaled in the bars C is a shaft O bearing a series of pinions P meshing with the various racks M, while on said shaft is also an operating gear, that shown being a screw gear Q driven by the threaded upper end of the vertical shaft R which is carried by the frame and bears at its lower end the beveled gear S engaging the oppositely disposed beveled gears T loosely mounted on the shaft U and having inner clutch faces V adapted to be engaged by the clutch member W to operatively connect said gears with the shaft U, said shaft being driven by a chain X passing around the sprocket Y on the shaft and rotated by suitable connection with one of the wheels of the machine.

The clutch W may be moved laterally on the shaft U and engaged with either of the gears, the position of the gears causing them when connected by the clutch to revolve the shaft in opposite directions, and to shift the clutch out of engagement with both the gears or in engagement with either as desired I employ the bell crank lever Z having one arm engaging the clutch and the other being received in a slot formed in the plate *a*, said plate being pivotally secured at each end to a pin *b* carried by one of the tubes *c*, the tubes *c* each having centrally of the length thereof a lug *d*, said lugs *d* being pivotally secured between the ears or bracket *e* by the shaft *f*.

Mounted in each of the tubes *c* is a heavy metal ball *g* adapted to roll along the tube, while projecting from the lower side of the tubes are the adjustable abutments *h* and *i*, said abutments being located at opposite ends of the tubes and oppositely disposed on the two tubes.

In the operation of my improved mechanism, when the frame of the harvester tips to one side or the other, one of the balls *g* will roll to the other end of its tube, and it will be observed that normally said tubes lie with their opposite ends depressed and containing the balls, the adjustment of the abutment *h* upon which they normally rest regulating the angle which the frame must assume before the ball will move. Upon the movement of the ball the tube will be tipped, said tipping movement raising the end of the plate *a* secured thereto and mov-

ing the crank Z to throw the clutch into engagement with the face V of one of the gears T, said gear through the medium of the connections heretofore described causing the revolution of the shaft O, while the pinions P meshing with the racks M serve to shift said racks up and down, thus changing the position of the axles J of the wheels K with respect to the frame and in this manner counteracting the tipping of the frame caused by the slope of the ground upon which the wheels rest.

It will be observed that the abutments *i* are so set that the normally upper or higher end of the tube when depressed is still above the lower end of the other tube, so that as the frame resumes normal position the ball in said tube will return to its regular position and throw the clutch out of engagement before the other tube is tipped to operate the mechanism in the reverse direction.

It will be understood that while I have illustrated a single plate *a* as being connected to the ends of both the tubes, I may employ a pair of said plates each being pivotally secured to the frame and operating independently of the other, and that if desired I may make other minor changes in the construction such as having one of the axles J fixedly secured to the frame and secure the adjustment entirely through the movement of the other axle or otherwise alter the structure illustrated without in the least departing from the spirit or principles of the invention.

From the foregoing description taken in connection with the drawings the construction and operation of my mechanism will be readily understood and its advantages be fully appreciated and it will be apparent that while I have shown the same as applied to a side hill harvester frame that it can be employed upon any other device adapted for use upon uneven or sloping surfaces, either traction engines, plows or like structures and that it will automatically keep the frame level and will fulfil the purposes of the invention in a highly satisfactory manner.

I claim:

1. In mechanism of the character described, the combination with a frame, of levers pivotally secured thereto, axles secured to the levers intermediate their length, and automatically operated means for moving said levers to adjust the position of the axles with reference to the frame, said means, comprising of a pair of pivoted weighted cylinders having connection with the said levers.

2. In mechanism of the character described, the combination with a frame, of wheels adjustably secured thereto, means for adjusting said wheels, a cylinder pivotally secured to the frame, a ball mounted in the cylinder and adapted to tilt said cylinder on its pivot upon the tipping of the machine, and a clutch connected with the cylinder and adapted to be thrown into engagement by the tilting of the cylinder to cause the operation of the adjusting means.

3. In a machine of the character described, the combination with a frame, of a pair of cylinders pivotally supported thereon, balls located in the cylinders and adapted to normally lie at correspondingly opposite ends of the cylinders, the ball of each cylinder being adapted to shift upon the tipping of the machine to tilt its cylinder, a double face clutch member connected with said cylinders and operated by the tilting of the cylinders, wheels adjustably secured to the frame, and operating mechanism adapted to be connected by the clutch with the shaft to adjust the wheels to restore the equilibrium of the frame.

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

JAMES R. TELLER.

Witnesses:
THOMAS A. MILLER,
JAMES A. JOHNSON.