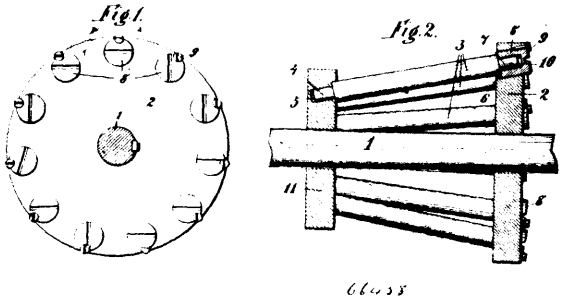
hanging hooks *t* engaged with said frame, substantially as described. 16th. In a bicycle trolley, the combination of the frame, the trolley wheels mounted in said frame, and the guide rolls mounted in the frame underneath the wire, substantially as described. 17th. A portable bicycle trolley, consisting of the skeleton frame, the trolley wheels, the prime motor and the driving mechanism connecting the motor and the trolley wheels, substantially as described. 18th. The combination of the frame, the trolley wheels, the driving belt, means for supporting the driving wheel of a bicycle in running contact with said belt, and means driven by said belt for operating the trolley wheels, substantially as described. 19th. The combination of the frame, the trolley wheels, the prime motor mounted in the frame and a shaft collecting said prime motor and the trolley wheels, substantially as described. 20th. The combination of the frame, the driving belt, means for supporting a bicycle in running contact with said belt, and a shaft operated by said belt for driving the trolley wheels, substantially as described. 21st. The combination of the frame, and a cradle for supporting the front wheel of the bicycle, having an adjustable connection with said frame, substantially as described.

No. 66,458. Roller Gear Wheels for Cycles.
(*Roue à rouleau d'engrenage pour cycles.*)

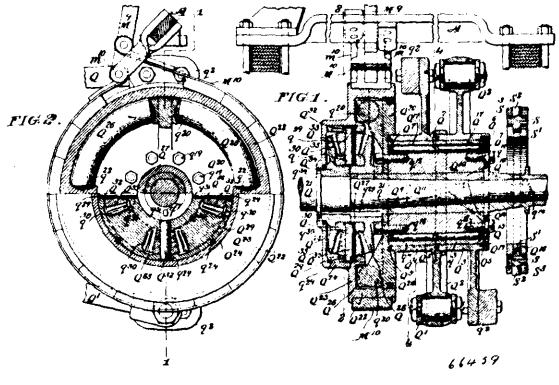


66458

Carl Gustave Irenans Schultz, Hamburg, Germany, 1st March, 1900; 6 years. (Filed 14th June, 1899.)

Claim.—1st. Roller gear wheels for cycles and the like in which two flanges are fixed upon the driving shaft to carry the respective ends of the rollers, one flange being provided with removable plugs and safety screws so that any roller may be removed and replaced without disturbing any other portion of the wheel, substantially as hereinbefore described. 2nd. The improved roller gear wheel with the following essential features in combination, two flanges fixed upon the driving shaft, bearings formed in one flange to receive the ends of the rollers, removable plugs screwed in the other flange to permit the rollers to be removed or inserted and when in position to act as bearings for the other ends, and all substantially as hereinbefore described.

No. 66,459. Clutch. (*Embrayage.*)



66459

John Potter Murphy, Philadelphia, Pennsylvania, U.S.A., 2nd March, 1900; 6 years. (Filed 30th August 1899

Claim.—1st. A clutch drum having a series of facets on its face, each consisting of a central surface Q^{13}, substantially radial to the centre of the drum and lateral surfaces q^{13}, q^{13}, forming a very abtuse angle with said central surface in combination with a clutch ring with a cylindrical inner face and a series of rollers interposed between the drum and ring and adapted to fit closely between the surfaces Q^{13}, and the clutch ring. 2nd. A clutch drum having a series of facets on its face each consisting of a central surface Q^{13}, substantially radial to the centre of the drum and lateral surfaces q^{13}, q^{13}, forming a very obtuse angle with said central surface in combination with a clutch ring with a cylindrical inner surface, a series of square ended rollers interposed between the drum and ring, and adapted to fit closely between the surfaces Q^{13}, and the clutch ring, a roller cage Q^6, angularly adjustable on the clutch drum formed with a series of rectangular chambers Q^8, of length equal to the rollers and of breadth somewhat greater than the diameter of the rollers and means for adjusting the cage. 3rd. The combination with a clutch drum as Q^{10}, clutch ring and rollers working between said ring and drum, of a roller cage situated between said ring and drum, one or more keys uniting the drum and cage having a straight connection with the one and a spiral connection with the other and means for moving said key or keys to shift the angular position of the cage on the drum. 4th. The combination with a clutch drum as Q^{10}, clutch ring and rollers working between said ring and drum, of a roller cage situated beneath the ring and drum, two keys uniting the drum and cage and having a straight connection with the one and a spiral connection with the other, a grooved annular ring secured to extensions of the keys aforesaid and lever arms engaging the groove of said ring for moving it and the keys and thus adjusting the angular position of the cage on the drum. 5th. The combination with intermittently acting clutch mechanism of two shafts to be driven thereby, an equalizing mechanism coupling the two shafts as described and whereby they are directly actuated and a yielding connection between the said equalizing device and the intermittently acting clutch. 6th. The combination with intermittently acting clutch mechanism of two shafts to be driven thereby arranged concentrically with the clutch, a plate Q^{20}, secured to the clutch drum and formed with outwardly extending wings q^{20}, bevel gear wheels Q^{28} and Q^{35}, one secured to each shaft, a casing Q^{22}, Q^{23}, Q^{24}, Q^{25}, forming a close joint with the edge of plate Q^{20}, and enclosing all the gear wheels aforesaid, said casing having internal wings q^{22}, arranged to interlock with wings q^{20}, springs interposed between said wings q^{22} and q^{20}, an annular spider secured on the inside of the casing to afford support to the journals of bevel wheels Q^{33}, and bevel wheels Q^{33} secured in said spider and in engagement with bevels Q^{28} and Q^{35}. 7th. The combination with intermittently acting clutch mechanism of two shafts to be driven thereby arranged concentrically with the clutch, a plate Q^{20}, secured to the clutch drum and formed with outwardly extending wings q^{20}, bevel gear wheels Q^{28} and Q^{35}, one secured to each shaft, a casing Q^{22}, Q^{23}, Q^{24}, Q^{25}, forming a close joint with the edge of plate Q^{20}, and enclosing the gear wheels aforesaid, said casing having internal wings q^{22}, arranged to interlock with the wings q^{20}, springs interposed between said wings q^{22} and q^{20}, an annular spider secured on the inside of the casing to afford support to the journals of bevel wheels Q^{33}, bevel wheels Q^{33}, secured in said spider and in engagement with bevels Q^{28} and Q^{35}, and a brake arranged to operate on the casing aforesaid. 8th. A clutch drum having a series of facets on its face in combination with a clutch ring with a cylindrical inner face, a series of square ended rollers interposed between the drum and ring, a cylindrical roller cage Q^6, situated between the drum and ring and angularly adjustable on the clutch drum, said cage being formed with a series of rectangular chambers Q^8, of length equal to the rollers and of breadth somewhat greater than the diameter of the rollers and means for adjusting the cage.

No. 66,460. Barrel Churn. (*Baratte.*)

David Maxwell & Sons, assignee of David Maxwell, all of St Mary's Ontario, Canada, 2nd March, 1900; 6 years. (Filed 20th February, 1900.)

Claim.—1st. The combination with the barrel, trunnions, and crank secured on the end of one of the trunnions and crank pin thereof, and the driving lever and rod connected to the lever, of an adjustable means for normally confining the crank pin within the jaw, as and for the purpose specified. 2nd. The combination with the barrel, trunnions, and crank secured on the end of one of the trunnions and crank pin thereof, and the driving lever, and rod connected to the lever, of spring held adjustable means for confining the crank pin within the jaw, as and for the purpose specified. 3rd. The combination with the barrel, trunnions, and crank secured on the end of one of the trunnions and crank pin thereof, and the driving lever and rod connected to the lever, of a socket formed in the enlarged end of the rod, a plunger in the socket, designed to close the end of the jaw and a spring for holding such plunger in its normal position