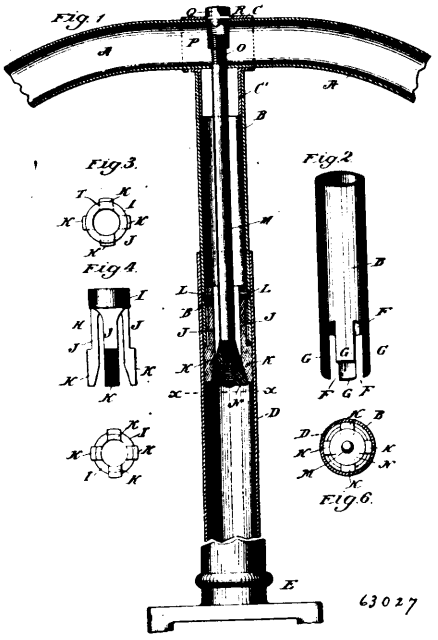
tective cushion for the purpose set forth. 7th. An insulator the exposed surface of which is divided up into small depressions 6 and intervening portions 7 the latter adapted to form a protective cushion for the purpose set forth. 8th. An insulator the surface of which is divided up into small depressions 6 and intervening portions 7 arranged in oblique cross hatch lines and the rib portions adapted to form a protective cushion, for the purpose set forth. 9th. An electric insulator provided with circumferential ridges 8 and intermediate grooves 7, the said ridges and grooves being formed on the exterior surfaces above and below the groove 5, substantially as and for the purpose described. 10th. An insulator the exposed surface of which is composed of easily broken ridges or protuberances of greater height than thickness disposed equal distances apart and in close proximity to one another to afford protection to the entire exposed surface, substantially as set forth. 11th. An electric insulator provided with ridges 6 and intermediate grooves 7, the said ridges and grooves being formed on the exterior surfaces above and below the groove 5, and the ridges being of greater height than thickness and disposed equal distances apart and in close proximity to one another to afford protection to the entire exposed surface, substantially as set forth.

No. 63,027. Bicycle. (*Bicycle.*)

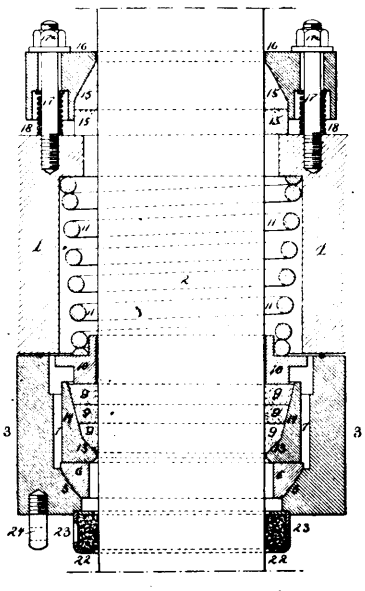


Leonard Budd Gaylor, Erie, Pennsylvania, U.S.A., 8th May, 1899; 6 years. (Filed 29th November, 1898.)

Claim.—1st. The combination, in a bicycle, of a handle-bar stem provided with slots, a steering tube, a series of clamping jaws located within and supported by the stem, but separate from it, and which engage through said slots directly against the inner wall of the tube, and an expanding device for the jaws, for the purposes set forth. 2nd. The combination, in a bicycle, of a handle-bar stem provided with slots, a steering tube, a series of elastic clamping jaws located within and supported by the stem, but separate from it, and which engage through said slots directly against the inner wall of the steering tube, and an expanding device for the jaws located within them, for the purposes set forth. 3rd. The combination, in a bicycle, of a handle-bar stem, a steering tube, a series of clamping jaws supported upon a ring which is located and held within the stem, recesses in the stem through which the jaws may move into direct contact with the inner wall of the steering tube, and an expanding device for the jaws, for the purposes set forth. 4th. In a bicycle, a handle-bar and handle-bar stem connected by a sleeve which embraces the handle-bar, separate clamping jaws connected with the stem and supported by it, and which engage directly with the steering tube, said steering tube itself, an expanding device for the jaws mounted upon a threaded rod or bolt and located within the stem, and a cup-shaped or tubular nut, located at the exterior of the handle-bar, which actuates said rod and expander, for the purposes set forth. 5th. In a bicycle, a handle-bar stem, the lower end whereof has a series of recesses, a series of elastic clamping jaws located within and supported by the stem and which work through said recesses against the inner wall of the steering tube, said steering tube itself, and a conical expander likewise located within said jaws and operated from the exterior of the apparatus.

No. 63,028. Rod Packing for Steam Engines.

(*Garniture pour pistons de machine à vapeur.*)



Charles Longstreth, Yeadon, Pennsylvania, U.S.A., 8th May, 1899; 6 years. (Filed 28th October, 1898.)

Claim.—1st. The combination of a rod, one or more soft metal packing rings surrounding the same, a casing having a recess which receives said ring or rings and has an outer wall presenting different degrees of bevel, the innermost bevel being th· more abrupt, and provision for pressing the packing ring or rings into said recess, the inner ring being of considerably greater width than the abruptly inclined portion of the wall of the casing, substantially as specified. 2nd. The combination of a cylinder and piston rod with an outer set of packings for said rod, and an inner packing which is r essed against a forward seat by the impact of water in the forward end of the cylinder, substantially as specified. 3rd. The combination of a cylinder and piston rod, with packing for the latter located within the cylinder and consisting of a ring or rings surrounding the rod, and a spring supported casing surrounding said rings and having a bevelled face for compressing the same when it is moved forwardly against the action of the spring support, substantially as specified. 4th. The combination of a cylinder and piston rod, with an outer set of packing rings for the said rod, and an inner packing bearing against a forward seat and contained in a bevelled recess in a sleeve which is acted upon by the impact of water in the forward end of the cylinder, whereby packing rings are pressed both against the forward seat and againat the rod. 5th. The combination of a cylinder head and piston or other rod, with a sleeve surrounding the rod and containing a set of packing rings in a recess at its outer end, and a snug fitting ring in a recess at its inner end, said packing rings being so supported that they will be compressed as the sleeve is driven forward, and said ring at the inner end of the sleeve having a fixed bearing, and provision whereby pressure is admitted to the space between it and the base of the recess in the sleeve, substantially as specified. 6th. The combination of a cylinder head and piston or other rod, with a sleeve surrounding the rod and containing a set of packing rings in a recess at its outer end, and a snug fitting ring in a recess at its inner end, springs for pressing said sleeve outward and the ring inward against a fixed bearing, an outer support for the packing rings, and means for admitting pressure to the space between the base of the recess at the inner end of the sleeve and the ring contained in said recess, substantially as specified. 7th. The combination of a rod and cylinder head or other structure having a recess therein, a series of casings contained within said recess and each containing a series of packing rings, a ring whereby pressure is transmitted from each casing to the packing rings contained in the casing in advance, a spring-actuated follower for pressing upon the inner ring of the inner casing, and a follower for pressing upon the outer casing of the series, substantially as specified.

No. 63,029. Pipe Lining Apparatus.

(*Appareil à doubler les tuyaux.*)

Frank Eugene Keys, New York City, New York, U.S.A., 8th May, 1899; 6 years. (Filed 31st January, 1899.)

Claim.—1st. In an apparatus for lining pipes, a hollow tapering spreader, means for moving and for guiding said spreader through a pipe and means for circulating fluid from end to end of the spreader and permitting the discharge of said fluid into the pipe from the