www.orphancameras.com

A FOUNTAIN PHOTOBOOK

Rollei MANUAL

by
ALEC
PEARLMAN

3rd EDITION

THE COMPLETE BOOK OF TWIN-LENS PHOTOGRAPHY

CHAPTER I

THE SCOPE OF THE ROLLEI

OMPLETE understanding between the photographer and his camera is an essential, and this book is written in an endeavour to give one of the largest bodies of camera users in the world the necessary knowledge for complete confidence in and respect for his apparatus.

All the models of the world-famous Rolleiflex and Rolleicord cameras have the same governing principles, a square format, a reflex viewing screen accurately coupled to the taking lens, a between-the-lens shutter, an eye level or direct vision viewing system. They are precision built instruments designed for years of trouble-free service and it is astonishing indeed to find just how many of the earliest models are still in regular use. Their optical systems are all sound, well tried formulae, and no flights of fancy have been allowed to interfere with the sane judgment of the manufacturers. Their guiding principle has always been that only the best should be considered good enough for the 'Rolleis' as they have come to be affectionately known by the countless thousands of Rolleiflex and Rolleicord devotees.

Before discussing the various characteristics of the camera, it should be thoroughly understood that the perfect camera has never been, and will never be, invented. What pleases one owner would not please another; what one man wants to do with a camera, another finds a waste of time. Furthermore there is no such thing as a universal camera and the Rolleis are *not* universal cameras, but I can emphatically state that they will tackle a larger number of different assignments than any other single camera.

The scope of any instrument from miniature camera to view camera will be increased by its various accessories, and I will go still further and say that with comparatively few accessories the Rollei will do twice as many jobs as any other instrument with a larger number of 'bits and pieces' weight for weight and bulk for bulk.

There are many spheres in which the camera would prove itself a poor tool, and no man would choose it for the job if given a choice. But I have seen astonishing results of almost impossible subjects taken with the Rollei only because it happened



Fig. 1
The Modern Rolleiflex Automat with built-in Exposure Meter.



Fig. 2
The Rolleicord V.

to be the photographer's one camera and he was compelled to carry out the work there and then with his available equipment. In all such situations the Rollei can be relied upon to give as good an account of itself, if not a better one, than any other general camera designed for conventional work. It might prove boring to give a list of unusual uses but two recent examples might be quoted: (1) the amazing series of under-water flashlight colour photographs taken under the sea by both Dr. Hans Hass and Commandant Jacques-Yves Cousteau, at depths up to 300 ft.; (2) the fact that a Rolleiflex accompanied the expedition which conquered Mount Everest in 1953 under the leadership of Brigadier Sir John Hunt of the British Army.

Format

The Rollei takes a square picture – or almost. The actual measurements of the negative of the modern instrument are 59×55 mm., generally referred to as $2\frac{1}{4}'' \times 2\frac{1}{4}''$ or 6×6 cm. The square format, and this size in particular, is being adopted by more and more of the world's best-known manufacturers and by now it does not need to justify itself or have any excuses made for it. There are in fact more cameras of the square format being produced to-day than any other shape.

The 'old school' which was largely brought up on a one to one-and-a-half relation between the horizontal and vertical sides of their negatives and who at one time argued so strongly against the square negative, are now as convinced of its advantages as the box camera user who insists on 12 pictures on a roll of film because of economy and because of simplicity in using the camera. Now that we have superb quality in photographic emulsions, the enlarged print is the order of the day and the large contact print is fast disappearing. It is a matter of general agreement that some enlarging will be carried out and the final trim and format is often decided at a later date – perhaps even long after the negative was exposed.

Even with the bulkier $3\frac{1}{2}'' \times 2\frac{1}{2}''$ instruments which have to be turned for each change of view, many are the times that their users will admit that they have taken a vertical 'piece' out of a horizontal negative or that only the centre of a vertical negative had been used to produce a 'landscape' print. Just how important the square format can be when taking the unexpected shot or the ever-changing group or view can be readily appreciated. Even when the whole negative is used, the square or almost square picture can be very pleasing and for some subjects which do not compose well as verticals or horizontals, it is an essential compromise.

Rollei Sizes

Apart from a number of smaller cameras produced between 1931 and 1939, all Rollei models take the $2\frac{1}{4}'' \times 2\frac{1}{4}''$ or 6×6 cm. size. The above-mentioned few were generally known as 'Baby' Rolleiflex's and then later, as the taking aperture widened to f/2·8, became known as the 'Sports' Rollei. These smaller cameras used 127, 27, or

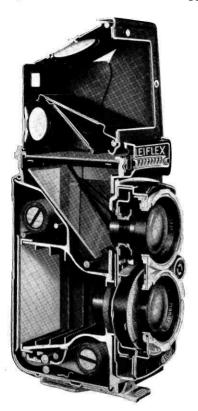


Fig. 3

Cut-away view showing the interior of the Rolleiflex and the arrangement of film, mirror, screen and viewfinders.



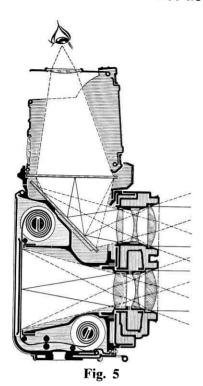
Fig. 4

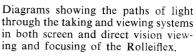
The Rolleiflex Automat with side panel removed showing some of the intricate winding, numbering and spacing mechanism. A-8 size film and took 12 pictures 4×4 cm. or $1\frac{5}{8}'' \times 1\frac{5}{8}''$ (actually 41×39 mm.). The standard size camera, of course, takes 12 pictures on the 120, 20, or B-2 film, except the earliest models which were made to use the old 117, 17 or B-1 size film which carried only six exposures. Although this size of film has not been in production for many years, large numbers of these early cameras continue to give good service in various modified forms. Some have had their take-up key and film spindles altered to accommodate the slimmer 620 size film and now produce the usual 12 pictures just like their proud successors.

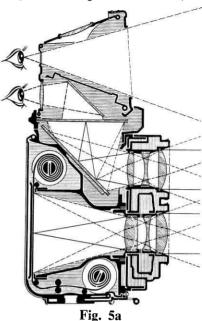
The Reflex Screen

One of the most satisfactory ways of sighting through a camera is to see the image on a ground-glass screen at the back of the apparatus, in the same position as the plate or film would normally occupy. This method, however, has the great disadvantage that the screen must be removed and a plate substituted before a photograph can be taken, with the consequent loss of time, necessity for a tripod, and the possibility of a change in position, and therefore in focus, of the subject viewed. The evolution of camera design produced the single lens reflex camera as the practical answer to this drawback, and in this type of apparatus the sensitized material was ready for exposure, whilst the view was seen and focused on a ground-glass screen at the top of the camera. Between this and the lens was interposed a 45° angle mirror, the lens-plate distance equalling the lens-mirror-screen distance. At the moment of exposure, the mirror swung upwards out of the field of the lens and at once obscured the ground-glass screen, releasing the shutter after a brief delay. This system was a great improvement on the earlier method, except for certain mechanical and psychological problems which were then introduced. An element of shock and vibration was caused in the camera, which often resulted in unsharp pictures due to vibration and more disturbing still, at or before the most important moment the photographer was robbed of his view and was left contemplating a black square. Then followed an 'empty space' of time before the shutter was actually fired. This method, though still in use in many refined forms, continues to suffer from most of these disadvantages.

The Rolleiflex and Rolleicord cameras use the reflex principle, but there is no disappearing image and no crash of the swinging mirror. The view is seen on a hooded screen before, during and after exposure, and with such continuity, the photographer can choose the moment of release exactly to his requirements. He need not take his eye off the screen and can quietly and decisively proceed to the next picture without any appreciable time lag to produce, if necessary, a whole series in a picture story. This 'magic' is made possible by the twin lens technique. This is, in effect, two cameras (see Fig. 5), the first being a simple camera composed of the lower or taking lens and the film in a light-tight box; the second consisting of the viewing lens, the mirror and







the ground-glass screen, just like our old-type reflex camera. The lenses of these two 'cameras' are placed very close together and are in permanent mesh and move in and out of focus together. They are also accurately matched for focal length and for 'progression' of focus, and it is in these most important points that many would-be imitators of the Rollei principle have failed. The Rollei cameras use lenses that are so accurately matched that the degree of error between them is less than 1 per cent. Such accuracy is only possible because the manufacturers insist on a very high specification and small tolerance limits in both taking lenses and viewing lenses, and this fact, coupled with very high standards in their inspection departments during manufacture,' is in fact the key to the Rollei supremacy.

Parallax

Because the viewing lens is placed above the taking lens, a very slight displacement of image takes place when one view is compared with the other at the closer distances. This is called parallax error and becomes very noticeable at the closest distances; it does, of course, exist in all rangefinders, or optical viewfinder types of cameras, but is

very rarely considered unless the camera is working at 3 ft. or less from the subject. Because, however, the Rollei cameras can be used as close as 32 inches without accessories, some provision has to be made, and in all recent models this is corrected automatically on focusing, by a sliding mask which gradually alters the position of the image on the top of the screen as the focusing knob is turned. This method has been used in one form or another since approximately 1936. The earliest models, however, used a screen the size of which was some 3 mm. smaller in vertical dimension than the actual picture taken, so that a little more appeared on the negative than was seen on the screen at normal distances. At close distances, therefore, adequate correction was automatically given.

Focusing

The actual screen of the Rollei cameras is of very fine grain hand-ground glass, ruled with fine lines for easy composition and for giving scale to images viewed. A $4 \times$ magnifier is built into the wall of the hood which springs to a horizontal position over the centre of the screen at a touch. This enables the eye to be brought into position over the magnifier and at a turn of the focusing knob the subject can be accurately focused on the fine screen.

It is often said that in this type of system uncertainty can arise as to when an image is really sharply focused because of the depth of field (see page 83) of the viewing lens. Whilst it is true that a sharp image will persist over approximately '025" of forward or backward travel of the camera front, the possibility of error has been reduced to the point where it makes no material difference by (a) making the viewing lens of wider aperture than the taking lens and (b) by hooding the top of the camera to exclude extraneous light, so giving greater contrast to the image viewed, and (c) in the latest models by coating the viewing system. This reduces internal lens reflections and gives a brighter and still more contrasty image on the screen.

Automatic Action

Apart from the very earliest models all the Rolleiflexes have a greater or lesser degree of automatic operation, from the earlier model with its film wind to a frame stop, to the most recent interlocked, shutter-set and film advance models with light value scale and built-in Exposure Meter. The present series of both 'Flexes' and 'Cords' now load their films with the minimum of attention from the photographer: one has simply to thread the film in the prescribed manner and wind the knob or crank the handle. Without any special attention of hand or eye to the camera, No. 1 frame of film comes automatically into the focal plane. All models of the Rolleiflex 'Automat' are, of course, the most advanced in design and their loading through a 'feeler' mechanism is almost magical in its precision and accuracy. The film is merely threaded and after

a few turns of the crank handle it is ready to expose with the numbering mechanism at No. 1 and the shutter cocked for immediate action.

Similarly, at the end of the roll of film the mechanism automatically disengages itself after picture No. 12 has been taken and the film can be wound off and reloaded with a fresh one in the space of only a few seconds.

Plate and Cine Film Equipment

For the specialist in various fields, the Rollei offers the use of a great variety of sensitized materials. It is not confined only to the use of roll films, but plates and flat film can be used for both black and white and colour photography by means of the Plate Back attachment. This permits the use of a back ground-glass focusing screen for very exacting work and single metal dark slides can carry all types of special emulsions. Once this special back is in position, roll films can be used alternatively with the plates by means of a cleverly designed pressure plate slide which avoids the necessity of changing backs in work of a mixed or varying nature.

All types of 35 mm. cine film can also be used in the camera by means of the cine film attachments which have now been marketed for many years and which can in fact be used on all $2\frac{1}{4}'' \times 2\frac{1}{4}''$ (6 × 6 cm.) models, except the earliest Rolleiflex, although various modifications have been made in the design from time to time. The earlier models need a special back but the more recent models have the dual purpose back already incorporated and with these, only finder and frame masks are needed as well as interchangeable spool holders. Once these accessories are in position, a still wider variety of emulsions in black and white and colour materials become available to the Rollei owner. The use of cine film can be indispensable for many specialized applications, including nature work, series pictures and microfile copying, as well as such subjects as portraiture, where the long-focus effect given by the 3" (75 mm.) lens on a 1" × $1\frac{1}{2}$ " (24 × 36 mm.) frame, coupled with the possibility of up to 36 exposures, is of special advantage.

Filters, Rolleinars, Rolleipars, etc.

Special filters of good quality glass, square lens hoods and close-up lenses have been marketed since the first Rolleis appeared, but since 1937 all Rollei accessories for the lenses have been made on a bayonet principle so that they cannot fall or be knocked off accidentally whilst in use, however rough may be their treatment. Filters, close-up lenses, parallax compensating devices for these, soft focus lenses (Rolleisofts) and lens hoods all lock securely into position and stay wherever they may be placed indefinitely – yet with half a turn and a light pull, one or all can be removed in a fraction of a second. This applies to both the viewing and the taking lenses and their various accessories. All these accessories are now ground, polished, coated and mounted under the same roof as the cameras and the highest quality is thereby assured.

Disadvantages

It has already been stated that the Rollei, like any other camera, is not a universal camera; in fact such a thing – even in these enlightened times – is still unknown. There are, therefore, certain subjects which are outside the scope of the Rollei and should not be attempted with it. For example, in view of the fact that the Rollei has no rising front or swing movements, true architectural work should not be attempted, although some small degree of rise, cross and drop front can be simulated by the correct use of the Rolleipar (see page 122). Better correction of converging verticals can be carried out at the enlarging stage and this has its limitations. Contrary to the usually held view, the Rollei can be used for photomicrography in conjunction with a microscope, simply by placing the camera lens as close as possible to the eyepiece. Low power macro work can also be carried out very successfully with the assistance of the close-up lenses and the enlarger.

The Rollei has no interchangeable lenses, with the exception of the Tele-Magnar f/9 which was only produced for a very limited period in 1939 and no great number were ever marketed. This also applied to the Duonar 2× produced in 1953 by the Carl Zeiss Organization in Jena and marketed by Franke and Heidecke for quite a short period. Their use is very limited and although full details are given on pages 143-4, generally speaking the camera must be considered as having only one taking lens.

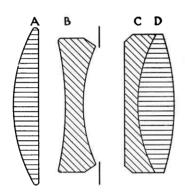
This, of course, has a number of advantages, as well as disadvantages – there are no spare lenses to lose or damage when they are carried on location, no time or pictures are lost whilst changing lenses and there is no fumbling or indecision as to which lens should be used. Furthermore, no dust or grit is able to enter the camera via the lens panel and there are no lens mounts to wear and alter their focus.

Rollei Lenses

Rollei lenses are all high quality anastigmats, made to work at a wide aperture and the fairly wide angle of view of 53° , but because of the high quality of these lenses and the extraordinary resolving power of which they are capable, it is possible to use small portions of the negatives and still obtain the finest possible results. The limit is in fact set by the grain of the film, and not by the resolving power of the lens. The writer has often used an area of $1'' \times \frac{3}{4}''$ (25 × 18 mm.) and enlarged that area to no less than $20'' \times 16''$ (50 × 40 cm.) and produced prints to the highest exhibition standards. This represents the approximate equivalent of using a 17 cm. lens, so one can safely say that the standard Rollei lens covers an angle of acceptance from 53° to about 20°; and even a smaller angle can be assumed and a still smaller part of the negative used, provided large 'blow-ups' are not required.

Any camera can only be as good as its lens and this indeed is one of the finest points of all the Rollei cameras. The manufacturers have very wisely set themselves a

very high standard in the quality of the lenses which they have accepted for inclusion in their products. For these they have gone to the finest lens-manufacturing houses in Germany – Messrs. Carl Zeiss and Josef Schneider, and specified their requirements within very small tolerances – both in taking and viewing lenses. Whilst in every sphere of lens manufacture these tolerances are usually quite wide, only the best has been considered good enough for the Rolleis and as a result a Rolleiflex Tessar, Planar, Xenotar or Xenar, or a Rolleicord Triotar or Xenar can be depended upon to give a very fine performance, even under the most exacting conditions. The Xenotar or Planar fitted to the Rolleiflex Automat work at an aperture of f/2.8 and give the same high performance even at open aperture. Lenses, of course, like other commodities in constant use, may suffer from the ravages of inexpert handling, or natural climatic conditions, and if any doubt is entertained as to the performance of a Rollei lens, then either the manufacturers, their agents, or an optical firm of high repute should be asked to undertake the testing and reporting on its performance, and if necessary cleaning and overhauling.



The construction and glass types of the Zeiss Tessar and Schneider Xenar four element lenses: (A)

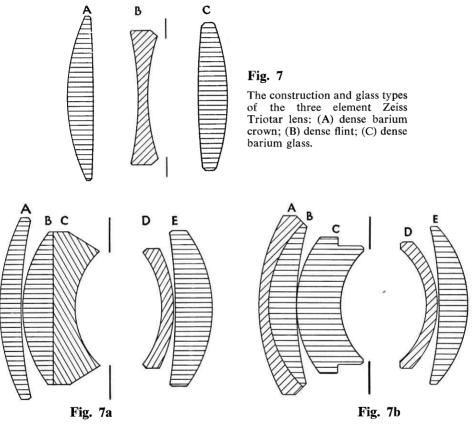
Fig. 6

Xenar four element lenses: (A) dense barium crown; (B) light flint; (C) telescope flint; (D) dense barium crown.

One of the most critical parts of your Rollei camera is the setting and synchronization of the taking and viewing lenses. These are adjusted to a very high degree of accuracy (actually 1/2000th inch or less) and under no circumstances should they be tampered with by the photographer, however experienced he may be, either as a photographer, or as a mechanic. The smallest inaccuracy in these vital parts may mean that the object focused sharply on the screen, may not be sharply focused on the film. When your camera leaves the factory, these lenses are in perfect adjustment one with the other, both at infinity and at the closest distance but should they be tampered with, or accidentally damaged, then this critical adjustment may be upset and most reports of poor results can be usually attributed to this cause. The remedy is to return the instrument to a Rollei agent or other organization specializing in optical adjustments.

The Rollei lenses are divided into three main groups, those of the four component Tessar type, those of the three component air-spaced Triplet type, and the newest five element Xenotar and Planar of the Gauss type, which, although of recent development, were originally produced about 1941 for aerial work. The first group are of apertures of f/4.5, f/3.8, f/3.5 and f/2.8 and the main construction of these are as shown in Fig. 6.

The second type of 3-component lenses are made in apertures f/4.5, f/3.8 and f/3.5 and so far only the Zeiss Triotar fitted to the Rolleicords has appeared, and these are constructed as shown in Fig. 7.



The construction and glass types of the Schneider Xenotar five element lens: (A), (B) and (E) dense barium crown; (C) light flint; (D) dense flint.

The construction and glass types of the Carl Zeiss Planar five element lens: (A) dense flint; (B), (C) and (E) dense barium crown; (D) dense flint.

The third type is available in apertures of f/2.8 and f/3.5 and is shown at Fig. 7a as developed by Josef Schneider in the Xenotar, at 7b as developed by Carl Zeiss in the Planar.

Shutters

As with the lenses fitted to the camera, so also with the shutters, the next most important part of the instrument. The shutters fitted to every model of the Rolleiflex and Rolleicord have been manufactured by the world-famous firm – Deckel of Munich, and the name Compur, or Compur Rapid, is recognized by photographers the world over as the finest shutter which can be fitted to any camera.

The normal Compur fitted to the early models had speeds of 1 second, $\frac{1}{2}$, 1/5th, 1/10th, 1/25th, 1/50th, 1/10th, 1/100th, 1

All Automats and 'Cords produced since 1954/5 have been equipped with the latest Light Value Scale shutter having interlinked speeds and apertures. In this there are ten speeds, viz. 1 second, 1/2, 1/4, 1/8th, 1/15th, 1/30th, 1/60th, 1/125th, 1/250th, 1/500th second, and the 1/250th and 1/500th speeds are now readily interchangeable.

All the Automat models since 1937 are fitted with either Compur Rapid or Synchro Compur shutters, have a delayed action device built in to the shutter and this is actuated by a small button or lever on the front focusing panel. This device allows the photographer some twelve seconds in which to place himself within a group being photographed, or as a figure in a landscape picture.

Size and Weight

The Rolleiflex and Rolleicords are not small cameras, they are not slim and pocketable and cannot be folded up to slip into a handbag. These features may perhaps be considered as disadvantages but in terms of rigidity, strength and ever present precision are unquestionable advantages. There are no bellows to hold dust or become perforated and to let in light, no front lens panel precariously poised on a lazy-tong

mechanism to receive the light knock or pull which puts it permanently out of alignment; no collapsible tube to forget or which can wear and give uncertain focus. No, the Rolleis are solid, lumpy instruments but no larger than the average box camera and heavy enough to hold in the hand or up to the eye for even long exposures like 1/8th second with little fear of camera movement. They can be gripped firmly and held securely, the entire 'feel' of the camera being solid and sure – a feeling which inspires confidence and certainty at every exposure.

CHAPTER II

THE EVOLUTION OF THE ROLLEI CAMERAS

O those who are interested in history, the development of the Rolleiflex is a fascinating subject: a story of diligent craftsmanship and attention to the smallest detail: a constant eye to the future, and an awareness of technical developments throughout the half-century of evolution of the world's most popular camera.

It was as far back as 1908 that Dr. Heidecke built his first prototype stereo camera. At that time stereoscopic photography was gaining interest and many manufacturers were turning their attention to this type of apparatus but the first Heidoscop stereo plate cameras, using the reflex mirror principle were only in large-scale production after the foundation of the firm of Franke and Heidecke in 1920. Dr. Heidecke and his partner Franke, a financial genius, were quick to seize on the growing popularity of the roll film as an idea for the stereo camera and this produced the first Rolleidoscope in 1923, using the reflex mirror idea. After much experimenting came the first roll film reflex camera using the twin-lens principle for non-stereo work and this was the forerunner of the Rollei cameras as we know them to-day. This was quite a revolution in camera design and the Rolleiflex was the first in the field in 1928. The first Rolleiflex, fitted with an f/4.5 Zeiss Tessar lens and taking the $2\frac{1}{4}$ " (6 cm.) square picture, was an instant success and at once the firm began to prosper, and a year later new factories had to be built to cope with the production of the 'new toy'. By 1931 the first of the Baby $1\frac{5}{8}'' \times 1\frac{5}{8}''$ (4 × 4 cm.) Rolleiflexes with a lever wind were in production. Both large and small models captured the hearts of photographers all over the world because of their beautiful workmanship, finish and precision manufacture. quite apart from the surprisingly fine work of which the camera was capable. In 1932 and 1933 the enterprising manufacturers began producing books and magazines for the devotees of their cameras. First came the Rolleiflex Book and then the Rolleiflex Journal and with the advent of the lower priced Rolleicords in 1933, the cameras in use began to reach astronomical figures and by 1935 were so popular that the manufacturers were able to launch world-wide Rolleiflex/Rolleicord competitions. By this

time more than 180,000 cameras were in use. At the same time they kept the photographic public agog with at least one new model per year either of the 'Flex or the 'Cord or both. Lens apertures became wider, the Sports or Baby Rollei reaching f/2·8. Improvement after improvement crept in and now some fifteen distinct models of the Rolleiflex and nine different models of the cheaper Rolleicord have been manufactured. The year 1937 saw the introduction of the first Automat fitted with most of the attributes of the present-day model, the automatic part being the ingenious and almost magical 'feeler' mechanism which, after simple threading takes the film straight to exposure number 1; also the mere act of winding the film by the crank handle, set the shutter, actuated the film counter and interlocked against double exposure. The same year this camera took the Grand Prix at the Paris World Exhibition and this again put the Rollei well ahead of all others who had attempted to plough the same furrow with the many copies thought-up and marketed at an attractive price to bathe in the Rollei's reflected glory. In this year and with this model, the now famous bayonet principle of attaching accessories was introduced.

To-day the Rolleiflex and Rolleicord cameras are sleeker and smarter and have more labour-saving devices than ever before but they are still essentially the same camera as produced in 1928. 1953 saw the introduction of the Automat 2.8C, the specialist's model, with almost every advantage which could be wanted already built in. This model was equipped with f/2.8 lens of Gauss type construction, the new Schneider Xenotars and Carl Zeiss Planars, adjustable magnifiers, multiple exposure provision and many other refinements. In the same year the 'Cord IV appeared with X.M. Synchro. Compur shutter, double exposure prevention and other improvements. 1954-55 saw the introduction of the light value scale and the new compur shutter with ten speeds on 2.8D, Automat and Rolleicord V. In 1956 both Rolleiflex models were equipped with built-in Exposure Meters calibrated to correspond with the light values of the new shutters. Now, not far short of a million Rolleis are in use and very few have ceased to function in this long span of years, with the possible exception of those lost at sea or blown up in battle - because the Rolleis were turned from peaceful plough-shares into bloody swords in the service of propaganda on all fronts and on both sides of the 1939-45 struggle. This period was a sad one indeed for Franke and Heidecke who had so many friends both in Britain and the United States. In 1950 Herr Paul Franke passed away – a sad loss to the world of photography – but not before he had renewed his long-standing friendship with British agent, Hunter - in the early years of peace when Germany was occupied but already struggling for a place in the post-war world. At 75, Dr. Rheinhold Heidecke still takes an active part in the technical development of all Rollei equipment, but direction of the Company's policy is under the energetic control of Horst Franke, and he is indeed well equipped to carry on the great Rollei tradition.

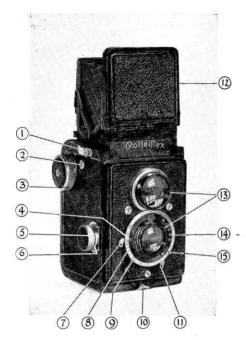


Fig. 8

Original Rolleiflex, front view: (1) Neck strap eye; (2) Neck strap anchor; (3) Film wind knob; (4) Shutter speed indicator arrow; (5) Focusing knob; (6) Focusing scale; (7) Shutter setting lever; (8) Shutter speed scale; (9) Cable release socket; (10) Base clip; (11) Shutter release lever; (12) Focusing hood; (13) Push on lens mounts; (14) Aperture scale; (15) Iris adjusting lever.

Fig. 9

Original Rolleiflex, back view: (1) Eye level focusing mirror; (2) Neck strap eye; (3) Neck strap anchor; (4) Screen magnifier; (5) Hood retaining catch; (6) Hood release lever; (7) Film wind knob; (8) Film numbering peep window.

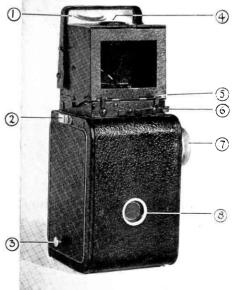
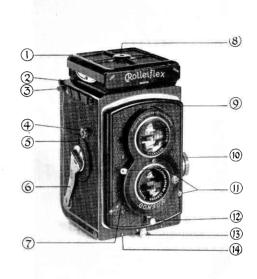


Fig. 10

Lever Wind Rolleiflex, front view: (1) Focusing hood, closed; (2) Back hinge; (3) Back hinge release lever; (4) Film numbering trip; (5) Film number peephole; (6) Film transport lever; (7) Cable release socket; (8) Diopter finder, closed; (9) Shutter speed and lens aperture window; (10) Focusing knob; (11) Speed and aperture setting levers; (12) Double action shutter set and release button; (13) Base clip; (14) Locating studs.



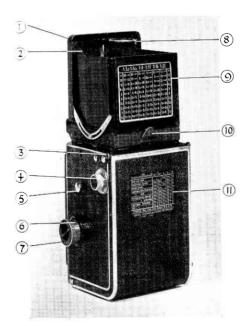


Fig. 11

Lever Wind Rolleiflex, back view: (1) Focusing hood; (2) Collapsing frame; (3) Back hinge; (4) Take-up spool retaining knob; (5) Neck strap anchor; (6) Focusing scale; (7) Focusing knob; (8) Screen magnifier; (9) Depth of field scale; (10) Double purpose hood catch; (11) Exposure chart.

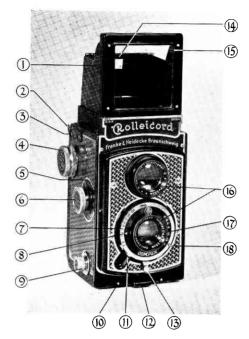


Fig. 12

Metal Plated Rolleicord, front view: (1) Focusing hood; (2) Back hinge; (3) Neck strap eye; (4) Film wind knob; (5) Focusing scale; (6) Focusing knob; (7) Shutter speed dial; (8) Speed indicating arrow; (9) Feed spool retaining knob; (10) Locating studs; (11) Cable release socket; (12) Base clip; (13) Double action shutter set and release button: (14) Direct vision finder peephole; (15) Finder frame; (16) Push-on lens mounts; (17) Aperture scale; (18) Iris adjusting lever.

Fig. 13

Metal Plated Rolleicord, back view: (1) Film numbering aperture; (2) Film numbering trip; (3) Neck strap anchor button; (4) Screen magnifier; (5) Direct vision finder peep-hole; (6) Focusing hood retaining catch; (7) Exposure chart; (8) Depth of field scale.

