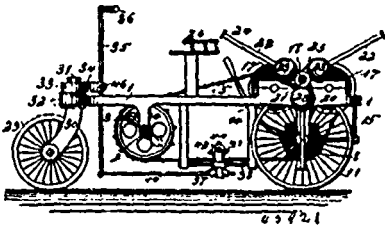


sleeve on said shaft, having corresponding clutch members and a sprocket-wheel, of shafts 7, carrying sprocket-wheels 6 and drums



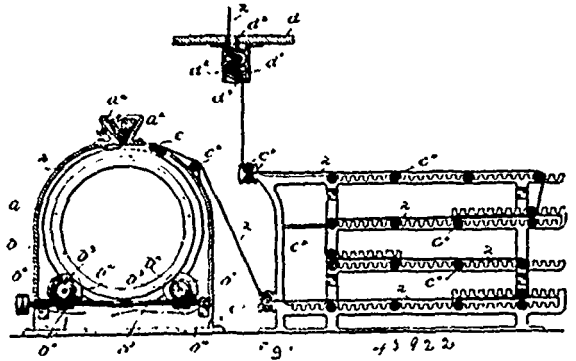
17, shaft 18, adapted to receive motion from said drums and carrying radial arms, weights on said arms adapted to be moved outward by centrifugal force, springs whereby said weights are normally held inward, and a sprocket-chain engaging the sprocket-wheels whereby movement is imparted to the power shaft and sleeve to store up momentum when the clutch members are disconnected, and to drive the machine when they are connected. 2nd. The combination with shaft 10, the driving wheels secured thereto and having clutch members and sleeve 9, provided with corresponding clutch members and a sprocket-wheel, of shafts 7, carrying wheels and drums 17, power shaft 18, provided at each end with radial arms, weights on said arms, adapted to move outward by centrifugal force, springs which normally hold said weights inward, and a sprocket-chain engaging the sprocket-wheels and imparting motion thereto. 3rd. The combination with shaft 10, the driving wheels fixed thereto and provided with clutch members, sleeve 9, having corresponding clutch members and a sprocket-wheel, shafts 7, also carrying sprocket-wheels and having drums 17, shaft 18, having movable weights and arms and a sprocket-chain engaging said sprocket-wheels, of slide 37, carrying shaft 41, sprocket-wheel 44, loose on said shaft and engaging the sprocket-chain, a ratchet fixed to the shaft, a pawl pivoted to the sprocket-wheel and engaging the ratchet, and suitable means for moving the slide backward and forward so that when moved in one direction the sprocket will engage the chain and carry it along, and when moving in the other direction the sprocket will turn and the pawl slip over the teeth of the ratchet. 4th. The combination with arm 34, and rod 35, pivoted thereto to swing in the vertical plane and carrying a handle bar, of sprocket-chain 5, horizontal slide 37, carrying sprocket-wheel 44, loose thereon, ratchet 43, secured to said shaft, a pawl secured to the sprocket-wheel and engaging the ratchet, and a rod connecting the slide to rod 35. 5th. In a cycle, the combination with the steering wheel, shank 31, by which it is carried, and arm 37, extending from said shank, of sprocket-wheels 4, 6 and 8, sprocket-chain 5, slide 37, carrying a sprocket-wheel 44, a pawl and ratchet connection between said sprocket-wheel and the slide, and a rod 35, pivoted in arm 34, and having at its upper end a handle-bar and at its lower end a rod connecting it to the slide so that the handle-bar and rod 35, may be used either to propel the machine or to steer it. 6th. The combination with shaft 10, carrying the driving-wheels, sleeve 9, and clutch mechanism adapted to connect and disconnect said sleeve and shaft, of sprocket-wheels 4, 5 and 8, a chain passing over said wheels, drums 17, power shaft 18, engaging said drums and carrying radial arms with sliding weights thereon, slide 37, carrying sprocket-wheel 44, also engaging the sprocket-chain and having a pawl and ratchet connection with the slides, suitable pedals by which the chain may be driven, rod 35, carrying the handle-bar, and rod 40, connecting said rod to the slide so that the chain may be driven by hand power if preferred.

**No. 45,022. Method of and Apparatus for Making Photographic Films. (Méthode et appareil pour la fabrication de pellicules photographiques.)**

Thomas Henry Blair, Northborough, Massachusetts, assignee of Stukely Edgar Waterman, Pawtucket, Rhode Island, U.S.A., 1st May, 1894; 6 years.

*Claim.*—1st. The improved process of making photographic films which consists in feeding the composition which forms the base or body of the film, on to the surface of a revolving cylinder which draws it into a thin strip, and subsequently coating this strip with a sensitive emulsion. 2nd. The improved process of making photographic films, which consists in feeding the composition which forms the base of the film, on to the surface of a revolving cylinder which draws it into a thin strip, and conducting said strip through a sensitive emulsion. 3rd. The improved process of making photographic film which consists in feeding the composition which forms the base of the film, on to the surface of a revolving cylinder which draws it into a thin strip, carrying the strip over suitably constructed and arranged guides while it becomes seasoned, conducting the strip into a dark room, and passing it through a sensitive emulsion. 4th. The improved process of making photographic films, which consists in feeding the composition which form the base of the film, on to the surface of a revolving cylinder which draws it into a thin strip, conducting said strip through a sensitive emulsion

carrying the strip over suitably constructed and arranged supports after leaving the emulsion, and subjecting it to a cold air blast.



5th. The improved process of making photographic films, consisting in drawing out a stream of dope to form the base of the film, applying a sensitive emulsion thereto, and rolling it up in the convolutions of a carrying device. 6th. The improved process of making photographic films, which consists in feeding the composition which forms the base of the film, on to the surface of a revolving cylinder which draws it into a thin strip, conducting said strip through a sensitive emulsion, and rolling it up in the convolutions of a carrying device. 7th. An apparatus for making photographic films, comprising in its construction means for feeding the composition which forms the base of the film in a plastic stream, and a revolving cylinder which receives the said stream and draws it over its surface. 8th. An apparatus for making photographic films, comprising in its construction means for feeding the composition which form the base of the film in a plastic stream, and a revolving cylinder which receives the said stream and draws it out over its surface, the periphery of said cylinder being roughened, substantially as and for the purpose described. 9th. An apparatus for making photographic films, comprising in its construction a hopper adapted to contain the composition which forms the base of the film, and constructed to discharge the same in a stream, and a revolving cylinder which receives the said stream and draws it out over its peripheral surface. 10th. An apparatus for making photographic films, comprising in its construction means for feeding the composition which forms the base of the film in a stream, a revolving cylinder which receives the said stream and draws it out over its surface, where it becomes a strip, and suitably arranged supports over which the strip is carried from the cylinder in return bends. 11th. An apparatus for making photographic films comprising in its construction means for feeding the composition which forms the base of the film in a stream, a revolving cylinder which receives the said stream and draws it out over its surface, converting it into a strip, a dark room having a zigzag entrance through which the strip passes, and means in said dark room for applying a coating of sensitive emulsion to the strip. 12th. An apparatus for making photographic films comprising in its construction a receptacle for sensitive emulsion, and means for conducting a continuous strip of composition forming the base of the film through the emulsion in said receptacle. 13th. An apparatus for making photographic films comprising in its construction a receptacle for sensitive emulsion, means for conducting a continuous strip of composition forming the base of the film through the solution in said receptacle, and means for subjecting the coated film to a cold air blast. 14th. An apparatus for making photographic films comprising in its construction means for coating a continuous strip of film with a sensitive emulsion, and a reel carrying an apron in whose convolutions the coated strip may be rolled up. 15th. An apparatus for making photographic film comprising in its construction means for coating a continuous strip of film with a sensitive emulsion, a pair of reels, an apron attached at its ends to said reels and adapted to wind on one while unwinding from the other and to receive the coated strip between its convolutions. 16th. In an apparatus for making photographic films, a flexible carrier adapted to be wound in a roll with the film between its convolutions, and provided with side projections separating the convolutions, and providing a space for the film when rolled up in the apron. 17th. In an apparatus for making photographic films, a flexible carrier adapted to be wound in a roll with the film between its convolutions, and provided with transverse strips having side projections to separate the convolutions, as and for the purpose described. 18th. An apparatus for making photographic films comprising means for drawing out a stream of dope to form the base of the film, and for conveying said strip through a sensitive emulsion, and travellers for engaging the sensitized film and exerting an influence thereon, from the middle in an outward direction, as and for the purpose described. 19th. An apparatus for making photographic films comprising means for drawing out a stream of dope to form the base of the film, and for conveying said film through a sensitive emulsion, and endless bands engaging the sensitized film and exerting an influence thereon from the middle outward, for the purpose described. 20th. An apparatus for making photographic films com