(No Model.)

C. H. LOHMAN.

PHOTOGRAPHIC PLATE CARRIER.

No. 478,235. Patented July 5, 1892.

Fig. 1.

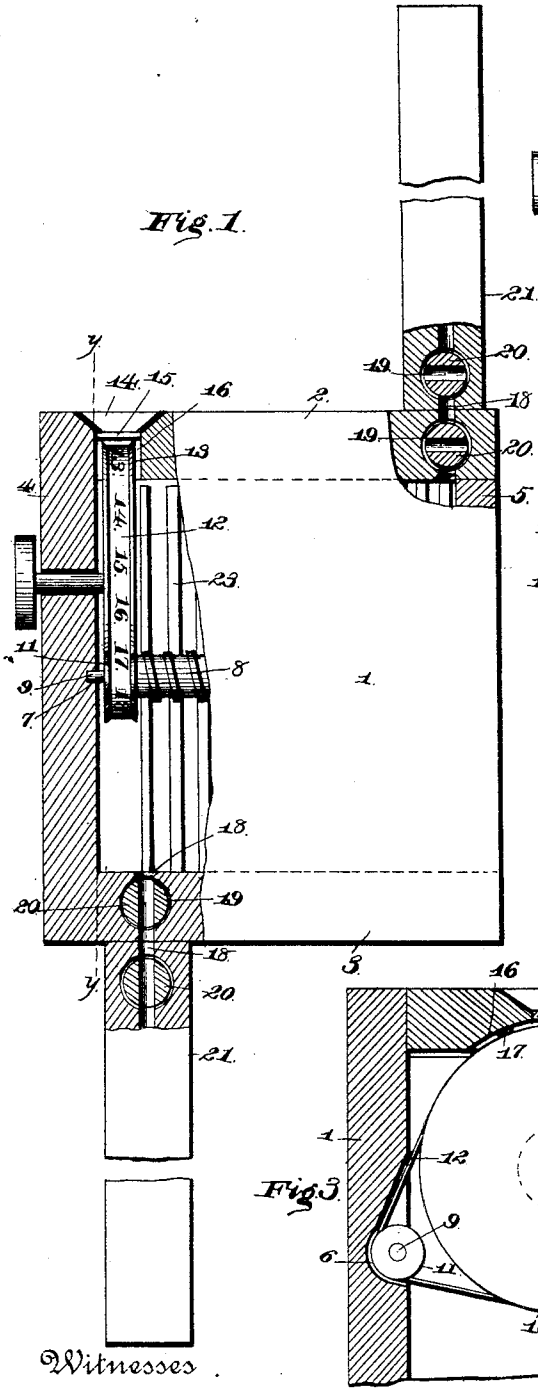


Fig. 4.

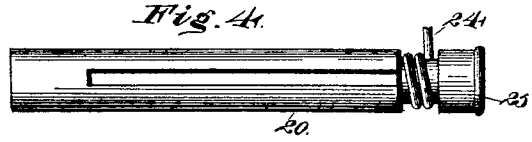


Fig. 2.

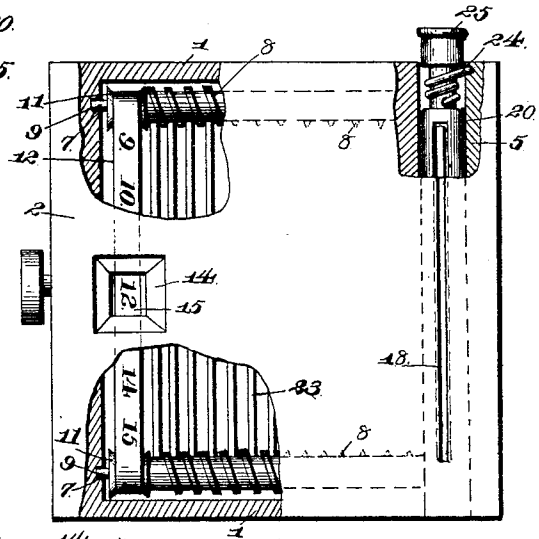
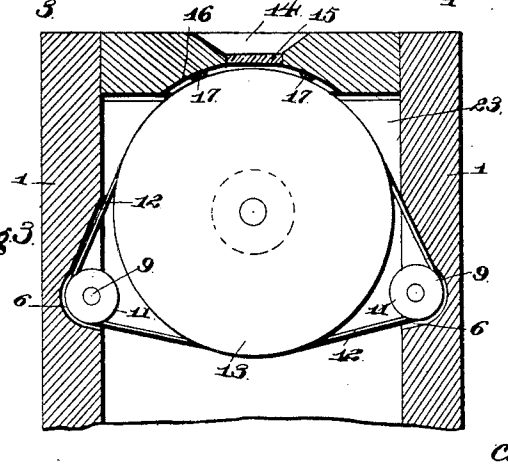


Fig. 3.



Witnesses.
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Inventor
Charles H. Lohman
By his Attorney
J. Em. Dumais

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES HENRY LOHMAN, OF CHICAGO, ILLINOIS.

PHOTOGRAPHIC-PLATE CARRIER.

SPECIFICATION forming part of Letters Patent No. 478,235, dated July 5, 1892.

Application filed December 24, 1891. Serial No. 416,101. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENRY LOHMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Photographic-Plate Carrier, of which the following is a specification.

My invention relates to improvements in photographic-plate magazine-carriers; and it consists in peculiarities of construction by means of which any desired number of prepared plates can be carried out for use in the field, transferred in turn to and from the camera, and brought back for development to the studio without the least risk of damage to said plate from exposure to light or air, as will be readily understood from the description hereinafter made thereof and from the claims and the accompanying drawings, in which—

Figure 1 is a side elevation of a box embodying my invention with parts of the same broken off to show the interior mechanism of my device. Fig. 2 shows a top view of the same with parts sectioned. Fig. 3 shows the upper half of my carrier in section on line *y y* of Fig. 1, and Fig. 4 illustrates a detail.

My plate-carrier consists, mainly, of a rectangular box having the sides 1 1, top 2, bottom 3, front end 4, and rear end 5. These parts may be made separately or integrally or partially so, either of metal or of plastic material. Each of the sides 1 1 has a square or preferably a three-quarter round housing 6, cut along its center parallel with the top and bottom of the box, and opposite and centering with the said housing a socket 7 is hollowed out in the inner face of each of the ends 4 5. The housings 6 and sockets 7 7 are designed to receive the screws 8 8 and bearing ends 9 thereof, respectively. Close to the front end of each of said screws a pulley 11 is turned with suitable flanges to carry the driving belt of chain 12. This belt is driven by means of the larger pulley 13, fitted in any suitable manner in the front end 4, and the purpose of this belt being not only to turn the pulleys 11, and consequently the screws 8 8, but also to carry numbers to indicate how many turns or portions of a turn said screws have at any time received. A sight 14 of suitable shape is provided in the top 2 opposite the path of said belt, which as it is driven will in turn present opposite the said sight all the figures which are carried on its upper face.

15 indicates a piece of glass or of any other transparent material covering the sight, so as to exclude air and dust, and to entirely exclude light the pulley 13 is made to run in a curved groove 16, cut in the inner face of the box-top, and has to press slightly in its passage therein against an elastic cushion 17, embedded or fixed in any suitable manner across the bottom of said curved groove on each side of the sight 14. The driving-pulley 13 is suitably journaled in the front end 4, the bearing of the shaft thereof being lined with elastic material to exclude both light and air. In the top 2, close to the rear end 5, I cut a slot 18, with edges diverging slightly upward, as shown, and about half-way between the upper and lower face of the said top and with its center in line with the middle of the slot 18 is the circular housing 19, wherein to lodge the round bar 20. (Shown by itself in Fig. 4.) This round bar is slotted to correspond with the slot 18 and to form therewith the inlet-valve for the plates. This valve, as well as the similar one provided in the bottom 3 close to the front end 4 and the one shown in the lower end of the plate-holder 21, are fitted so as to absolutely exclude air and light from the interior of the box and may be kept normally closed, as shown in the top 2, by any suitable spring or other device 24, the said round bar 20, projecting out at one side of the box and being terminated by a suitably-shaped bottom 25 or other device for the turning of the same. The introduction of the plates 23 into the carrier may be had in the dark-room either by lifting the box-lid, or, if the box is made without such part, as may be thought desirable, by means of top valve, as it has to be done when each plate is returned to the carrier after exposure in the camera. Each of the plates 23 is received between two adjoining points of the screw-thread, the latter projecting in the interior of the box, and thus forming a separating and conveying device. To the pulley 13 is imparted the requisite motion at each step by means of the button affixed to the shaft thereof, and the figures carried on the outer face of the belt 12 are dis-

tanced thereon, so as to indicate at any moment how many plates have been taken out for exposure in the camera.

The fixing of the plate-holder 21 against the top or bottom of the carrier may be effected in any desirable manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a magazine-carrier for photographic plates, the combination of a box having an inlet and an outlet cylindrical valve kept normally closed and light-tight, a conveying-screw housed in each side of the box, means to rotate said screws and at the same time indicate the number of plates moved thereby, and an ordinary plate-holder having a light-tight cylindrical valve adapted to be alternately put in opposition to the inlet or outlet valves of the box, substantially as and for the purpose set forth.

2. In a magazine-carrier for plates, screw conveyers adapted to separate, guide, and move the same from one end of the box to the other opposite the outlet-valve thereof, in combination with a belt adapted to drive the screws in one or the other direction and carrying figures arranged thereon, so as to indicate the number of plates brought opposite the outlet-valve, as set forth.

In testimony whereof I have signed the above, in presence of two witnesses, this 14th day of December, 1891.

CHARLES HENRY LOHMAN.

Witnesses:
GEO. F. WEBSTER,
E. WEBSTER.