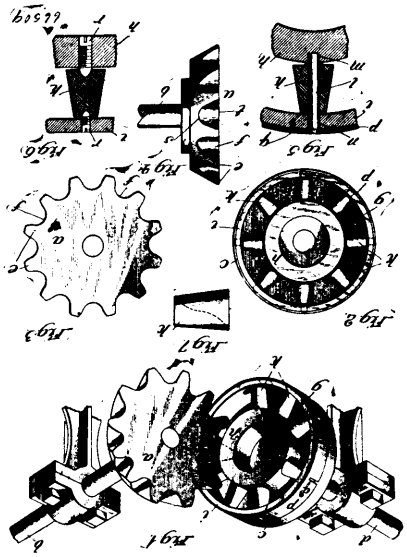
teeth, substantially as described. 4th. A gear wheel having pivoted teeth with concaved inner faces, in combination with a circular spring bearing against the concaved inner faces of all of the teeth. 6th. A gear wheel, comprising parallel side plates, and teeth pivotally mounted between said plates and normally projecting beyond the peripheries thereof, in combination with a circular spring intermediate said side plates and common to and bearing against all the teeth to hold them normally in their operative positions while allowing them to yield, substantially as and for the purpose described. 6th. The combination with a gear wheel having yielding teeth, and a circular spring common to and operating against the inner ends of all of said teeth, of a reciprocating double rack engaging the teeth on opposite sides of the centre of rotation of the gear wheel, said spring permitting the teeth to yield alternately on opposite sides of said centre, substantially as described.

No. 66,509. Motion Transmitting Device.

(*Appareil transmetteur de mouvement.*)

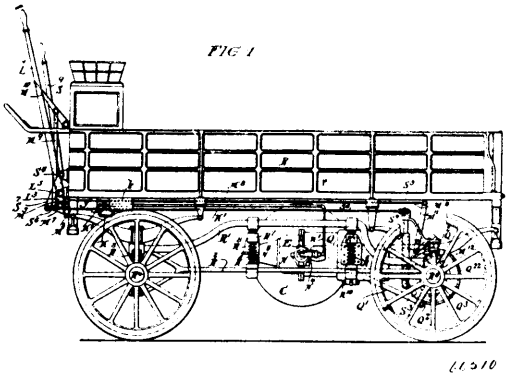


Charles Frederick Stokes, Chicago, Illinois, U.S.A., and Charles Edward McGlinchey, Highlandville, Massachusetts, U.S.A., 7th March, 1900; 6 years. (Filed 7th October, 1899.)

Claim.—1st. In angle gearing, the combination with the drive gear having curved interdentel spaces and teeth of greater length at the base than at the extremity, of a driven gear having rounded teeth extending at an angle from the centre of rotation, substantially as described. 2nd. In angle gearing, the combination with a drive gear having the curved interdental spaces and teeth of characteristically bevel shape, and a driven gear having frusto-conical teeth extending outward from the centre of rotation whereby the movement of the drive teeth on the driven teeth is substantially as described. 3rd. In angle gearing, the combination with the driven gear having radially extending round faced teeth, of a driving gear frusto-conical in form with curved interdental spaces, the bases of which are substantially parallel with the drive shaft, the parts being arranged, substantially as described, whereby the drive teeth engage the driven teeth in a line changing gradually in a spiral centripetal direction, substantially as set forth. 4th. In angle gearing, the combination with a driven gear having rotatory teeth extending at an angle from the centre of rotation, of a frusto-conical drive gear having outward extending conical teeth and curved interdental spaces, the bases of which present a line substantially parallel with the drive shaft, the parts being arranged to operate substantially as described, whereby the pressure contact between the teeth is on a spirally varying line leading toward the centre of the driven gear and sliding friction is overcome, substantially as set forth. 5th. In angle gearing, the combination with the driven gear having round faced teeth, of a drive gear frusto-conical in shape and having bevel teeth and curved interdental spaces, said interdental spaces being warped at their rear extremities to afford freedom of movement of the extremity of the driven gear tooth in its archial rotation, substantially as described. 6th. In angle gearing, the combination with the driven gear having the round faced radially extending teeth, of a drive gear frusto-conical in shape and presenting interdental spaces of greater expense at the rear than at the forward end and having the edges of the teeth at the front rounded to permit ready withdrawal of the teeth extremities from between the driven teeth in the archial movement of the gear, substantially as described. 7th. In angle gearing, the combination with a frusto-conical drive gear having interdental spaces cut transversely of the gear body on a line substantially parallel with the drive shaft, whereby the depth of the interdental space is greater at the face of the gear than at the back, and a driven gear having radially projecting rotatory teeth supported substantially as described. 8th. In angle gearing, the combination with a frusto-conical drive gear having interdental spaces cut transversely of the gear body on a line substantially parallel with the drive shaft, whereby the depth of the interdental surface is greater at the face of the gear than at the back, and a driven gear having radially projecting rotatory frusto-conical teeth supported substantially as described. 9th. In angle gearing, the combination with the driven gear having radially projecting frusto-conical teeth supported at both ends, of a drive gear frusto-conical in form with curved interdental spaces cut transversely of the gear body on a line substantially parallel with the drive shaft, whereby the interdental space is deeper at the outer than at the inner end thereof relative to the teeth, the said teeth being of a length to engage the surface of the driven teeth before driving pressure is exerted, whereby a contact without shock between the gear members is produced, and in the driving operation the driving teeth move in a line spirally upon the driven teeth and toward the centre of the driven gear, and friction is overcome by the rotation of the driven gear teeth on their axis, all as set forth. 10th. In angle gearing, the combination with a driven gear having round faced radially projecting teeth, of a drive gear having radially projecting teeth and interdental spaces, the sides of which are formed to conform to the opposing face of the driven gear teeth during driving engagement in their movement through their arc of rotation to preserve line contact during said engagement, substantially as described. 11th. In angle gearing, the combination with the driven gear having round faced radial teeth supported at opposite ends as described, of a drive gear frusto-conical in shape with curved interdental spaces, the bases of which are parallel with the driven gear teeth at the moment of most intimate meshing of the gears, and the sides of which are formed to maintain line contact with the driven gear teeth throughout the period of the application of the driving power, substantially as described.

No. 66,510. Power Transmitting Mechanism.

(*Mécanisme transmetteur de la force.*)



John Potter Murphy, Philadelphia, Pennsylvania, assignee of George Simpson Strong, New York City, New York, U.S.A., 7th March, 1900; 6 years. (Filed 10th October, 1899.)

Claim.—1st. A rotary head having a transverse cylinder formed in it inside the plane of its outer face in combination with a plunger movable in the cylinder, a crank pin secured directly to said plunger, and so as to project from the outer face of the head, a driving shaft for actuating the head, and channels for introducing and exhausting pressure fluid to and from the cylinder to move the plunger and adjust the eccentricity of the crank pin, and channels being formed in the shaft and head aforesaid. 2nd. A rotating head having a transverse channel formed in it, said channel comprising a cylinder at one end, a plunger movable in the cylinder aforesaid and having a crank pin secured in it, resilient means secured to the head and arranged to exert its force against the plunger to force it home in the cylinder, and a channel for fluid under pressure leading to the outer end of the cylinder. 3rd. A rotating head having a transverse channel formed in it, said channel comprising a cylinder at one end, and a spring chamber at the other, a plunger movable in the cylinder aforesaid and having a crank pin secured to it, a spring situated in the spring chamber and acting against the end of the plunger to force it home in the cylinder, and a channel for fluid under pressure leading to the outer end of the cylinder. 4th. A rotary head in combination with a transverse movable slide having a crank pin secured thereto, transversely movable counterweight mechanism, means connecting the crank pin slide and counterweight mechanism as described, and so that they will move simultaneously, and so as to balance each other and the head as a whole, and means for moving the slide to adjust the eccentricity of the crank pin. 5th. A rotary head in combination with a transversely movable slide having a crank pin secured thereto, transversely movable counterweight