

Watkins Universal Pinhole Lens

Se reproduce aquí el texto de un folleto explicativo que acompañaba este accesorio que permitía convertir una cámara normal en cámara con lente pinhole (de orificio de aguja). No se han tenido en cuenta las características tipográficas del documento. Una cortesía de www.brocantina.com

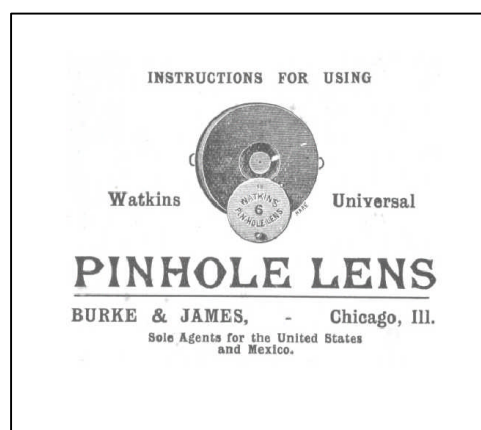
WATKINS UNIVERSAL PINHOLE "LENS."

The pinhole in this implement takes the place of the camera lens, which must first be removed by unscrewing from its flange. The exposure will be much longer than with a lens.

Decide how far the camera is to be racked out (the amount usual for your ordinary lens) and measure what this is from face of the flange to the ground glass by means of a stick or rule through the flange. The image will be equally sharp at any distance and no focussing is required.

Lift up the two steel wire arms with finger and thumb of right hand, until they stand at right angles to wood mount; then insert these arms within the lens opening (or flange) and release. The force of the springs will keep the wood mount tight against the flange.

The image can only be seen on focussing screen in very brilliant light; therefore, having levelled the stand, turn the camera round, and lifting the focussing screen apply the eye to the pinhole and see if the view wanted is framed in the end of the camera. Then turn camera round again for the pinhole to face the subject.



TO CALCULATE THE EXPOSURE.

The stop value is known by multiplying the W.P. number of the pinhole by focal distance as measured above, 6 being the standard number of pinhole usually supplied. Example—With the camera racked out to 5 inches the pinhole is F/30. Calculate with the aid of the Bee Meter (or other means) with the stop value just decided (F/30 in this case), and whatever the calculated exposure is in seconds give that number of MINUTES exposure. If in another case the camera were extended to 10 inches, the pinhole value would be F/60. If the calculated exposure is a fraction of a second, give the same fraction of a minute.

The definition given by a pinhole cannot be so sharp as that with a lens, but is of superior character to an out of focus lens.

A wide angle view is secured by racking out camera to a much shorter distance than before; or a narrow angle view by racking out to an exceptionally long distance. Any less distance than the length of the plate may be termed wide angle. Twice the length of the plate or over may be termed narrow angle. No focussing is required and definition is practically alike in all cases.

The front disc is allowed to cover the pinhole when the shutter of dark slide is drawn. To make the exposure lift it sideways. If dust settles in the pinhole, blow hard through it.

The method of naming the pinhole as if it were really sixty times the size, and then giving the calculated exposure in minutes instead of seconds, is the original invention of Mr. Alfred Watkins. But Dr. D'Arcy Power hit upon the modification of this plan, by which the focal distance divided into the above diaphragm number gives an arbitrary number by which the diaphragm value for another focal distance can be instantly calculated.

It may be convenient to call this the Watkins Power No. or the W.P. No. to avoid confusion with the sizes of needles.

The following table gives the sizes of the different W.P. numbers with their nearest needle size. In every case the W.P. number multiplied by the focal distance gives the diaphragm number to calculate by—giving minutes exposure for seconds. The distance given can be departed from widely, and the No. 6 can be used for almost any size.

W.P. No.	Inch	Nearest Needel No.	Most suitable distance
3 =	.053	+No. 1	40 inches
4 =	.040	+No. 4	20 "
5 =	.032	No. 5	15 "
6 =	.027	+No. 7	10 "
7 =	.023	No. 8	8 "
8 =	.020	+No. 10	5 "
10 =	.016	+No. 12	3 1/2 "
12 =	.013	+No. 13	2 1/2 "

The Watkins pinhole "lens" is only stocked with W.P. No. 6, but can be supplied to order with either size.

COPYING.

Set the copy upright and flat. Rack out camera to its accustomed length, measuring focal distance as before. Now remember that if four straight lines diagonally from the four corners of the copy to the four opposite corners of the plate all cross at the pinhole, the subject will exactly fully occupy the plate. Therefore fix the camera level, with pinhole level with center of copy, and at such a distance that the above conditions are fulfilled. Calculate the exposure as for an ordinary out-door subject giving full exposure for a coloured picture, or half indicated exposure for a photograph in black and white. Ignore the copying table given in Watkin's Meter instructions, as it is not needed in this case, the measurement of distance from pinhole to plate making due allowance.