



# NARZISS

PHOTOGRAPHIC  
CAMERA



**PHOTOGRAPHIC CAMERA**

**"NARZISS"**

**Instruction Manual**

The present Manual contains the basic characteristics and essential operating principles of the "NARZISS" camera and is not to be considered as a photographer's handbook.

Before starting to take pictures, make a thorough study of the handling rules and operating procedures as briefly described in the Manual.

The Manufacturer reserves the right to modify the camera, therefore the construction of the camera you own may differ a little from the description given in the Manual.

## PURPOSE AND APPLICATION

The "NARZISS" is a single-lens miniature reflex camera using unperforated 16 *mm* roll film.

It offers equally excellent service to amateur photographers and scientists.

## ESSENTIAL FEATURES

The camera is delivered complete with a 35 *mm* f/2.8 "VEGA M-1" lens, with focusing from 0.5 *m* to infinity.

The lens is focused by means of a groundglass. One 180° stroke of the shutter winding lever cocks the shutter, advances the film, lowers the mirror, and counts exposures. The camera is synchronized for electronic flash or bulbs.

The "NARZISS" reflex camera is very convenient in copying work and in photography in conjunction with other optical instruments, medical ones inclusive.

The image produced by the lens is projected by the mirror at the groundglass where it is viewed through a magnifier the optical axis of which runs parallel to the optical axis of the lens. The image viewed is erect and correctly oriented.

The eyepiece magnification is 6.5 $\times$ .

The size of the groundglass viewed through the magnifier is 12 $\times$ 19 *mm*.

The camera takes 24 pictures (14 $\times$ 21 *mm* in size) on 0.95 *m* long film without reloading.

Only one film magazine is used in the camera.

The curtain-type shutter has speeds from  $1/2$  to  $1/500\text{th sec.}$ , plus "B" (hand-controlled exposures).

The mounting thread of the lens is  $3\text{M}24\times 1$ .

The working distance of the camera (the distance between the rearmost plane of the lens and the film plane) amounts to  $28.8\text{ mm.}$

As the film is being advanced, the spaces between the pictures increase.

## CONSTRUCTION

The reflection-type viewfinder (Fig. 1) coupled to lens 1 consists of swing-up mirror 2, plane-convex lens 3 (the plane surface of which is frosted), ridge pentaprism 4, and two-lens eyepiece 5.

When the mirror is flapped up (position 2'), the lens projects an inverted image of the object being photographed at film 6.

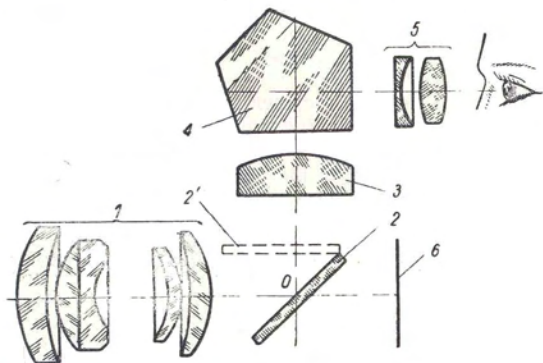


Fig. 1

If the mirror is lowered (position 2), the image is obtained on the ground surface of lens 3. The distance between point  $O$  on the mirror and the film is equal to that between point  $O$  and the frosted surface of the lens.

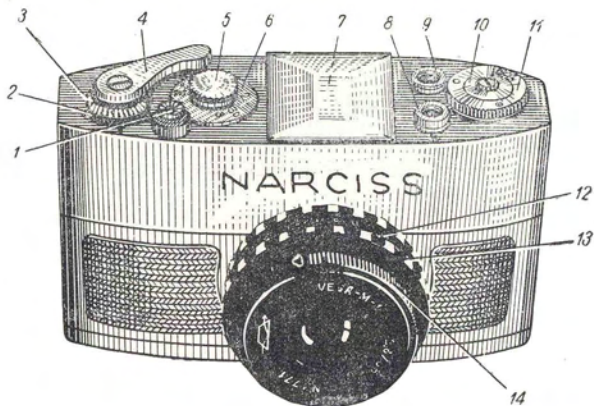


Fig. 2

If the image obtained on the ground surface is in sharp focus, it will surely be sharp on the film, too.

The inverted image of the object produced by the lens is erected by mirror 2 and pentaprism 4, and the operator who views it through eyepiece 5, observes an erect image.

To transport the film by one frame, to lower the viewfinder mirror, to wind up the curtain-type shutter and to advance the film counter by one division it is necessary to move lever 4 (Fig. 2) counter-clockwise until the stop is reached.

Shutter speeds are set by means of shutter speed knob 5; to obtain a desired shutter speed setting, the knob should be lifted and fixed in the required position with reference

to shutter speed dial 6. Exposure time setting should be carried out only after shutter cocking.

Do not turn shutter speed knob 5 in the interval between figures 30 and 2. Figures 30, 250, 500 etc. on the shutter speed dial identify instantaneous shutter speeds of 30th, 250th, 500th etc. of a second, and the letter "B" hand-controlled exposures.

To obtain a delayed exposure (time exposures available in the "Д" setting) it is necessary first to set the shutter speed knob at "B"; then press shutter release knob 1 (Fig. 2) and, keeping it depressed, turn it hardover in the counter-clockwise direction. Upon expiration of the desired exposure time, turn the button back in the clockwise direction and release it.

The "VEGA M-1" lens is focused by rotating lens focusing ring 13 (Fig. 2).

Ring 12 of the lens carries the central index of the distance scale and the depth-of-field scale.

The diaphragm scale is plotted on ring 14.

The camera may be used with interchangeable lenses manufactured specially for the "NARZISS" camera. These lenses are:

28 mm f/2 "MIR-5";

28 mm f/2.8 "MIR-6";

50 mm f/2 "JUPITER-17".

All the above mentioned lenses are automatically stopped down to preselected lens apertures.

The top plate of the camera body has two contact sockets which are used for synchronization of the shutter operation with flash units.

Socket 8 (Fig. 2) marked "X" is used for electronic flash kits. When this contact is selected for flash photography, the usable exposure times are 1/60th sec. and longer.

Socket 9 marked "M" is used for operation with flash bulbs. When a bulb with long flash duration is plugged to this socket, any exposure time is allowable.

The eyepiece can be adjusted dioptrically to suit the operator's eye within +1 to -2 diopters.

Prismatic eyepiece 7 (Fig. 2) which is retained in its socket only by the tension of its spring, is demounted by shifting it toward the detachable back cover of the camera.

The eyepiece is focused to suit the operator's vision, by turning mount 1 (Fig. 6) either clockwise or counter-clockwise.

Film rewind knob 11 (Fig. 2) mounts a film rewinder dial with a film type index.

To align the division line corresponding to the speed of the film used with the film type index it is necessary to turn ring 10 (Fig. 2) by its knurled portion, retaining knob 11 in position.

The coloured silhouettes of a bulb and the radiating sun identify colour film for artificial and natural lighting conditions, respectively; the circle with a black dot in its center stands for black-and-white film.

The camera is secured in the carrying case or on a tripod (with the case removed) by means of case (tripod) nut 5 (Fig. 6) threaded to 3/8" which is provided on the detachable bottom plate of the camera body. Mounted in the bottom plate is also latch 3 which locks the plate to the camera.

## OPERATION

### Loading the Magazine

The camera accepts a film magazine which consists of three parts: a casing, spool, and cap (Fig. 3). To open the magazine remove the cap and withdraw the spool.

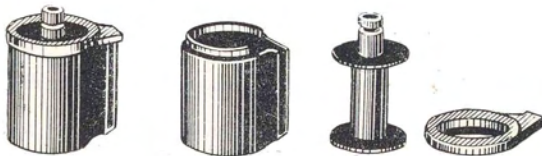


Fig. 3

The magazine should be loaded and unloaded in complete darkness.

To load the magazine act as follows:

Cut the film end to a shape shown in Fig. 4.

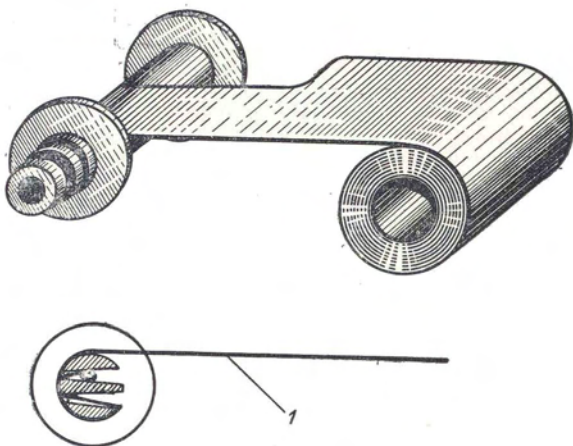


Fig. 4

Insert the film in the spool slot and bend the projecting end thrice. While doing so see to it that with the spool head turned to the operator, the emulsion side 1 (Fig. 4) of the film faces downwards.

Place the loaded spool in the casing so that the bottom end of the spool would rest against the casing bottom; next turn on the magazine cap. Leave a free film end 8 to 10 cm long outside the film magazine.

Further operations on the magazine may be carried out in daylight (bright light is not recommended).

Cut the free end of the film to the shape shown in Fig. 5 (use a special pattern if available).

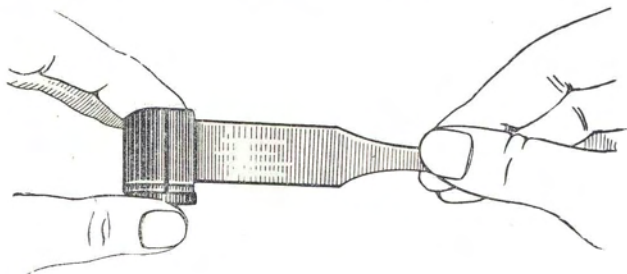


Fig. 5

### Camera Loading

To load the camera follow the following steps:

Lift the swivel of latch 3 (Fig. 6) and give it half a revolution in the clockwise direction.

Shift camera back 4 (Fig. 6) downwards and separate it from the camera.

Holding the loaded film magazine in the right hand insert the film end in the slot of the take-up spool as shown in Fig. 7.

Transfer the magazine into the left hand, bend the film end with the right hand, and fit the magazine in its recess in the camera, moving the magazine in the bottom-top direction (see Fig. 8). If the magazine stops short of the recess top surface, slightly turn film rewind knob 11 (Fig. 2). Operate lever 4 to tension the film.

Replace the camera back, turn the swivel of latch 3 (Fig. 6) counter-clockwise and release the shutter by depressing knob 1 (Fig. 2).

To advance the light-stricken portion of the film onto the take-up spool effect seven shutter cocking and release cycles. The shutter is released by means of knob 1

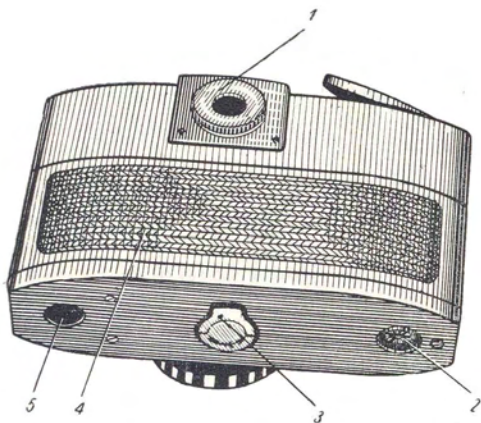


Fig. 6

(Fig. 2). When winding the shutter, make certain that the film rewind knob spins in the opposite direction.

Turn dial 3 in the direction of the arrow to zero film counter 2.

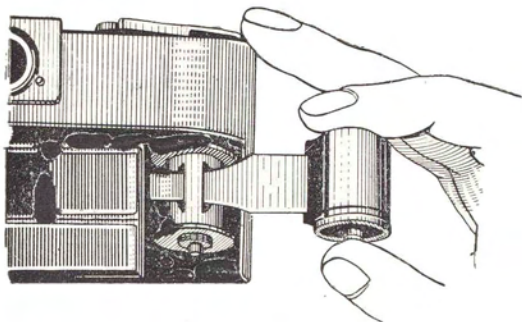


Fig. 7

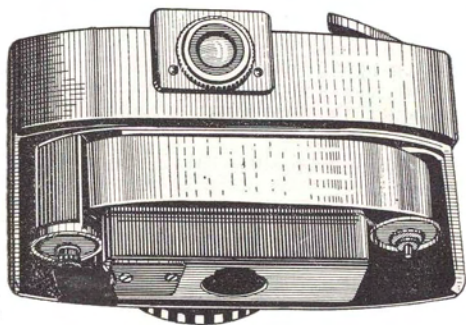


Fig. 8

## TAKING THE PICTURE

To take a picture, proceed as follows:

with the thumb of the right hand turn lever 4 counter-clockwise until the stop is reached, and smoothly release it;

set a desired exposure time by placing the index of shutter speed knob 5 against the corresponding figure on dial 6 (Fig. 2); obtain a desired lens opening by means of scale 14;

focus the lens;

depress button 1 to release the shutter.

## REWINDING THE FILM

To rewind the film from the take-up spool back into the film magazine, press button 2 (Fig. 6) and turn it fully counter-clockwise, lift knob 11 (Fig. 2), and rotate it in the direction indicated by the arrow.

## CARE OF THE CAMERA

The photographic camera "NARZISS" requires careful handling. The camera should be kept clean and protected from mechanical damage, moisture and heavy temperature fluctuations.

Do not touch optical surfaces with bare fingers when cleaning the camera; the optical surfaces may be easily damaged if cleaning operations are done carelessly.

Stains (such as fingerprints, dimming, and the like) are best eliminated with a stick-seated cotton wool wad slightly soaked in rectified alcohol, petroleum (or sulfuric) ether or in a mixture of both. If these agents are not available, toilet Eau-de-Cologne may be used for the purpose. Optical surfaces should be cleaned in circular movements, starting from the lens centre and gradually passing towards the edges.

The camera should be repaired and adjusted only by highly qualified opticians and thoroughly checked after re-assembly.

## **BUBBLES IN OPTICAL GLASS**

Modern high-quality lenses are made of special grades of glass, and bubbles are inevitable in its manufacture. Many fine composite lenses have tiny bubbles in the glasses, which have no adverse influence on the functioning of a photographic lens.

Therefore the Manufacturing plant will neither accept any claims concerning bubbles in the lenses nor exchange them.

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## STANDARD EQUIPMENT

1. Photographic camera with lens, detachable back cover and removable prismatic eyepiece
2. Lens cap
3. Magazine with spool (4 pieces)
4. Carrying case with shoulder strap
5. Adapter ring for lenses used with cameras of the "ZENIT" family
6. Adapter ring for enlarger
7. Adapter frame for enlarger
8. Spool flange for developing tank
9. Instruction Manual

## CONTENTS

|                                    |    |
|------------------------------------|----|
| Purpose and Application . . . . .  | 3  |
| Essential Features . . . . .       | 3  |
| Construction . . . . .             | 4  |
| Operation . . . . .                | 7  |
| Loading the Magazine . . . . .     | 7  |
| Camera loading . . . . .           | 9  |
| Taking the Picture . . . . .       | 12 |
| Rewinding the Film . . . . .       | 12 |
| Care of the Camera . . . . .       | 12 |
| Bubbles in Optical Glass . . . . . | 13 |
| Standard Equipment . . . . .       | 14 |

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