(No Model.)

L. C. OVERPECK.

PHOTOGRAPHIC BACKGROUND CARRIER.

No. 588,597. Patented Aug. 24, 1897.

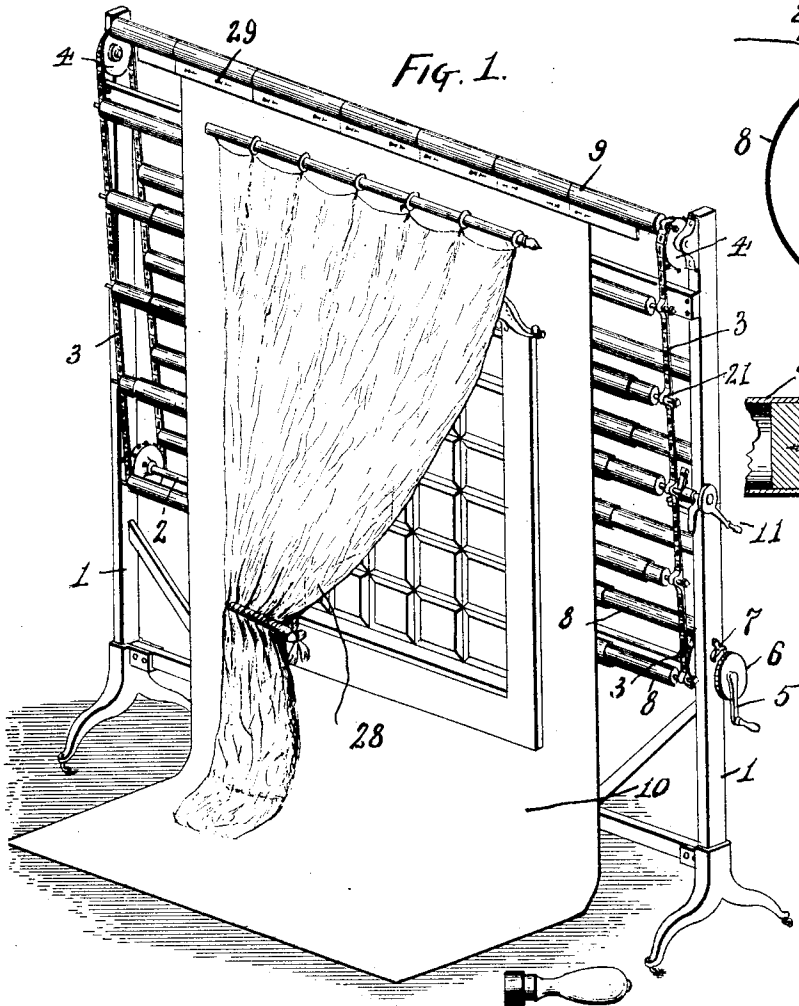


FIG. 1.

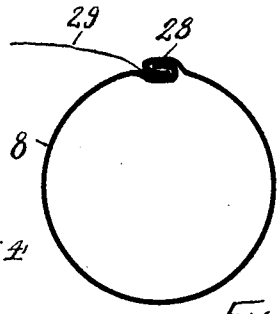


FIG. 7.

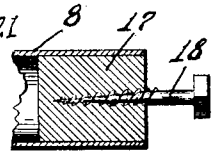


FIG. 6.

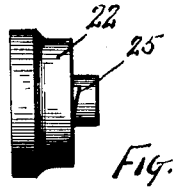


FIG. 5.

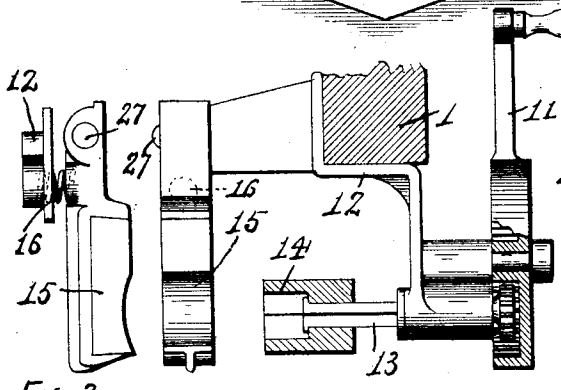


FIG. 3 FIG. 2

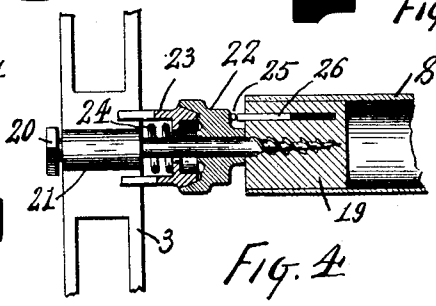


FIG. 4

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PHOTOGRAPHIC-BACKGROUND CARRIER.

SPECIFICATION forming part of Letters Patent No. 588,597, dated August 24, 1897.

Application filed May 5, 1894. Serial No. 510,149. (No model.)

To all whom it may concern:

Be it known that I, LUCIEN C. OVERPECK, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Background-Carriers, of which the following is a specification.

This invention pertains to improvements in carriers for backgrounds, as for photographers' use, of that class in which a series of the backgrounds, each rolled upon an independent roller, is carried by properly-supported belts or chains in conjunction with provision by means of which a selected roller can be brought to place and its background unwound and supported for use.

My improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a background-carrier exemplifying my invention; Fig. 2, a plan of the winding apparatus and brake, parts appearing in horizontal section; Fig. 3, an end elevation of the inner face of the brake; Fig. 4, a vertical longitudinal section at one end of one of the rollers, showing its method of attachment to the carrying-chain and showing one of the check-brakes; Fig. 5, a front elevation of one of the members of the check-brake; Fig. 6, a vertical longitudinal section of one of the rolls with its winding-gudgeon, and Fig. 7 a vertical transverse section of one of the rollers.

In the drawings, 1 indicates a framework formed of properly-stayed standards, forming a portable structure which can be moved about; 2, a horizontal shaft journaled in the two standards of the frame quite a distance below the top of the frame and provided near each end with a sprocket-wheel secured to it; 3, chain belts provided at intervals with journal-bearings for the gudgeon of rolls and engaging the sprocket-wheels on the shaft 2 and sprocket-wheels journaled at the top of the frame; 4, the sprocket-wheels journaled at the top of the frame and engaged by the upper portion of the chain belts; 5, a hand-crank on one end of shaft 2, by means of which that shaft may be turned and motion given to the belts; 6, a toothed wheel on shaft 2 at the crank 5, which crank will be hereinafter termed the "shifting-crank;" 7, a double pawl at toothed wheel 6, standing normally out of engagement with that wheel, but capable of being tipped in either direction, so that it may prevent rotation of shaft 2 in a selected one of the two directions of rotation; 8, a series of rollers provided with gudgeons supported in the journal-bearings of the belts, so as to be free to turn, these rollers being formed of tubes of sheet metal of a length suited to the maximum width of background which the apparatus is designed to provide for, there being as many of these rollers as is desired or provided for; 9, a selected one of these rollers which, by the operation of the shifting-crank, has been brought to the top of the frame; 10, a background of flexible material which is wound upon roller 9, and which in the illustration appears as being unwound therefrom and in position for use in front of the apparatus, it being understood that each of the other rollers is provided with a background wound upon it; 11, a hand-crank mounted on the frame with its axis parallel with the rolls; 12, the bracket which supports this hand-crank; 13, the winding-spindle connected by gearing with crank 11, which crank will be hereinafter referred to as the "winding-crank," this winding-spindle being in such vertical plane that as the belts are moved the rollers will be brought in succession past the winding-spindle with their axes in the plane of the axis of the winding-spindle; 14, a winding-socket mounted on the winding-spindle and capable of endwise motion thereon and presenting itself inwardly toward the ends of the rolls, the exterior forming a handle or means for actuating the same; 15, a brake-pad supported by the framing and projecting forwardly in such position that when a selected roll is in axial line with the winding-spindle the roll will bear upon the brake-pad, the brake being, however, mounted upon the pivot, so that it can be turned up entirely out of the path of the rolls as they are moved by the belts; 16, a spring supporting the brake-pad when the pad is in position to be engaged by a roll at the winding-spindle, this spring giving elastic support to the brake-pad; 17, a wooden plug firmly secured in the end of each of the rollers at the end toward the winding-spindle; 18, a lag-screw

screwed into the plug 17 and having a non-circular head adapted to fit the winding-socket 14, the head of the lag-screw standing away from the outer face of the plug 17 far enough to provide a journal for the roll, such journal engaging the appropriate one of the journal-bearings of the chain belts; 19, a wooden plug in the end of each of the rollers at the end opposite the winding-crank; 20, a lag-screw screwed into the plug 19 in a similar manner to lag-screw 18, but having a very much greater length of projection outwardly from the plug; 21, the journal-bearings which have been heretofore referred to as being carried by the belts for the gudgeons of the rolls; 22, a hub loose on lag-screw 20 and abutting inwardly against the roll, the outer portion of this hub forming a concentrically-bored conical clutch-rim; 23, a second hub loose on the lag-screw 20 and having its inner end, in the form of a cone, fitting and frictionally engaging rim-bore of hub 22, the outer portion of this hub 23 having prongs which engage the chain belts, so that the hub is prevented from rotation; 24, a spring acting between the chain belt and the hub 23 and tending to press the two hubs into frictional engagement; 25, a ratchet-tooth on the inner face of hub 22; 26, a spring pin or pawl carried by the end of the roller at hub 22 and pressing against the inner face of the hub and adapted to engage the tooth 25, tooth 25 facing in such direction as to arrest pawl 26 when the roll turns in the direction corresponding with the unwinding of the background wound upon it; 27, the pivot on which the brake-pad 15 is mounted, as heretofore explained; 28, a lock-seam formed in the metal in forming the sheet-metal tubes 8, this seam being of the usual form employed by tinners in forming tin tubes, the tubes in the present case being long and formed by joining short sections together, as by soldering, and 29 short flaps of flexible material, as cloth, locked into the seams 28 at the time the seams are rolled, these flaps projecting far enough to permit the backgrounds to be readily attached to them, the flaps being in sections instead of extending continuously the entire length of the tube, the desired result being accomplished, as the tubes are being constructed, by making up the short section of tube with its section of flap, the subsequent joining of the tube-section to form a long tube leaving the flap still in separate sections.

All or as many of the rolls as desired may be provided with backgrounds properly fastened to them, and backgrounds may be added to empty rolls as needed, and rolls may be added as needed up to the limit imposed by the number of journal-bearings carried by the belts. In other words, the apparatus may have one roll with a background upon it or it may have the full complement of rolls. Normally the backgrounds are wound upon the rolls and the apparatus is idle. To bring a selected background into use, the shifting-crank 5 is turned to bring the selected roll to a convenient height, when the background may be pulled from it and disposed properly, the selected roll being brought to such point near the top of the frame as the conditions may require. Pawl 7 being tipped the right way prevents the preponderating weight of the unrolled backgrounds from pulling the parts into improper position. If the full complement of rolls or backgrounds is not upon the apparatus, then the unsymmetrically-disposed weights might tend to move the motion parts undesirably whether a background was in use or not, and pawl 7 may be employed in preventing such improper motions. In unrolling a selected background from its roll the check-brake, formed by the hubs 22 23, &c., with which each roll is provided, prevents the too rapid or improper unwinding, the engagement of pawl 26 with tooth 25 compelling hub 22 to turn with the roll as the background unwinds, and the non-rotary hub 23 frictionally resisting the motion. Spring 24 is to be of such tension that it will permit the ready withdrawal of the background from the roll without permitting the background to run from the roll by its own weight.

When the use of a background is over and it is to be rewound, the shifting-crank 5 is turned to bring the particular roller down into line with the winding-socket 14, which is then shifted endwise till it engages the head on screw 18, the roll at the same time resting upon the brake-pad 15, which has been turned down to receive it. Winding-crank 11 is then turned, winding up the background upon the roll, the brake-pad imposing a steadying frictional resistance upon the winding and at the same time serving to steady the roll in position while being turned. While this winding is going on the spring-pawl 26 is without effect, as it passes idly over the ratchet-tooth 25.

The belts, no matter how tight they may be strained, have a certain amount of edgewise flexibility, and the heads of the lag-screws 18 and 20, coming at the outer edges of the belts, serve to stay them, and in the case of lag-screw 20 the head at the outer edge of the belt also prevents the retreat of the belt under the influence of spring 24.

The belts are best formed of ordinary sprocket-chains, such as are common in the market, such chains being readily procurable with links at intervals in the form of eyes or journal-boxes.

In case the check-brakes should not be employed upon all of the rollers the brake-pad 15 may be employed in checking the off-run of the backgrounds, the desired rolled-up background being brought to the winding position and on the brake-pad without the winding-socket being necessarily thrown into action. The background may then be drawn off, as desired.

The backgrounds are readily attached to the flaps 29 by means of pins, paper-fasteners, or the like, and the sectional arrangement of the flaps will be found important in permitting a hand to be reached conveniently in behind the flaps, as would not be the case if the flap were continuous.

I claim as my invention—

1. In a background-carrier, the combination, substantially as set forth, of a frame-work, a movably-connected series of parallel rolls mounted therein capable of being unwound at any point and arranged to be brought selectively into position for use, a retarding agent for each roll, a winding-crank mounted on said frame, and a winding-spindle connected with said crank and adapted to be engaged selectively with said rolls.

2. In a background-carrier, the combination, substantially as set forth, of a frame, a pair of belts carried by wheels mounted on said frame, rolls journaled in said belts capable of being unwound at any point, a retarding agent for each roll, a winding-crank mounted on said frame, and a winding-spindle connected with said crank and adapted to be engaged selectively with said rolls.

3. In a background-carrier, the combination, substantially as set forth, of a frame-work, wheels supported thereby, a pair of belts engaging said wheels, rolls carried by said belts capable of being unwound at any point, a retarding agent for each roll, a winding-crank mounted on said frame, a winding-spindle connected with said crank and adapted to be engaged selectively by said rolls, and a shifting-crank arranged to move said chains to bring a selected roll into position for use and to bring a selected roll to the winding-spindle.

4. In a background-carrier, the combination, substantially as set forth, of a frame, a shaft and wheels mounted on the frame, a pair of belts carried by said wheels, rolls carried by said belts, a winding-crank mounted on the frame, and an endwise-movable winding-socket located on the frame connected with said crank and adapted to be engaged selectively with said rolls.

5. In a background-carrier, the combination, substantially as set forth, of the uprights of the frame, the sprocket-wheels, the shaft connecting a pair of said sprocket-wheels, the chains engaging the sprocket-wheels, the rolls carried by the chains, the endwise-movable winding agent, means for actuating the winding agent located upon the frame, and means for revolving the sprocket-wheels and rolls.

6. In a background-carrier, the combination, substantially as set forth, of a frame, wheels, belts and a series of rollers mounted thereon, a retarding agent for each roll, and a brake-pad mounted on the frame and adapted to be engaged by said rollers selectively.

7. In a background-carrier, the combination, substantially as set forth, of a frame, wheels, belts and a series of rollers mounted thereon, a retarding agent for each roll, and a brake-pad pivoted to the frame and adapted to engage a selected one of said rollers when brought to it and adapted to turn out of the path of said rollers.

8. In a background-carrier, the combination, substantially as set forth, of a roller having a journal and bearing, a non-rotary friction-hub carried by the bearing, a second friction-hub carried by the roll-journal and free for continued rotation thereon and engaging the first-mentioned friction-hub, a spring urging said friction-hubs into contact, and a pawl and ratchet in connection with the roll and second friction-hub and arranged to cause said hub to turn positively with the roll when the roll turns in the unwinding direction.

9. In a background-carrier, the combination, substantially as set forth, of a frame, sprocket-wheels carried thereby, a shaft connecting a pair of said sprocket-wheels, chain belts engaging said wheels, a series of rolls carried by said belts capable of being unwound at any point, a retarding agent for each roll, a winding apparatus mounted on the frame and adapted to be engaged by any selected one of said rolls, a hand-crank on said shaft, a toothed wheel on said shaft at said crank, and a two-way pawl mounted on the frame and adapted to engage said toothed wheel.

LUCIEN C. OVERPECK.

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