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British Journal of Photography

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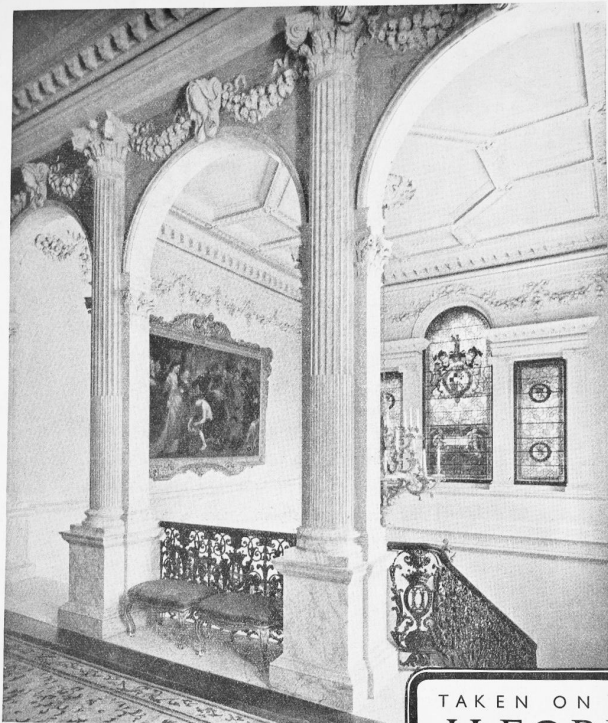
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THE BRITISH JOURNAL OF PHOTOGRAPHY.

THE OLDEST PHOTOGRAPHIC JOURNAL IN THE WORLD.

ESTABLISHED 1854.

No. 3871. VOL. LXXXI.

FRIDAY, JULY 13, 1934.

PRICE THREEPENCE.

EX CATHEDRA.

Daylight Development. It would seem that the development of roll-films is shortly about to enter on another phase, namely, an all-daylight process by the aid of an apparatus by means of which the length of bare film is separated from the wrapping paper and conducted (in full daylight) into a tank where it is developed, fixed, and in which also it can be washed. Already, in Germany, Agfa has led the way with an apparatus of this kind, and it would seem that there are at least four others very like it. Needless to say, appliances of this kind are not of the simplest in construction or use, and something more than the modicum of skill and sense which nowadays is put to the credit of the roll-film camera user is needed for the manipulation of these daylight tanks. However, we shall see whether a system such as this prevails over the alternative of development in a darkened room or the use of some dark receptacle under cover of which to smuggle a film out of its spool into a tank.

And Then. There is, however, one "talking point" which we think may advisably be left on one side in connection with apparatus of this kind. This is the idea, feelingly dwelt on by some makers, that the appliance enables the amateur to develop his films at the time of exposure, or at any rate within a few minutes, and before the opportunity has been lost of making further exposures if the first lot falls short of the mark. We are asked to contemplate the enjoyable prospect of sitting down in a field or on a highway with a tank into which the length of film is ingeniously insinuated, after which developing solution to the amount of half-a-pint or a pint is poured in. With watch in hand our ultra-modern amateur then times the process of development, and if he is satisfied may then run off the used developer and produce a supply of fixing solution which in turn is poured into the tank. If these inconveniences were not enough, there still remains the problem of getting home with about a yard of wet emulsion-coated celluloid without ruining the delicate pictures by dust or rubbing. This is the very human problem which makers of these appliances seem to ignore altogether in dwelling upon the new facili-

ties bestowed by the all-daylight tank. It was the same when years ago there were boxes of one diabolical pattern or another for the development of plates away from the dark-room. Nobody ever seemed to think of the spectacle which a human being would present when endeavouring to carry half-a-dozen or a dozen sticky glass plates safely to their destination.

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By Paul Coe.

any photograph by competitors, yet it presents photography in a new way, which no doubt will attract those who hitherto have not taken any interest in it for the record of antiquarian features.

Industrial "Motion-Study." It is now some 30 years since photography was first used to analyse the movements of factory workers so that repetition work could be simplified and fatigue reduced to a minimum. At first, of course, an ordinary camera was used, the shutter being open all the time that a certain action was being performed, while small electric lamps tied to the wrists of the worker traced out the paths followed by his hands. In recent years the sub-standard cinema camera has entered the field and made "slow motion" analysis of routine work almost a commonplace. An interesting case which has just come to our notice is the work done by Messrs. Ferranti, Ltd., the

Landmark Competition. A PROVINCIAL newspaper (in Wrexham), in conjunction with a firm of photographic dealers, is running a competition which is a slight improvement upon the eternal snap. In the newspaper are reproduced seven photographs of places in the town or neighbourhood, in each case with a rhyming clue for finding them. An example is:

Across the road and to the right
We see this building old;
Where once salvation was assured,
We now insure our gold,

which is not so bad as clues go. A guinea, a camera, and a consolation prize are offered each week in this competition, which naturally calls for a fresh set of photographs each week. The newspaper and the dealer share equally in linking themselves with the contest, and although the latter does not involve the taking of

* * *

well-known electrical engineers. Apart from the benefits to be expected from slow-motion study, there is one unusual point of special interest in their results. This is that in some particular cases it has been found necessary to re-

design machinery and tools in order that the best working conditions and output could be realised. This must surely be a notable case of the influence of the cinema camera on industrial practice.

CLOUDS WITH AND WITHOUT LANDSCAPE.

IT may seem a simple matter to put a red filter in front of a panchromatic plate and photograph a bank of clouds, but when the local meteorologist sees the results he is inclined to criticise them as being unsuitable to his purposes. For this reason, it may be of general interest to put down some few details of technicalities involved when clouds are the work in hand.

In the first place, work must often be conducted in a hurry, as clouds change their shape and position much more quickly than is generally realised, and in the second, if a series of records at definite intervals of time is required, the hurry is intensified. All this, quite apart from deciding technical details.

Cloud photography falls into two heads: (1) where the landscape beneath is wanted as a foreground, and (2) where clouds alone are needed. In the first case, the red filter is certain to give over-correction of the foreground, and a graduated filter of some sort is needed. In this connection it may be as well to remark that a graduated filter is not the least use if it is half an inch from the front lens component. Those who have focussing screens should try the experiment, and will find that in general the filter must be about half the focal length of the lens away from the front component to get a correct graduated effect on the ground-glass screen. In view of the time needed to get the graduated filter into the proper position, it is as well that clouds and uncorrected foregrounds are not often wanted on the same plate. It is also useful that in such cases a very great contrast is seldom desired, so that the photographer is not put to the expense of getting a graduated tricolour red filter.

So long as foregrounds are involved a lens of normal focal length compared to the plate will generally do all that is wanted, though at times it may be useful to have a long-focus or telephoto lens at hand when small clouds are in question. The long-focus lens, however, scores heavily when clouds alone are to be photographed.

When working on clouds without foreground, a rigid tripod or camera stand is necessary, and a tilting head is a great advantage. The rigidity of camera makes it possible to keep the angle of field identical when a series of plates are being exposed on a cloud-formation. Such series are particularly interesting in the case of the large white "cauliflower" clouds when a thunderstorm is working up,

for they shoot up billows of white vapour so quickly that one can clearly see the movement.

Since contrast between cloud and sky is the most important point in these matters, the red filter must almost always be used, and the plate developed for contrast. Ninety per cent. of clouds can be satisfactorily taken with the red filter, but in the evening it sometimes happens that clouds of a yellow colour float in a pink or purple sky, which makes the use of the red filter impossible. The use of a filter passing only yellow light is here clearly desirable, but though such "spectrum" filters can be bought, they are always wanted when there is no time to get one, and apart from scientific work they have very little other use.

Luckily it is possible to get the same effect from a combination of filters. If a tricolour red and tricolour green filter are superimposed, the only light which passes will be in the region of their transmission overlap, and in the case of commercial tricolour filters it happens that this overlap is a narrow band between 570 and 610 millimicrons. This includes spectrum yellow and a little of the orange, but nothing else, and the result is that the resulting photograph is one taken in practically monochromatic light. Such a combination of filters will render yellow clouds in a purple sky very well.

Extra contrast is gained by using yellow light in this way because most panchromatic plates exhibit the peculiarity of giving a higher contrast image in yellow light than in any other. The increase of exposure necessary for the tricolour red and tricolour green in combination is nothing short of enormous—about 400 times normal. With a lens working at $f/4.5$, however, and using Ilford Hypersensitive Panchromatic plates, the exposure will seldom be longer than two seconds, which is short enough to avoid blurred images from cloud movement unless a gale is blowing. If the clouds were moving so fast that this exposure could not be given, then a normal tricolour green filter would be a possible compromise, but since this type of cloud and colour of sky does not generally obtain when strong winds are blowing, no trouble is likely to arise on this score.

It seems necessary to conclude by reminding photographers of clouds that when long-focus lenses are directed toward the sky in this way a deep lens hood is an absolute necessity. Backed plates, too, are usually of advantage.

it is good to say, is in substantial demand, whatever is talked about the gloomy state of portrait photography.

Here are opportunities for girls of aptitude and fairly good education. Frequently the principal, Miss Crawley, when taking a student from a provincial town, can hold out the probability of employment (at the end of the course) in the student's own district.

Third Lucerne International Salon of Photography.—The recent closing-days for receiving prints for this international salon of photography has proved to be a never expected success for the organisation. It is stated that exhibits from all parts of the world will be shown. More than 400 parcels, containing over 2,500 pictures, have been sent from thirty different countries. The fact that professional photographers and amateurs of world's reputation, and of the most diversified standing, will participate in the show foretells the interest which the public will take in this salon to be held in the new Palace of Art at Lucerne from July 14 to August 5, 1934.

Bloomsbury Girls' Photographic Trade School.—On Friday last, July 6, was held the annual exhibition of students' work at the L.C.C. Trade School, Queen's Square, London, W.C.2. It is an event which, so far as the photographic section is concerned, might be held more frequently, for the students' work in retouching and finishing reaches a very high standard, and is eloquent tribute to the excellence of the training. At this school there is no nonsense in the shape of attempting to teach girls something about every photographic process. Instruction is concentrated on the retouching of negatives and spotting and working up of prints, with the result that girls obtain astonishing efficiency within the space of one or two years. The school supplies staff to many leading studios, and it is a tribute to the character of the training that the principal cannot supply the demand for assistants who have been trained at the school. We may impress on the parents of girls anxious to "take up photography" the existence of this school, where, for absurdly moderate fees, girls obtain a thorough training in work which,

The Winning Portrait



The Marcus Adams Cup has been awarded to Mr. Harold Hunt, Heanor, for the best example of portraiture made by a student at the Kodak School of Professional Photography in 1934.

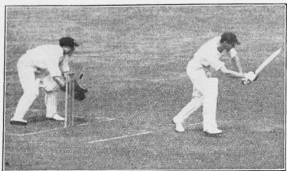


By Harold Hunt, Heanor, Negative on

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Photograph by "The Times."

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A TRADE ENLARGER FOR MINIATURE NEGATIVES.

By Leslie G. Sandys.

IN view of the increased number of miniature spoofs that are now being exposed, it is desirable to have an enlarger set apart for them in order that standard size prints may be made without disturbing the ordinary routine of the enlarging department, and so that they may be executed quickly.

Of course, it is best to have a vertical type machine, and as the amount of work may not yet warrant the purchase of such a piece of apparatus especially for miniature film orders, one may wish to make one instead. This can be done by following out the instructions given here and by noting the various points mentioned in the illustrations. Actually, the model from which these drawings were made was constructed from parts of a postcard strip printer and a whole-plate size conical bellows camera. There is no need for everyone to follow this

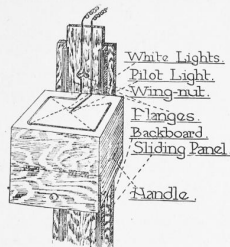


Fig. 1.

idea, however, for the desired results can be obtained by making the machine from bought wood, the working parts being made in the same way as if such a printer had been used. This point is mentioned because not everyone will have a strip printer, or, at any rate, one which may be thus utilised, and it is not worth going to the expense of buying one unless it can be picked up cheaply, for ordinary wood will be found just as reasonable and useful, except that more work will have to be put into it. Will the reader please note, then, that when the various sections mentioned below are those which have been taken from a strip printer, they will have to be made up if he does not possess such a machine.

Backboard.

Fig. 1 shows two of the main parts of the apparatus—the backboard and the lamp-house. The former is made from the bed of the strip printer, complete with sliding panel. A wing-nut should be placed at the top of the panel so that it may be merely tightened to secure the panel to the backboard in any desired position, thus rendering possible the making of enlargements of any size from the various sizes of miniature negatives. It is a good plan to engrave an arrow on the backboard, and also one for each size of film on the sliding panel; thus, it is a simple matter to focus the various sizes sharply, engrave the arrows so that the points of each just meet when the sliding panel is set at the size, and then the machine may be quickly adjusted for any size film at a moment's notice. It is well worth one's while to take this extra trouble for the time it will save in working.

It will be noticed that the sliding panel is held to the backboard by means of two flanges, one on each side. In the strip printer this is provided for, but in making up such a machine it is best to cut two strips and screw them together to form a right-angle, which, in turn, may be fixed to the backboard. This will be quite clear on reference to fig. 1.

Lamp-house.

This is the most difficult part to construct, for there are several points to be taken into consideration. One has to

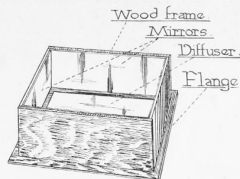


Fig. 2.

remember the white lamps, the amber lamp, fitting for camera, provision for film carrier, diffusers, and reflector. Let us take these points in order; first of all four batten-holders should be screwed inside the lamp-house, which is actually the light-box of the strip printer, in the positions indicated in fig. 1. These should be wired in parallel; i.e., the negative and positive leads from the mains should be taken and run side by side into the first batten-holder, then over into the second, and so on with all four. One of the wires should be broken by a

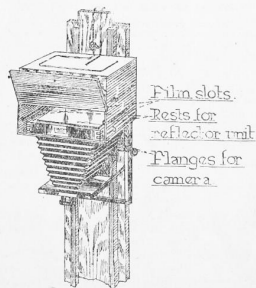


Fig. 3.

switch which will be fixed to the base of the machine, as shown in fig. 4, the leads being run down the back of the backboard. This should be done in the order of mains, switches, lamps, to get the right working order. The batten-holder for the amber pilot lamp should be fixed in the centre, as indicated, and the wiring treated in a similar manner to that of the white lamps.

The camera may be any instrument which is available, so long as it is in good working condition. In the case of the model made, a whole-plate camera was used with complete success, but there is no reason why a smaller size should not serve the purpose as well. First, an aperture should be cut which will enable the camera to be just fitted in without any tight leakage, that is to say, a very tight fit. As shown in fig. 3, flanges should be fitted and screwed to the base of the lamp-house, so that they grip the sides of the camera firmly to prevent it slipping out of place, as it must naturally be exactly vertical from lens to film carrier.

Having done this, a slot should be cut at each side of the lamp-house, so that a film may be pulled through; this eliminates working from cut negatives—a disadvantage even with sizes which normally are simple to handle. The slots should have pieces of velvet glued to the tops and bottoms so that the film cannot slip about, and so that no light shall escape and

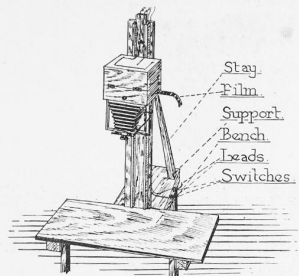


Fig. 4.

possibly fog sensitive materials which may be lying exposed in the dark-room.

Next, the film carrier must be provided. This is easily done by replacing the ground-glass of the camera with clear, flawless glass, and then placing a second sheet on top of this, the films being placed between the two for enlarging. It ought to be seen that the glasses are large enough to prevent slipping about when the films are drawn through.

The last of the items mentioned for the lamp-house are the diffuser and reflector. These two are made in one section very conveniently. Fig. 2 shows exactly how this is done; a wood frame is made first of all, of such a size that it will just fit

snugly into the lamp-house and rest on the "rests for reflector unit" which are indicated in fig. 3. A flange is provided on the lower edge for this purpose, and is seen in fig. 2. This extends a little way inside the frame, so that the diffuser-glass may rest upon it. This glass is secured by a strip of wood being screwed around its edges. The diffusing-glass itself may be ground-glass or opal, and is necessary to render the light even. If it is not provided one will find that in the projected image will be seen the four lamp filaments; the diffuser will successfully eliminate them.

Now there is the question of reflectors; these will increase the intensity of the projected light and will help to break it up inasmuch as the beams are scattered in all directions, and the volume is thus rendered more evenly distributed. Four mirrors will serve the purpose well, and should be cut to size to fit the two sides and the two ends of the reflector unit. If they are a tight fit they may stay in position without being secured, but otherwise strips of thin wood or cards may be tacked along the top edges.

It is a good idea to screw two small handles on to the sides of the lamp-house, as seen in fig. 1, so that it may be moved up and down more easily. If the lamp-house is made from a strip printer, there will be a door, as shown open in fig. 3; but if the apparatus is being made in the usual way, it is necessary to make a door so that the films may be manipulated, the lamps cleaned or replaced, and so on. A small knob may be screwed to the outside of the door to make it simple to open. A small catch should be fitted to each side also, so that the door may be locked tightly in position when closed. These two points may be seen in fig. 1. Focussing of the image is, of course, done by the camera rack and pinion.

Fitting Up.

The machine, when made up as described above (or even before all the details are complete) should be fitted up with a firm support and baseboard for sensitive papers. Fig. 4 gives a very good idea of how this should be carried out. An ordinary table may be used for the baseboard, if desired, and a support provided behind this to take a stay which is run to the top of the backboard or upright. This stay should consist of two parts—only one being shown in the illustration owing to the viewpoint—forming a triangle with the base support.

It will be noted that the two switches are fixed to this base portion, being within easy reach of the operator where he will stand to operate the machine. A spirit-level should be used to determine that the bench is absolutely level, and when the upright is being screwed to it, a right-angle should be employed to see that it really is upright. If this is not done it will be found that each enlargement will be a fraction out of focus; this may not be noticed in enlargements of small diameter, but it will manifest itself when larger prints are being made.

Press Photographers and the N.U.J.—The N.U.J. approved last Saturday a draft agreement for Press photographers between the Union and the Newspaper Society. It was agreed that the draft should be sent to all branches, with a recommendation that it be accepted.

Messrs. Burroughs Wellcome and Co. advise us that the telephone number of their head office in London has been changed to Central 4900 from July 14. Will the many readers of the "British Journal of Photography" who are doing business with Messrs. Burroughs Wellcome and Co. please make a note of the change.

Karswood Competition.—A competition through July and August for dog snaphots is announced by Messrs. Karswood, the manufacturers of dog powders. Full information regarding the term of the competition may be obtained from all shops where Karswood products are sold.

Selling Photographs on Blackheath.—At Greenwich Sessions on July 3, Robert Mansfield, St. Leonards Street, Bow, E., was summoned for taking and selling photographs on Blackheath. The stipendiary magistrate, Mr. M. P. Griffith Jones, dismissed the case on payment of the costs.

Old-Time 15-Penny Portraits.—A correspondent writes: Reference is often made to portraits taken on the sands a generation ago for one shilling, or even ninepence, and the following item of news may come as a surprise to modern portrait-makers. It appeared in the "Weekly Dispatch," dated June 29, 1834, and reads as follows: "15-Penny Portrait.—A small man, with a carefully-cultivated pair of curly mustachios appeared at the Court of Requests. He claimed fifteen pence, the price charged for a whole-length portrait of Mister Robert White, a member of the Worshipful Fraternity of Coal-heavers. He was awarded that sum."

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THE STERRY STRIPPING PROCESS IN PRACTICE.

By O. J. Morris.

THE purpose of this article is to demonstrate the advantages of the above process, and to offer remedies, thoroughly tested in practice, for its difficulties. With its companion "dry" (potassium carbonate) process, the method is noted at length in the 1934 "B.J. Almanac," p. 355. To avoid cumbersome description, the following terms are adopted herein:—

- "Original negative": a negative (on glass) before any stripping process has been applied to it.
- "Film": the gelatine coating, containing the silver image, before it has been stripped from its original glass support.
- "Transfer": a film which has been stripped from its original glass support.
- "Final negative": a transfer, or a series of transfers, in permanent position upon a new glass (or other) support.

(1) Comparison of Stripping Processes.

The standard, or hydrofluoric acid process, will always commend itself for regular and extensive work, because it is speedy, and needs little care to produce a perfectly clean transfer. Unfortunately for its universal adoption, hydrofluoric acid needs special order, and also, because of its solvent action upon glass, gutta percha bottles, the initial expense of which renders the process impracticable for only occasional use. Furthermore, highly-corrosive acids of this nature are unpleasant, and, sometimes, acutely dangerous things to have about the dark-room. In the safety and easy procurability of its chemicals, and in the economy with which they are employed, the Sterry process offers very great advantages, and the results are by no means inferior in certainty to those of the standard process above referred to.

However, potassium carbonate stripping processes are in some disrepute, because they are apt to leave the transfer "dirty." In this condition, it has a scum, powdery when looked at, and opaque, in the form of streaks or patches, when looked through. If these deposits are light, no harm is done; if, as may easily occur, they are heavy, they naturally show in the print as corresponding areas of reduced density.

(2) Nature of Scum.

Scum results from impurities in the water generally used to make up the stripping bath. In the presence of lime—a common impurity in tap water—potassium carbonate precipitates calcium carbonate (which, in one of its forms, we all know as chalk) as a sediment on the film. In the old days, when potassium carbonate was used in development, this deposit was known as *calcic fog*; as alkaline developer deposit, it is regularly met with today, when tap water has been used for compounding the developing bath. By neutralising this deposit, through the agency of an acid substance in the fixing bath, or, as some workers prefer, by removing it through the scouring action of cotton wool, developer deposit disappears. Obviously, no such course can be adopted to remove similar scum from a transfer. It is one of the golden rules of any stripping process that *no liquid, other than the original stripping solution, or one compounded to the identical formula, must come in contact with a film when once it has passed into the stripping bath.*

It would thus appear to be a simple remedy to compound the stripping bath with distilled water, and so prevent the formation of scum, but, unfortunately for this apparently simple theory, potassium carbonate, a highly deliquescent substance,

absorbs moisture from the atmosphere during the drying of the transfer. The latter is, of course, impregnated with the chemical, atmospheric moisture contains several impurities, and, therefore, the use of distilled water is not a remedy, although it certainly is a palliative. Its use, however, is not to be recommended, since it makes the transfer excessively friable, so that subsequent processing becomes a matter of considerable risk. In addition to calcium carbonate, minute



Fig. 1.

quantities of other chemical substances appear to be deposited in the gelatine, which occasion little practical trouble, and are noted in Sect. (8) below.

(3) Circumventing Scum.

In the preceding section, it was laid down that scum, present in the transfer, cannot be removed, because the normal clearing baths cannot possibly be applied, consistently with the safety of the transfer. Thus, if immersed in water, the thin leaf of gelatine, which is the transfer, tends to expand, cockle up, and split. At the worst, it is irrevocably ruined; at the best, if it can be unravelled, it appears in an expanded and generally irregular form.* Sometimes it *can* still be used, but not if it is one of several, destined to be fitted together as a combination negative, because each one of the companion transfers would expand to a different degree.

Hence, scum cannot entirely be cleared, but ways and means must be adopted to minimise its deposition, or to render it innocuous, if it is already present. These ways and means are:—

(a) Extreme care both chemical and mechanical, in the processing of the original negative. Scum is deposited heavily upon areas where strain, or abrasion in any form, has occurred. If, for example, the pressure of a thumb or finger has been present upon the film, a very heavy deposit will be there, exactly contouring the skin print.† If, again, instead of an acid fixing bath, hand-sawdabbing has been resorted to, scum will be heavily deposited upon the numberless, but normally invisible, score-lines, resulting from this friction. In a

* The method of entangling a negative by stripping the film and sweetening it, was devised in 1882, and hands will remember a preparation, subsequently marketed for this purpose. The process is not at all a practical one.

† A parallel suggests itself here to the "dusting powder" used (or reputed to be used) in criminal investigation, for rendering finger-prints visible to the eye, as well as to the camera.

laboratory test, a "mixture" of potassium carbonate and lime water will cause a heavy deposit of calcium carbonate (scum) upon the exceedingly minute abrasions formed at the bottom of a measuring-glass by the repeated grinding action of the stirring rod. It should, therefore, be a strict rule that the surface of any original negative, intended for treatment by the Sterry process, should be mechanically homogeneous, and ways and means of observing this rule will suggest themselves to every worker.

(b) By use of a matured stripping bath. After five or six successive negatives have been through a freshly-compounded bath, the deposition of scum is so far reduced, that, on further use of the same bath, its presence is generally so slight as to be harmless. Similar clarifying action, on the part of gelatine, is known to chemists. Hence, waste negatives should be kept, and used for this purpose, before placing a new bath into commission.

(c) Re-absorption, by the transfer, of the original stripping solution. Where the transfer has to be mounted upon a fresh support, this re-absorption will follow as a matter of course, in the manner detailed in Sect. (4). By this means, the reappearance of scum is greatly retarded, although not actually prevented.

(d) Varnishing the final negative, as detailed in Sect. (8).

(4) The Transfer and its New Support.

Having stripped a mechanically sound transfer from the original glass plate, it is generally needful to secure it to a fresh support, which will usually be a glass plate.

It is possible to take advantage of slight residual moisture, to apply the transfer directly to its new support, where it apparently "sticks" quite willingly. The method is erroneous from two points of view. Firstly, it is impossible to apply this near-dry leaf of gelatine, without an extensive crop of "non-contact" bubbles between it and the glass. These bubbles appear, in the print, as white pock-marks, necessitating a lot of retouching. Secondly, if the transfer does remain stuck long enough to reach the printing stage, its exposure to the heat of the printing light infallibly dries off the slight moisture, which has been giving it adhesion, and, of its own accord, it then *falls* (mark the word!) off the glass. Valuable bits of gelatine are not the best things to have floating about one's dark-room!

The "Wet Method" is the only proper means of application. Bearing in mind the golden rule, noted in Sect. (2), it is obvious that the only permissible liquid is the original stripping solution, either from the actual bath, previously employed, or from an identical one. A small pool is poured upon the glass plate, the transfer is lowered into the liquid by one edge only, and it is then rolled on, the procedure being similar to that suggested in these pages for glazing. Until the transfer is thoroughly saturated with the liquid—a matter of some thirty seconds—it *must not be touched*, or its uneven adhesion will inevitably cause it to split. To test its thorough saturation, tilt the glass slightly, and, if the transfer slips of its own accord, it may safely be moved (by means of the fingers) to any desired position upon the glass. A piece of photo-blotting is now laid over it, and a roller squeegee passed along and across, until surface liquid has been taken up. The plate may now be placed aside to dry *naturally*. Any suggestion of heat will cause the transfer to part from the glass.

On drying, the transfer will be found quite clean, and scum will not reappear for some time. When it does so—and that indicates a period which varies between a few hours and a few days—it is frequently so slight as to be negligible.

(5) Applying Combination Transfers.

When transfers have to be mounted together to form a combination negative, the extreme end one is applied, and secured, first, as described in the foregoing section. Bear in mind that the transfer forming the right-hand of the print

is applied to the left-hand of the glass, and *vice versa*. One gets so used to examining a negative from its glass side, that the natural impulse is to apply the right-hand transfer to the right-hand of the glass; if this has actually been done, the whole of the glass must be *flooded* with stripping solution, and, when the transfer has again been thoroughly saturated, it may be shifted from one side of the plate to the other. Under no circumstances must a wet transfer be moved to a dry, or merely damp, portion of the glass, because it will cling, and upon further handling, it will either split or crinkle.

Assuming that one end transfer has been anchored in place, another pool of stripping solution is poured alongside (the spot having previously been dusted free from specks, etc.), the second transfer is rolled on, and brought up to the first, in *roughly* the desired registration. Any attempt at obtaining a perfect register at this stage will be useless, because the



Fig. 2.

squeegeeing will shift it. The second transfer is now squeegeed, through blotting as before, *once* along and *once* across. If now it still tends to slip too freely, it is squeegeed once each way, again. The aim is to anchor the transfer sufficiently to obviate slipping, but not so permanently as to prevent deliberate movement. If all is right, it will be easy to bring the second transfer up to the first, and obtain the *exact* registration, after which further squeegeeing will secure it in place without being able to shift it. Further transfers are dealt with in the same manner.

(6) Registering Combination Transfers.

"Exact" registration does not imply that each transfer has been brought dead up to its companion, because, although the joint will look very nice so long as the transfers remain damp, it will gradually widen as they shrink during drying, and the final negative will have gaping streaks of bare glass, needing much retouching. Consequently, each transfer is brought up, not merely to *touch* its companion, but actually to *overlap* it—the overlap allowed being about one-thirty-second-inch, as shown in Fig. 1, at B. The pull of gelatine upon gelatine is more than sufficient to prevent creep-back, and the overlap can subsequently be dealt with as noted further on.

(7) Trimming Transfers for Registration.

It is evident that, if the overlap is not allowed for beforehand, the continuity of detail in adjoining transfers will be broken. Hence, one of each pair of transfers must be cut a little *beyond* the intended joint line.

Accuracy in trimming is easily attained, if the operation is performed in the following way. The first transfer is laid, in its dry state, upon a dry piece of glass, and rubbed gently down so that it adheres. The adjoining, or second, transfer is shifted about over the first, until detail common to both (allowed for when taking the original negatives) coincides.

The second transfer is now shifted away from this dead-exact position, the degree of shift determining the amount of overlap, and in this new position it is temporarily secured. A good way is to allow the free portion of the second transfer to make contact with the glass, whilst the overlap is still held firmly in position. A rule (or template, prepared to any desired contour) is laid along the overlap, in any selected position, and both transfers are cut through to the glass by means of a very finely-sharpened knife. The further transfers are similarly dealt with, after which they are carefully peeled off the glass, pending final application to their new support, as described in Sect. (5).

(8) Securing the Transfer.

The transfer, or transfers, having dried upon their new support, they are varnished with *crystal* negative varnish, previously filtered and applied in the well-known manner. It is particularly to be noted that varnish of any other kind will pick up the transfer from the glass, and cockle it into a hard, and therefore unmanageable, mass—a state of affairs for which there is no remedy.

By protecting the transfer from the atmosphere, this final varnishing entirely arrests the further deposit of scum, due to the atmospheric cause already noted. Occasionally, however, a curious chemical action ensues within the varnish, causing the latter to lose its polish in places; these areas acquire a brown tint as time goes on. That this action is not the result of scum previously present is proved by the fact that the new "deposit" never occurs in the same areas, but always in parts from which scum was originally absent. In Sect. (2), the suggestion was offered that chemical deposits, other than calcium carbonate, might occur in the gelatine, and I am led to the possibility that an exceedingly small quantity of caustic potash might be one of them. Whatever the cause, the trouble is ordinarily negligible, but if the final negative has to be kept for several months, it may become necessary to apply a further coat of crystal varnish over the one already present. When this has been done, the negative is restored to perfect printing condition for a further period.

(9) Finishing the Final Negative.

At this stage we have a negative wherein continuity of detail is interrupted by the overlaps ("B," Fig. 1). Each overlap is now trimmed off, with great care, so that the joint is as near as we can make it. The transfers being held in varnish, no further shrinkage can occur, and the joint will remain permanently close. Of course, however close it may be, it will always show in the print. Long runs will, therefore, be printed off a copy negative made from a worked-up master print, but a few prints may be worked up separately in the usual way. The joint is far closer, and very much cleaner,

than it can ever be when prints from the original negatives are mounted together, and copied through the camera. In addition, the method of double trimming, Sect. (7), automatically allows for registration, so that no oddity of contour presents the least difficulty.

(10) The "Dry" Stripping Process.

The "dry" process is inferior to the Sterry method from every point of view, except one—namely speed. The difficulties met with are identical with those of the Sterry process, and, owing to the saturated state of the stripping bath, the avoidance of scum is a more difficult matter. If the film, immediately upon removal from the stripping bath, is very vigorously rubbed with a soft cloth until the surface is dry, and offers a suggestion of polish, the heavier deposits will thus have been removed, and the remainder may be unimportant. Occasionally, however, this extra-brisk friction causes partial sticking of the film, which splits on stripping.

The foregoing notes apply equally well to the "dry" process, with the proviso that these transfers expand considerably more, under re-absorption, Sect. (5), than do those of the Sterry process; consequently, uneven expansion is to be feared, which renders the dry process an unsafe one for combination transfers.

(11) The Illustrations.

Fig. (1) represents a simple combination of two transfers, stripped by the Sterry method, and processed as herein described. The original overlap is at "B," and it has been trimmed off at "A." The subject is not one calling for combination work, but it has been selected on account of its many lines, showing the entire absence of distortion in the final negative. Fig. (2) is a comparative print, taken complete, by means of which the truth, and exactitude, of registration of Fig. (1) may be judged.

(12) An Operating Caution.

When taking negatives intended for combination, allow considerable overlap, say, half-an-inch all round upon a half-plate. If the taking lens is slightly wide in angle, considered in relation to the actual plate in use, the edges of the negative will show density losses, due to inequality of illumination; these losses are of little moment in any one negative, but, in combination with others, they appear as darker bands in the print, and consequently require a lot of dodging. For the same reason, rise and swing of front must be used with circumspection. Unequal illumination becomes very prominent when certain tints of colour filter (particularly red) have been employed, and is always more apparent when there has been under-exposure. It is safe to work to the following rule: if two half-plates will exactly span the extent of subject, use three in practice, and then roughly in proportion.

Pearson said that he had taken photographs on the beach for fifteen years. His brother, who was his partner, received payment for the photographs.

The brother, Edmund Pearson, said that he had taken photographs on the beach for twenty-five years. Owing to an unfortunate occurrence at the auction sale of beach sites he had no permit to sell photographs on the beach. He considered that they had been done an injustice over the site.

Mr. Beckett informed the Bench that the family had always had a photography pitch on the beach, and they had a perfectly clean record. At the beach sites sales this year his clients allowed three pitches to go by, and were overlaid on the fourth. He asserted that a man was allowed to bid at the sale, but for reasons known to the Corporation, the bids were not accepted, the sites were withdrawn, and were not allowed to be negotiated for afterwards. If the pitches had been withdrawn in the usual way they could have been negotiated for after the sale. His clients were doing their best to earn a livelihood.

The Bench fined each defendant 2s. 6d.

Beach Photographers Fined.—At the Hastings Borough Sessions on July 5, Reginald Percy Pearson, and his brother, Edmund Ernest Weeks Pearson, photographers, were summoned for selling photographs on the beach without permission on June 15 and 16.

A police-constable stated that defendants took photographs on the beach, and sold copies after being developed. He asked Reginald Pearson for his permit, and he replied that his partner had a hawk's licence, which was produced. Witness pointed out that the hawk's licence did not give defendant permission to take photographs on the beach, but Pearson replied that it did, and added, "Very well; this is Great Britain. I can take photographs anywhere in Great Britain with a hawk's licence. You can do as you like; I am glad you are going to make a case of it. We'll see who is right or wrong."

Mr. F. G. Beckett, who defended, said that the offence was practically admitted, but Reginald Pearson was summoned for selling a photograph, which he did not do. His brother received the money for it. Defendant was entitled to take photographs anywhere, other than photographs of military operations.

AN ACCESSORY FOR LEICA USERS.

By H. How.

PHOTOGRAPHERS who use the Leica camera and who wish to cut off and develop a short length of film before the whole spool has been exposed will find the following method useful for avoiding the waste of 4 ins. or more of film which occurs in making a fresh tapered end each time that it is cut.

Two pieces of brass or tin-plate sheet are cut to the size and shape shown in fig. 1. A piece of old film is placed on one of

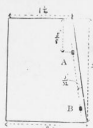


Fig. 1.

of the pieces and a perforation on each side of the film marked round with a sharp point (A and B, fig. 1). In the exact centre of these marked areas a centre punch mark is placed and a clearance hole for a 4 B.A. screw drilled. The centres of these holes are $3/32$ in. from the edge of the sheet. A short 4 B.A. brass screw is passed through each hole and soldered at the back. The screws are cut off to project about $1/4$ in. from the surface of the sheet and the tops filed smooth. With a small smooth file the projections are carefully filed to the size and shape of the film perforations. The two pieces of sheet are hinged together along the bottom edges by soldering a small brass hinge to them. Along the sloping edge of the second piece two $1/4$ in. diam. holes corresponding in position with the projections on the other piece, are drilled so that the projections come through them when the two halves of the template are put together.

The best way to remove the exposed portion of film without the risk either of cutting off a portion of the last negative or

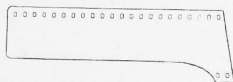


Fig. 2.

wasting a length of unexposed film at the end is to take off the bottom-plate of the camera in the dark-room and make a cut in the top edge of the film by inserting the blades of a small, narrow-bladed pair of scissors into the space between the spool-chamber and the film gate. The film is then wound back into the spool-chamber and the latter removed from the camera. The spool-chamber is opened, and the film drawn out with a finger in contact with the top edge, until the cut is felt. The film is cut off here, and the spool-chamber closed with about half an inch of film projecting.

A piece of old film is cut to the usual tapered shape required for the beginning of the film, the broad end placed in the template and cut off (fig. 2). In the position shown in the figure the emulsion side of the film must be upward. The end of the film projecting from the spool-chamber is now placed in the template so that two perforations near to the end fit on to the projections, and cut off.

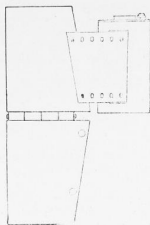


Fig. 3.

The two end perforations of the film in the spool-chamber are fitted on to the projections and the template left open (fig. 3). The broad end of the previously tapered piece of film is covered for a width of about $3/16$ in., on the face free from gelatine, with celluloid cement, and placed on top of the film already in the template, the two end perforations of this film also being engaged by the projections (fig. 4). The template is then closed and the two halves pressed together for a few minutes to allow the cement to dry. This method of cementing a tapered end on to the film may, of course, be used when starting a new reel, when the film is purchased in lengths of 50 ft. or more, and not on ready-wound spools. It is easier to make the tapered end in a full light than in the dim light of the dark-room, particularly when panchromatic film is used.

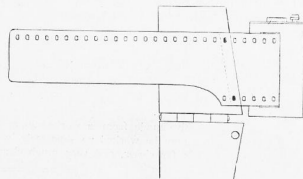


Fig. 4.

A quick-drying celluloid cement may be made by dissolving in acetone a sufficient quantity of old film to make a solution of the consistency of thin syrup. The emulsion should, of course, be cleaned from the film before use.

A case of considerable interest to photographers, particularly the new "Walkie Snap" operators, was heard at Blackpool Police-court on Friday last (July 6), when Jack Knockton, a member of a Blackpool "Walkie Snap" firm, was summoned for touting for custom. He entered a plea of "not guilty" through his counsel, Mr. W. Blackhurst, who declared that the prosecution affected a new form of business which employed something like 15,000 people in this country.

A constable gave evidence that on June 26 he saw Knockton on the footpath in Waterloo Road with a camera of the cinematograph type, with which he was taking "snaps" of people

approaching. When they got near, he handed them a "Walkie Snap" card. Cross-examined, the officer admitted that Knockton said that as far as he knew he was on private property, and had received permission to stand there. Enquiries revealed, however, that the forecourt was one acquired by the Corporation.

Announcing that they took the view that people had to deviate and were caused annoyance, the magistrates imposed a fine of 6s. Mr. W. Blackhurst then declared that it was a matter which would have to go further, and he intimated that an appeal was likely.

MORE ABOUT LEGAL PHOTOGRAPHY.

By R. Bassett-Bullock, M.C., A.R.P.S.

EXPERIENCE in courts of law show the immense value of finely produced photographs. Their power to drive home the evidence in support of which they have been made is infinite. Sometimes within the writer's personal experience they have been the vital links and have brought success to solicitors who realised what could and should be done while their opponents failed to do so. It is often useful to provide sets of photographs for the use of the jury to enable them to follow the case easily, and, what is so vital, INTELLIGENTLY. Do not think this a reflection upon jurymen or women. It is nothing of the kind. Two important factors make this task of listening to the evidence anything but easy:—

1.—The brilliance of counsel and the solicitors who instruct them. This is generally appreciated only by those continually working with them.

2.—The inability, through lack of experience, of the jury to follow the masterly presentation of the case by those in (1) above.

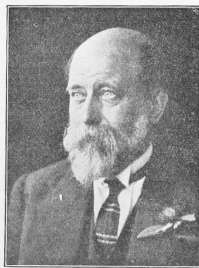
Judges go to infinite pains to explain technical evidence, and it is the duty of all engaged in legal photography to present their case so as to give the Court the maximum amount of assistance, rather than to set themselves up as experts with superior knowledge. The latter is superior only when it is imparted to others.

Technical excellence of prints is supposed to be taken for granted, but experience shows that it is sadly lacking in many cases. Bad or inferior work is submitted, with the result that photography as an art as well as a science suffers. Nothing but the best will do.

Sooner or later almost everyone engaged in legal photography finds himself opposing a brother professional. Let nothing be done in such circumstances to engender hostility.

Death of Mr. Edgar Clifton.—We are very sorry to record the death on Friday last, July 6, of Mr. Edgar Clifton, in his seventy-third year. Mr. Clifton was one of those who had been "in photography" from the very early days, and had known almost everyone of note who had contributed to its progress.

As a youth he seems to have been in the firm of James Epps and Co., and obtained an insight into the rising power of advertising. Mr. Epps was one of the first to spend prodigally in advertising his goods and died a millionaire. Afterwards, Mr. Clifton was in a publishing house, where he met



EDGAR CLIFTON.

many of the notable literary lights of Mid-Victorian times.

At the time when the firm of J. H. Dallmeyer was under the control of Lord Crawford, Mr. Clifton became manager of the

it gets nobody anywhere. Civil proceedings are between two persons or companies or firms. You may be interested, but never forget that you are an assistant and NOT a PRINCIPAL in the case. There is a world of difference.

Once the late Lord Birkenhead (as Lord Chancellor) delivered a masterly summing-up of a case and complimented a technical witness upon the equity and efficiency of the conclusions he had put before the Court. "This," said Lord Birkenhead, "is the way in which expert evidence ought to be given." No one who heard that pronouncement could fail to notice the Lord Chancellor's satisfaction. The words are as true to-day as ever they were.

In spite of all that has been written, the danger of infringement of copyright is still not well understood. Within the last two weeks the writer happened to meet a photographer who was engaged upon photographing nearly a hundred postcards! He imagined that his customer and not he himself was concerned with the question of copyright. Only just in time was adequate warning given.

At this time of the year many serious accidents occur day by day. The writer deals with them almost every working hour. Greater and greater efficiency is called for. In one that is being dealt with at present there are four separate sets of proceedings in progress, one a criminal charge (manslaughter). The remaining three are civil actions for damages arising out of the criminal charge. In circumstances like these nothing but ruthless efficiency can be tolerated. There are so many people to satisfy; no two have the same views on what occurred.

Week by week and year by year legal photography becomes more exacting. Anyone who practises amid the intricacies of the law had best keep right up to date and continue to learn all he can. Even then he will be hard put to at times to fulfil the demands the profession make upon him.

London office, and for many years discharged a host of duties for Dallmeyers on the technical as well as on the business side. He was the designer of the quick-action repeating back, widely popular on studio cameras. In later years he was on the teaching staff of the Photographic School of the Regent Street Polytechnic, a post which he resigned only a year or so ago. Few men in photography had so wide a knowledge and experience of its various branches coupled with the ability to write simply and plainly about them. In the course of the last twenty years a very great number of articles written (mostly anonymously) by Mr. Clifton had appeared in the "British Journal of Photography," and hundreds upon hundreds of individual questions were answered individually by him. Curiously enough, in the case of one so well acquainted with previous attempts, he had dabbled in colour photography, or rather more than that, for he had perfected the details of a process of making three-colour prints by the carbon process. The novel feature, which he patented, was the use of manganese dioxide in the coating of the blue tissue. Attempts were made to launch the process commercially, but they came to nothing.

By all those who knew him in any measure, Edgar Clifton will be remembered as the most cordial and genuine of friends. Never blessed with much of this world's goods, he would nevertheless give most generously in help, and often to comparative strangers, even when failing health rendered such work an effort. We ourselves have lost in him a friend and a colleague, rare enough in this world, whose help and advice were ever available, at once interested and disinterested. There are many, we know, who will echo these feelings and join with us in this sincere tribute to one who went through life always deserving well of his fellow-men.

RUNNING A PORTRAIT STUDIO.

By Paul Coe.

RUNNING a portrait studio can be a great pleasure or a great pain; which result is obtained will depend upon how it is run! While the scientist and the mechanic have, between them, made the making of a photograph easier than of yore, the standard required and expected by the public has so increased that what the portrait photographer has gained on the swings he has lost on the roundabouts.

To run a modern portrait studio successfully requires and brings into play a far larger number of talents than were necessary when portrait photography was in its infancy.

The modern portraitist should be a man of education, wide outlook, sound business ability, and have some knowledge of art, chemistry, mechanics, and in addition he should understand something of physiognomy and psychology. Last, but not least, he must know how to suffer fools gladly, or, to put it another way, he must have tact and understand human nature.

Words of Advice.

If the writer were saying good-bye to a young photographer who was just off to open his first studio, his last words of advice would be "Get a young staff round you at once, don't attempt to run your studio single handed. Beware of two snags—avoid all exhibition work, and do not allow the members of the local centre of the P.P.A. to put you in office until you are making a profit. Keep on good terms with your competitors, and if you have to cut prices for a time, notify all the other photographers that you will withdraw those cut prices in a given time, and see that you keep your word! Do not ruin your eyesight by spotting, and do as little retouching, personally, as you possibly can. You will require your eyesight for more important matters."

Selecting the Staff.

Never attempt to run a studio single-handed. Directly the new studio is open, advertise for a pupil, apprentice, or assistant and select with great care. When choosing a girl, the writer always selects a brunette—blondes look very clean and pretty in the reception-room, but blondes are not so reliable nor so loyal as are brunettes. Start with a brunette. When interviewing the boys, avoid a red-headed youth—he is always very clever, but he does not make a good servant; he wants to be boss in about three months. (During the Great War the red-headed recruit was made a corporal in a month!)

Be sure to have a clause in all agreements that no pupil must engage himself to another photographer, or open up for himself in the same town.

If you can possibly avoid it, do not engage anyone under sixteen years of age: under sixteen years of age a boy, or a girl, is a "young person." Under the Factory Act the regulations and rules regarding young persons are rather stiff and troublesome. If you are opening a brand new modern studio it is a good plan to require staff to wear rubber soles and heels.

The Reception Room.

It is a fact that the writer has been in several reception-rooms in which there is not a single chair! Several chairs are a necessity for everybody's comfort. Do not be old-fashioned and cover the walls with portraits. It is not fashionable to decorate a room with portraits. Be fashionable at all costs!

The best plan is to have all the framed portraits at that end of the reception-room furthest away from the 'phone. A table or two, with a good selection of all styles of portraits arranged in neat portfolios is the best way of showing off one's work. Do not show wedding-groups to stiff old maids and bachelors.

Avoid showing a portrait of a beautiful lady to an exceptionally plain one. Select a portfolio suitable for the age, appearance, position, and temperament of the prospective sitter. If you show too many specimens to a customer, she will walk out and say she will call again. She will be so confused.

The Printing and Projection Room.

Have plenty of ventilation, and warm with an electric radiator if there is no central heating. A vertical mercury vapour enlarger is the best for all portrait work. Fit up a zinc box with two low-power carbon lamps (a carbon filament gives out the most heat) to keep the developer at the right temperature, thus doing away with hot water, kettles, and damp floors. Make it a crime of the deepest dye to allow the floor of a work-room to get wet or even damp. Provide plenty of towels; one is not enough.

The Changing and Developing Room.

Have the largest amount of safe light for the plate or film being used. The writer's lamp for watching his plates and films develop is fitted with a movable slide which allows more and more light through as the sensitive material becomes less sensitive during the process of being developed. Have the bench for changing plates as far away from the sink as is possible, and so avoid splashes of water and chemicals ever reaching the bench or dark slides.

The Mounting Room.

Keep very clean and free from dust, and also have plenty of ventilation. Mounts should be kept handy. No one should be expected to work in the mounting-room at retouching, spotting or other close work while the dry-mounting press is on.

The Studio.

Arrange for everything to move as easily and as silently as possible. All movable screens and lamp-holders on floor should either be fitted with large castor wheels if there is any carpet or rug, or domes of silence if a wooden floor. Keep all metal parts oiled—to run mechanical contrivances without oil is asking for noise and trouble; noise wears out the nerves of staff, and the absence of oil wears out all metal parts which move.

The Photographer's Ten Commandments.

1. Keep fit—mentally and physically.
2. In the reception-room—suffer fools gladly.
3. In the studio—be an autocrat.
4. In the work-room—be a chemist.
5. At the desk—be big-minded.
6. At the till—be accurate.
7. When paying—be gracious.
8. When buying—be careful.
9. When selling—be generous.
10. When at leisure—avoid social entanglements, at least, until you are rich!

The Business Side.

It will be seen from the above ten commandments that a young photographer will have many parts to play in the course of each day. While a change of occupation is good for the brain, yet, so the doctors say, a too constant switching on and off from one subject to another is exceedingly harmful to the nervous system—too much change wears out the switch, not the brain. A photographer will do well to arrange the day's work so that he may not have to switch on and off from one thing to another more than is absolutely necessary. Always finish the work in each department before thinking of the next. To start off developing an important batch of films (in a tank) and then rush off to retouch a negative is wrong in practice.

The man who starts to enlarge and then, while the exposure is on, dashes out to trim a print, is wasting his nervous energy.

Plan, arrange and think so that all that nonsense of filling up every minute of the day may be a thing of the past—learn to live each hour as well as to work.

Concentration and Decision.

Learn to concentrate the mind upon every small detail as it crops up, then come quickly to a decision. The workhouse and many other unpleasant places of abode are full of those who never made up their mind, and went through life like a wandering star looking for its orbit. In small things decide at once. In big things, put down the pros and cons in black and white, sleep over it and come to a decision in the morning (not in the evening).

Most men, with an artistic temperament and a keen imagination, learn to discriminate between the true wave and the false. If a brain-wave comes along late at night, write it down and read it over in the morning—it will probably be found to consist of the stuff that dreams are made of! But when a brave-wave comes along early in the morning, when the brain is fresh, it is generally worth carrying out! When once a decision is reached on a big matter of policy, do not allow the staff, family or friends to make you change your mind. Friends, relatives and often the staff are immensely frightened at the idea of any change. Brush aside all they have to say and go ahead. Better to be wrong, now and then, than to go through life afraid of one's own shadow and every wind that blows.

Salesmanship.

Selling a portrait is a great art and science combined. One of the weak points about professional portrait photography is the fact that it depends upon the generosity instinct of the public for its financial success. Photograph a man or a woman who only requires one copy—and you are working for very little profit; but sell a dozen copies, or more, and up goes the profit at once. So work hard to sell portraits by the dozen. Everybody has an instinct of generosity somewhere in their hearts: but that instinct often has to be encouraged and amplified—set a good example by being generous yourself when dealing with the public.

Fortunately, a desire to possess a thing is one of the greatest instincts of a woman. When selling a portrait always endeavour to get the prospective customer to hold it. The big stores understand this psychology of selling, and you will find piles of goods all open to the touch of a woman. A woman loves to touch. Watch a lady shopping, you will notice she touches and feels everything, and buys most of it. From the moment you can get a lady to hold a frame, or miniature, the sale is almost complete.

The Art Side.

The art side of running a studio is of importance equal to that of its business side. In fact, if the writer had to choose between the use of art in his work, or business tricks, he would choose art as being the most important when running a studio that is to go on running for a long period. Business tricks for a short run. Art for a long run. With a combination of good business habits and art, a studio can be run for a life-time.

Art—what is art? The dictionary gives art as being "Practice, skill, guided by rules." "The rules and methods of doing certain actions." "Cunning; artifice." Art applied to a portrait alters it in appearance, in *value*, and in its effect upon all educated persons, and also in its effect upon thousands of uneducated persons.

A young photographer should saturate himself in art. He

should study all paintings, engravings and sculpture of all ages—not forgetting the modernist! He should also go to nature herself and study light and shade on hill and dale, valley and mountain, see the sun rise and set, and watch the waves of the sea shore. He should also study light and shade in bus, car, train, theatre and concert hall. He should then sit down and put on paper what lighting effects he thinks most natural. I, he admires people when sitting in a darkened room with very little light—work accordingly. If, however, he finds he admires people most when sitting in a well-lighted room—work accordingly. Opinions differ greatly as to what is good art, and what is bad art: the same difference of opinion exists regarding religion, politics, music and many other arts—so do not worry too much about it. Please your public and please yourself.

The Artist.

Artist—what is an artist? The dictionary gives an artist as one who "practises one of the fine arts, as painting, sculpture or architecture." The writer will put it thus, and say that an artist is one who sees when a thing is right in design according to the rules of art: and also can see when it is wise to break those same rules—whether one is making a portrait or a motor-car.

Service.

In a luxury business like that of portrait photography the service given is of the utmost importance. Serve the public well, but do not become its slave. Always put yourself in the place of a disappointed client.

While the service of a portrait studio should be reasonable as to the time taken to execute all orders, mere hustling for hustling's sake should be avoided. Give the goats from the sheep by making a small additional charge where an order is demanded out of its turn. Quite a lot of ladies who "simply must" have their portraits by the end of the week will not insist further if 2/6 is requested for the extra promptness. Train a clever girl to receive all visitors with a smile of welcome. Do not teach her to be servile. Let her have dignity all her own, so that she may quickly control everyone who enters the reception-room. Appointments should be made to suit the smooth running of the studio. In addition, appointments should be made to suit the age and the life lived by the prospective sitter. Those getting on in years look their best in the morning!

When a sitter is accompanied by several friends, it is far better for the receptionist to bar the way to the studio to those friends, rather than to allow them into the studio only to be turned out again by the operator, which causes friction and annoyance all round. The writer's practice is to allow one friend of the same sex in the studio, if desired. Under no ordinary circumstances will he photograph a lady with a gentleman present, or vice versa. When making a special study of either a man or a woman, he always advises the sitter to face the camera alone.

Twice in his life the writer has been "out of work." The misery of seeing the world go on its way quite well without him was a bitter blow. No one man is indispensable. When a photographer reaches that state of mind in which he thinks he must be at the studio every minute of the day, one of two things has taken place, he has either failed to organise his staff properly, or, more often, he is on the way to a nervous breakdown, and he should take a holiday at once!

One last word of advice—when you lock up the premises, lock out from your mind everything connected with business, and so give the brain as well as the body a complete rest.

Only Smiles Pay.—In the course of a case at Weston-super-Mare, where a "walkie" photographer was summoned for obstruction, it was explained in evidence by the defendant that

he only photographed the passers-by who smiled, for it did not pay to take the ones who looked sour. The case was dismissed on payment of costs.

SUB-STANDARD CINEMATOGRAPHY

By SPROCKET.

READERS will recall my recent remarks with regard to speed markings of film. Since then another instance of the vagaries of stated speeds has come to my notice. A friend who recently bought a cine-camera came to me to ask with regard to the relative speeds of two films which he wished to use. He pointed out that one was rated at a speed four times as fast as the other. I recommended that one be regarded as 50 per cent. faster than the other. He compromised and treated the film as three times as fast. Result: the faster film was all badly under-exposed. This is the sort of thing that spoils beginners for cinematography. Another thing that spoils them is faulty apparatus. An experienced photographer bought a small cine-camera at a low price. He had all sorts of trouble, but principally light fog. He has given cine pictures up in disgust and is going on with his still work.

D.I.N. Speeds.

No doubt there were many who read with interest the description in a recent issue of the "R.J." of the new German speed rating for photographic sensitive material. Like the Scheiner speed rating, the D.I.N. is based on the least amount of light which is required to make any impression on the emulsion. So far as cine reversal film is concerned, I should like to remind readers of the observations of Dr. Lummerzhelm, of Agfa, to which I made reference a short while back. The essential for a cine reversal film is one which will give more or less transparent high lights in the finished film; the exposure, therefore, being, not the least amount of light which will produce some effect on the film, but the amount of light which will render the highest lights as transparencies. It would seem that for reversal film the top part of the sensitometric curve is more important than the bottom part, so that a speed rating based on the straight line, such as the H. and D., is of greater value in the estimation of the speed of reversal film than methods based on the threshold sensitivity.

Film Speeds for Practical Purposes.

It has always seemed to me rather surprising that the computation of emulsion speeds should be determined with a specified developer, whatever the make of the emulsion. Emulsions respond differently to different developers, and it is only reasonable from the user's point of view that the speed should be that obtained when using the developer recommended by the maker. I should also like to see the issue with emulsions of a small copy of the characteristic curve obtained with a specified developer. If this were done, the method of speed rating would be of less importance, for the information would be obtainable from the graph. It is arguable that but few would understand the curves. This might be so at first, but in a short time there would be a much greater proportion of users with an understanding of the chart than there is of wireless users who understand the curves issued with wireless valves. In the article on the D.I.N. (Das ist Normal) system it was stated that if an article is certified standard in this way, failure to maintain the standard is an offence. One may doubt the wisdom of such legislation in this country, particularly with such an intractable product as a photographic emulsion. Manufacturers to-day would not, however, agree that there is much variation in the characteristics of most of their products. Errors of as much as 20 per cent. in light or opacity values would not be material for most practical purposes. I think that with the growth in the number of types of emulsion the time has

arrived when users should as a matter of course be given this information with supplies of material. If it is not possible to give the information to the margin of error suggested, then the user deserves to know this.

How Long is a Film Leader?

The time during which the camera must be run after loading up a reel of film before filming can be commenced is as a rule very clearly set out in the instructions sent out by the maker of the camera. Sometimes, however, one may have doubts on the point, or at the end of a reel one may wonder whether or no all of the film has run through and whether one is exposing on the trailer. The answer given to a querist in the American "Movie Makers" is so simple that many will not have thought of it. It is merely that one should remove the lens from its mount and see whether film or trailer is in the camera gate. Only one or two frames of film will be spoilt at the most.

Sound Tracks Again.

The same paper mentions a successful demonstration of sound film pictures which are part of a library run by the United Research Corporation, Long Island City, New York, in which the standard double perforation 16-mm. film was used, the sound track being inside the perforations and the picture reduced in size, as with 35-mm. film. This is of interest in view of opinion expressed recently by Mr. W. Vinton, the English kine manufacturer, in favour of this type of film. With the prospect of at least four different sound film standards in the near future the use of double line perforation film (i.e., 16-mm. silent film) is the more likely to receive consideration again. One advantage which it has is that the pull of the sound sprocket is on the same side as the track, and flutter in printing is much easier to avoid than when (as with the single line perforations) the pull is on one side and the track is on the other.

Idle Thoughts.

If sub-standard sizes multiply at the present rate we shall find some young inventor evolving a projector which will take film of any width, of any size perforation, of any depth of picture, and any sized sound track anywhere on the film. If he can get it ready within the next few years there should be a market for it.

The Price of Film.

The introduction by the Kodak Company in America of Ortho Reversal 16-mm. film at the price of \$4.50 for 100 feet, compared with \$6 for the ordinary pan film, follows the introduction over there of a number of films of this type and price. According to an account which appeared in the "American Cinematographer" these films, under a number of different names, are mainly of the Pont manufacture, and are actually sound track or "recording" positive emulsions having very fine grain and highly ortho characteristics, coated on to 16-mm. safety film. We are not without our low-priced ortho reversal films over here, but the introduction of a film of this type with standard of reliability in processing associated with a film such as Kodak should find a warm welcome. Here's hoping!

Sprocket's New Goods.

The Arri printer is now obtainable for 35-mm. film from Sands, Hunter & Co., Ltd., 37, Bedford Street, London, W.C.2. The Hikepod, a low-priced walking stick tripod, has been introduced by Mr. O. Schiff.



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- 10 1/2° Swift Rapid Paragon.
- 19° Optimus Rapid Rectilinear.
- 8 1/2° Watson Rapid Rectilinear.
- 11° Suter Applanat.
- 11 1/2° Ross Rapid Symmetrical.
- 6 1/2° 1 1/2 plate Optimus Wide Angle Lens.
- 9° 1 1/2 plate Wide Angle Lens.
- 5 1/2° Goetz F 6.8 Syntor, in Automatic Shutter.
- 6° Ruby F 6.8 Anastigmat Lens, in Kollon Shutter.
- 6° Beck Enofocal, F/4.5, in Celverex Shutter.
- 6° Beck Isostigmat, F/7.7, in Celverex Shutter.

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PRINTER-Finisher. Willing general assistant. Travel. Live in. Permanent. Particulars—Coon, Moor, Down.

REFLEX Operator, able to print. State wage. V. acc. copy references—Hawkins, Photographers, Malborough, Lines.

REFLEX Operator. Fine imposition; offer abroad, experienced man—Walker's, Marine Gardens, Margate.

REFLEX operators required. Full particulars with photograph of self—Remington, Photo Service, Woodland Farm, Frazington.

REFLEX operators wanted for seaside. Must be good camera-men. — Apply Empire Films, Woblesley Road, Clacton.

RETOUCHER-Finisher, lady; permanency if suitable—21, F. Robinson & Co., Redhill.

RETOUCHER, Lady, required Card Negative Photo, salary required—Scaman, Marine Parade, Great Yarmouth.

RETOUCHER, (licences expression, West End experience, Finisher, Operator, London preferred, single; three or four weeks' notice—Box Z, 24, Wellington St., W.C.2.

SMART Receptionist wanted for well known West End photographer. Must be clever Saleswoman and good Telephoneist.—Box Z, 6, 24, Wellington St., W.C.2.

SMART Travellers, for sale of well-known celluloid films. Preferably with car or combination. Salary, commission and expenses. Apply with copy references.—I.P.A., 9612, Lambeth Palace Road, S.E.1.

SMART Traveller required by leading West End photographer. Also has sound connection with leading fashion houses and national agencies. £1,000 per annum easily earned.—Box Z, 7, 24, Wellington St., W.C.2.

VELOX Printers and Developers wanted, used to quantities of good-class work.—Northcote Photo Works, rear of 20, Broad Street, Teddington.

WANTED—Good White-T-Wait Bromide Printers for Card Negatives. Also male or female D & P Printers wanted.—Apply Williams' Studios, Harold Road, Merton, S.W.19.

WANTED, Receptionist, good Saleswoman, and to take charge of office. State age, wage and experience.—Scott, Photographer, London Road, Kettering.

WYOMING Lady required for commercial work with experience in bromide printing and developing. Permanent position. Satisfactory applicant—Apply "Studio", Harris Tebus, 62, Tabernacle Street, E.C.2.

Businesses, Premises, and Partnerships

Twelve words 1/-, and 2/- for every additional word

A COMPACT, well-established little portrait business for disposal, 15 miles from London. Price £125.—Box Z, 24, Wellington St., W.C.2.

ADVERTISER wishes to hire portrait studio in London, occasionally.—Box Z, 20, 24, Wellington St., W.C.2.

BRANCH for Sale. First-class portrait. Established and well-advertised by well-known Midland photographer. Suit retail artist with personality.—Hill, Old Bank Chambers, Midvern.

D & P Business for sale, with splendid connection, well-fitted with latest plant for giving quick service. Works in centre of large city. Owner retiring.—Box Z, 24, Wellington St., W.C.2.

FIRST-CLASS Business for sale. Fashionable seaside resort. Premier site. Three floors sound connection. Audited figures 2000, about £1,000 required. Owner retiring.—Box V, 3, 24, Wellington St., W.C.2.

FIRST-CLASS West End Business for sale. Owner retiring.—Box Z, 22, 24, Wellington St., W.C.2.

HIGH-CLASS Photographer's Business in Glass-rose for sale, owing to death of proprietor; main shopping street, up-to-date equipment; day and evening light; wide connection.—Apply A. & P. Ferguson, Solicitors, 34, West George Street, Glasgow, C.2.

OPPORTUNITY occurs in well-known London Advertising Studio, for expert technical working partner, one willing to invest capital preferred. Full test investigations.—Box Z, 18, 24, Wellington St., W.C.2.

PHOTOGRAPHIC Business, main road, S.W. Shop, 2 rooms, side entrance. Lease 18 years. Takings £40 to £500. Price £285.—Grant's, 7, The Parade, St. John's Hill, S.W.11.

PHOTOGRAPHIC Dealer in Midlands, excellent. P. & P. connection, well-stocked, double-fronted shop, good living accommodation. Owner retiring.—Box X, 31, 24, Wellington St., W.C.2.

RARE Opportunity to acquire a good-class building in prosperous city at a very low figure. Lady or gentleman.—Box Z, 24, Wellington St., W.C.2.

SECOND Business, excellent premises, south, inland, good professional, D & P. 1500 prints per week. Good turnover. 18 mo. trial allowed. About £300.—Box Z, 21, 24, Wellington St., W.C.2.

SOUTH Coast—Modern electric studio, centre of city. Large population.—Box Z, 21, 24, Wellington St., W.C.2.

WANTED to rent, view purchase, small photographic business. Living accommodation. South Midlands preferred. Sure living.—Photographer, 34, George Borrow Road, Norwich.

WELL-EQUIPPED good-class Business. Shop window. Low rent. Main road, Manchester.—Box Z, 24, Wellington St., W.C.2.

WELL-KNOWN, old-established Portrait, Commercial and D & P Business, main road, double-fronted shop, spacious and modern equipped studio. Population over 180,000 (Midland). Good class work. S.A.V. £350, or nearest reasonable offer. Only genuine applicants please reply.—Box Z, 24, Wellington St., W.C.2.

Apparatus For Sale and Wanted.

Twelve words 1/-, and 2/- for every additional word

A 8 1/2 x 4 T.P. Press, F.4.5, 3 D.D. case; 3 1/2" A.M. lens shutter, 10.—Alison, 80, Tottenham Court Road, W.1.

A 10.00 C.P. Boardman (repair) Carbon Arc, 35/6. Celverex, 3/6. "Photography" Manual, 2/6, unbound, below.

A 2 1/2" f.4.5 Tessar, 15 cm. Sunk Focusing Mount; 1/2-pl. Anschütz, f.6.8, 12-pl. Holder, 8/6. Below.

A 3-pl. Studio, Beck Lens, T.P. Shutter, 3 D.D. Tripod, 20/6; also 3 1/2" Instaphot, new, 17/6.—Allison, 80, Crossways, Odes, Yorks.

FOR Disposal.—£50 model Gerster glazing machine, perfect condition, £30; 2 large gas heated glazing machines; horizontal photo-planer; and 4 rotary printing machines. All low prices.—Box Z, 24, Wellington St., W.C.2.

FOR Sale.—Up-to-date studio and workroom Apparatus, excellent condition. Any reasonable offer considered. View by appointment.—Write Box Z, 13, 24, Wellington St., W.C.2.

P. C. Reflex, Russian Model "B," 7" Cooke Series II, f.4.5, four D.D.'s, 15 film card negative holders, tripod, case. Sincerely used. £12 lbs. or nearest.—V. O. & S. S., 46a, Blatchington Road, Hove.

SALE—4-pl. T.P. Reflex, f.4.5 Cooke, 6 slides, S. Case. New condition, 46 lbs. 8/-, 21, Lewis Place, Portwalk, Glouc.

V. P. Eremann f/1.8 Erosar, 12 single slides, S. case, with new film. Also 3 1/2" 2 1/2" Dallmeyer speed camera, f.2.9 Pentac, 4 double slides, case, perfect, 21/0.—Carwell, South Tay Street, Dundee.

ZESS Ikon Miroflex, 9 x 12 cm. or 1/4-pl. Zeiss f.4.5 Tessar, f.4.5, F.4, plateholders, leather case; as new, cost £51 lbs.; £25.—Puttock, 46, Castle Road, Bedford.

1 1/2" Marion Soho Reflex, tropical model, 4" revolving back, f.4.5 Zeiss Tessar, 1 D.D. slides, F.P.A., Dallmeyer Series VI Dalton 12" Telephoto lens, leather case, perfect working order. £30.—Colonel Hill, Redfield Place, Ashford, Kent.

1 1/2" Studio Camera, Kodak Stand, 2 Slides, 12" Portrait Lens f.4.5, as new. Cost £25.—67, Hamden Road, South Chingford.

6 x 4" KODAK Vertical Enlarger, dishes, scales, film, docket books, 415 the lot, to save storage.—St. Vaie Road, Mlicham.

9 x 12 CM. or 1/4-pl. Business, Tessar f.2.7, 6 slides, film rack, case, £25. 30" Cooke photo, f.5.6, cost £40, as new. £22. 20" Aldis Triplet, f.5.6, £6.—H. C. L., Caluana, Woking, Surrey.

12 x 10" Camera, Square Bellows, 5 D.D. slides, cheap. Particulars—B, 3, Emperor's Gate, Gloucester Road, London, S.W.7.

(Continued on page 31.)

The Deltico 9-mm. camera is now obtainable fitted with the well-known Meyer lenses from Mr. A. O. Roth, 85, Ringstead Road, Catford, London, S.E.6.

Wide angle and telephoto lenses interchangeable with the standard $f/3.5$ lens for the Cine-Kodak 8-mm. camera are now obtainable from J. H. Dallmeyer, Ltd., 31, Mortimer Street, London, W.1. A very slight addition to the camera is required.

S. Maurice & Co., 40, Paradise Street, Liverpool, announce that they are prepared to print 16-mm. and 9-mm.; reduce 35-mm. either to 9-mm. or 16-mm.; reduce 16-mm. to 9-mm.; and enlarge 9-mm. to either 16-mm. or 35-mm.

Gramophone records which may be played in public free of royalties are announced by the Hudson Record Co., 171, Wardour Street, London, W.1, and also by Synchronophone, Ltd., 24, Berners Street, London, W.1.

Pathescope, Ltd., announce that their 9-mm. news-reel will be issued for July. Future issues will be ready on the first day of the month, and the next issue, on 1st August, will include, *inter alia*, the Second Test Match, Ascot and Epsom Race Meetings, and the Hendon Air Pageant.

PRESS PHOTOGRAPHY NOTES

By FOCAL-PLANE.

FREELANCES are all agreed that if there was no necessity at any time to render accounts for photographs published or to make inquiries about prints submitted but not returned or seen as reproductions, business would not only be better financially, but life as a Press photographer would lose a good deal of its worry and uncertainty.

A London reader writes: "I shall be very glad if you will let me know if there is any book or other means of finding out which papers and magazines pay on acceptance, and which require an account to be rendered before payment is made. The pay-on-acceptance variety interests me most as I have no time to check the various papers to see if prints submitted have been used."

This same question has been put to me dozens of times since I began writing these notes eight years ago, and I expect it will continue to be asked for some time yet. Neither this country nor any other is Utopia; and I cannot foresee the day when business methods will be so vastly improved that it will be the accepted thing for all newspapers automatically to pay for all material used. Should that day ever come, then I do sincerely hope I am still in business—even if only to experience the joy of such a blessing!

NO TRUE GUIDE

But it is to-day and not to-morrow which concerns us now, and drawing from my own experience, I must say that I do not know of any book or publication which does accurately give such information—at least, information which all newspaper contributors can accept without question at any time. I have in mind one book which professed to be more or less "official" in this respect and gave some hundreds of newspapers and periodicals which pay either on acceptance, publication or demand. A perusal of this book showed that, as far as I was concerned at least, there were several offices described by the "official" information as being of the pay-on-acceptance variety which automatically paid me on publication (or within one month of that date), while there was a much greater number of offices described as "pay-on-acceptance" which experience told me did not unfailingly observe the alleged practice. With regard to this latter class I must say that had I accepted such "official" information without question I should have found it necessary to seek rather a large overdraft at my bank to-day! I do not say that the information in the book I refer to was completely inaccurate. It was not; for in discussion with other operators I found that there were many instances where some photographers automatically received payment from offices to which I, personally, had to render an account before payment was made, and vice versa.

The same thing applies to-day. Many old-hands have had to fight their own battles with respect to individual offices, and

though they may have been given assurance that all reproductions will be paid for within a reasonable time of publication, no "guide" compiled from such sources of information can, I am confident, be accepted unquestioningly by all operators. I have known some art editors and accountants grant one contributor this "privilege" (!) and refuse it to another. It is, therefore, for such reasons that I cannot help my correspondent in the way he desires to be helped.

Naturally enough, the pay-on-acceptance papers and periodicals interest all freelances most of all, but there are several markets which, though not in this category, no full time freelance can afford to neglect. Speaking from my own personal experience, I know that my books show that if I neglected to serve one particular market simply because, in order to receive payment for photographs used, I had to keep a careful check on each issue and render an account, I should be sacrificing a not inconsiderable part of my income. And I know that there are many freelances who are similarly placed.

No, there is no book which I can recommend as being reliable in the direction my correspondent wishes, and if he can afford to confine his dealings to those papers which pay on acceptance then he is fortunate indeed.

NAMING AN AGENCY.

Some years ago I recommended one or two particular agents to the notice of readers. Then later, when I considered that owing to the rather troubled state of the market and the apparent change in the sales which agencies were being able to effect, I stated in these notes that I had decided to refrain from naming any agency or agencies as offering reliable service. I continued, however, to receive inquiries—apparently from new readers who had not seen my decision. After making my decision known once more in these columns such inquiries more or less ceased, but now they are beginning again, and one correspondent asks me to give him a letter of introduction to the agency which handles my own work. I regret that I cannot accede to his request. There are several reasons why I cannot oblige him, and one is that I do not know of any single agency which can effect good sales from all types of Press photographs. Some agents get better results from news pictures than from stunts or "anytime" photographs, while I have in mind at least one agency which, in my opinion, does poorly with news but "gets in" with a class of photograph which some of us call "tripe."

Candidly, apart from a few exceptions, I think the freelance is likely to do better by circulating his own work direct. Printing paper and postage accounts will be bigger, but on the whole they will be more than compensated by the financial returns—provided, of course, that circulating is done with discretion and some knowledge of market requirements.

PATENTS INTELLIGENCE

Applications, June 21 to 27:—

Mounts.—No. 18,400. Supporting devices for photographic mounts, etc. S. H. Kaufmann.
Cameras.—No. 18,038. Photographic cameras. Kodak, Ltd.
Films.—No. 18,074. Photographic films. H. D. Murray and D. A. Spencer.
Wallets.—No. 18,808. Wallets for photographs. J. S. Giles.

Arc Lamps.—No. 18,547. Projection arc lamps, etc. Zeiss Ikon Akt.-Ges.
Projection Apparatus.—Nos. 18,092-18,093. Apparatus for projecting lantern-like films. I.G. Farbenindustrie A.-G.
Colour Photography.—Nos. 18,032-18,036. Colour photography. Kodak, Ltd.
Diazotypes.—No. 18,073. Method of obtaining ink prints from diazotypes. H. D. Murray and D. A. Spencer.

NEW GOODS ON THE MARKET

The Coronet Model B Cine Camera for 9-mm. Film. Made by the Coronet Camera Co., 310, Summer Lane, Birmingham, 10.

When the Coronet Company introduced their 9-mm. cine camera about two years ago they set a new standard in cine values. The Model B camera which they now introduce contains a number of improvements based on experience with the earlier model and makes available a thoroughly sound and reliable cine camera at the very low price of 75s. The camera is strongly made of metal, black enamelled, and is fitted with a leather carrying handle. The winding of the clockwork is effected by means of a fixed key, which turns easily and conveniently in a clockwise direction. One winding of the clockwork takes the whole thirty feet of film through. The exposure button, which is conveniently placed at the front of the camera, is recessed in order to avoid accidental exposure. The enclosed direct vision-finder gives an excellent picture, and, as it is next the camera lens, avoids parallax effects and always gives an accurate indication of the picture which is being taken. Loading is effected by means of the standard 9-mm. chargers, and is almost fool-proof. A spring pressure gate is now fitted, which, in conjunction with the $f/3.9$ anastigmat lens, was found to give good definition at full aperture. The film is moved by means of a six-picture sprocket, driven by a mechanism of the maltese cross type, the only camera that we know of which this type of mechanism is employed. The footage meter is ingenious and avoids all chance of the setting of the meter being forgotten. The meter will only work when the charger is in the camera. On the removal of the charger the meter reading automatically returns to zero. As an additional aid to good picture-making the camera is fitted with a tripod bush so that it may readily be fitted to a stand. We found the Coronet

Model B camera very easy to handle and easy to load. The resulting pictures were sharp and steady. One would need to be very critical to have any fault to find with its performance.

Certo Super-Sport Roll-Film and Plate Camera. Sold by Actina, Ltd., 29, Red Lion Square, London, W.C.1.

This camera occupies a place by itself among high-class instruments, since it takes the popular $3\frac{1}{2} \times 2\frac{1}{2}$ ins. spool, and is made for allowing 10 exposures ($2\frac{1}{2} \times 1\frac{1}{2}$) on this spool or, alternatively, 8 exposures $2\frac{1}{2} \times 2\frac{1}{2}$ ins. In addition, single metal plate-holders or film-pack adapter may be used for pictures $2\frac{1}{2} \times 1\frac{1}{2}$ ins.

The camera is of most substantial build, and of the semi-self-erecting type, the lens coming out into position for use simply by putting down the baseboard. It is fitted with the delay-action Compur shutter, and may be had with one or another of a variety of lenses of 3 ins. focal length, ranging in aperture from $f/3.8$ to $f/20$. With $f/3.5$ Trioplan the price is £8 5s., or with $f/3.8$ Zeiss Tessar, £13 9s. These prices include detachable focusing screen and three single metal plate-holders in case. Although fulfilling the double purpose of a film and a plate camera, the Super-Sport is reasonably compact. It measures a shade more than 5 ins. in length, less than $3\frac{1}{2}$ ins. in width, and less than 1½ ins. in thickness. With its covering of real black leather and highly polished nickel fittings it is of very attractive appearance, and design and workmanship are both of a kind that should ensure long life.



NEWS & NOTES OF THE WEEK

New Director for Kodak, Ltd.—It is announced that Mr. Denison Pender has joined the Board of Kodak, Ltd.

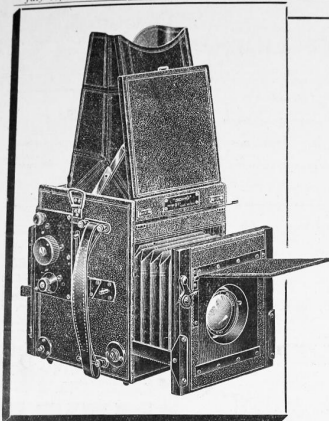
Samuel Kerr (21), photographer, of Balmoral Road, Blackpool, was fined 40s. at Blackpool Police-court, on July 4, on charges of stealing a lens, valued at £6 12s. 6d., and photographic chemicals and paper, value at 17s. 6d., from the "Walkie Snaps" works, Station Road, Blackpool, between November, 1933, and February this year.

John Vickers, a partner in the firm, said that Kerr had been in the employ of the company during the season 1933, and this season up to the time of his arrest. He had no right to take the lens and sell it for 2s. 6d.

Defendant said he thought the things were worthless; he knew he had no right to take the lens.

After announcing the fine, the Bench disallowed the expenses of Richard Kahler, Station Road, on the recommendation of the Chief Constable, who said that when he bought the lens Kahler must have known it was worth more than 2s. 6d. If he had rejected it the youth would not have been in trouble.

A Quest for Treasure.—The steamer "Ophir" is being equipped at Clydebank for an expedition in search of sunken treasure. Among the equipment is a one-man submarine, specially fitted for under-water photography and cinematography, and it is proposed first to visit the spot where the "Lusitania" was sunk.



SOHO REFLEX

THE BEST CAMERA
IN THE WORLD

Sportsmen, who have only one opportunity of photographing an event—Scientists, whose research work must be reproduced, in many cases urgently—Explorers and those who travel in places where it is not possible to get repairs effected, and all others whose first consideration is reliability—in short, all who are primarily concerned in possessing a camera which may be relied upon for the finest possible work under the most exacting conditions, will find in the British-made Soho Reflex an instrument which will prove equal to every demand. Full information as to various models, and fittings, and the lenses available will be forwarded on request.

Full details of the Soho Reflex and
all other Soho Models from:

SOHO LTD., SOHO SQ., LONDON, W.1



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TRADE PHOTO PRINTING . . .
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THE
MASTER FILM
& BESURE OF A BUMPER SEASON

REMEMBER underexposure
is the great bugbear of snap-
shooting. This is almost im-
possible with the
WESTMINSTER
film, even when using a box
camera in indifferent weather.

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2½ x 3½ — 8 EXPOSURE — 8/- per
doz.

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ORDER NOW!!!

APPLICATIONS FOR AGENCIES INVITED.

DRYMOUNTING
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Undertaken at Lowest Prices
TRY US FIRST.

Also: **IPA PAPER FILMS**

2½ x 3½ — 8 EXPOSURE — 4/6 per
doz.

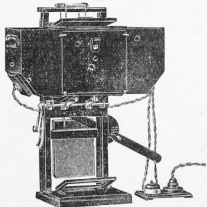
Price List of other materials sent on request.

IPA PHOTOGRAPHS

8, 10 & 12, LAMBETH PALACE RD.
S. E. 1

WITH THE LANCASTER 1934 NO.4 AUTOMATIC FOCUSING PAPER ROLL FILM PRINTER AND ENLARGER

With attachment for Celluloid Films you can
make with the utmost speed same size or
large size prints or enlargements up three
times magnification from Paper or Celluloid
Films of any size up to and including 5½" x 4½".
Make Paper Negatives from Positive Prints
and then print Positives or Enlargements
from the Paper Negatives.



Price:— Complete with Dallmeyer F/4.5
anastigmat in iris mount, orange pilot lamp,
two-way hand switch, seven interchangeable
masks giving crisp white margins round
any size prints up to 8½" x 6½", attachment
for celluloid films with carriers taking film
negatives in the strip. £8 ; 10 ; 0 net.
Extra cost for foot switch, 7/6 net.

J. LANCASTER & SON, LTD.
87, PARADE, BIRMINGHAM, 1.

APPARATUS FOR SALE (continued).

WANTED—Billich Camera with triple post-card back and slides. Must be in good condition and cheap for cash.—Box 2, 23, Wellington St., W.C.2.

WANTED—High street studio, show-barracks.—Holmes, 2 or three Backgrounds.

WANTED, two or 12 Minimum Palms 1 1/2 or 1 1/4 Cameras several 1/2-plate D.D. slides, 41 standard field cameras. Several 3 x P Palms D.D. slides. Must be in excellent condition.—Smith, Press Photographer, 68, South Castle Street, Liverpool.

WANTED—Vertical Balinger, whole-plate or 10 x 8, mercury vapour. Also Dry Mounter for 13 and larger.—Box 2, 23, Wellington St., W.C.2.

Apparatus—Trade.

Twice words 21, and 22, for every additional word.

BACKGROUNDS, reduced prices. Designs 30—S. Hosking, Bury Court Studios, Oswald Road, Accrington.

BILLICLIFF'S Camera Works, Manchester, 15-Card Negatives.

FREE Demonstrations showing advanced studio lighting systems, plate, card negative, and original copy projector, automatic masking, contact printer, drying and plating machines, gas-heated, £10 10s., electric, £18 10s. Convince us of the simplest, mature, prices within popular reach.—Kemp, Ltd., 22, Bunhill Row, E.C.1.

LOVING'S—London's Largest stock second-hand Apparatus, 47, Lamb's Conduit Street, W.C.1. Camera, lanterns, installations, Cameras, Lenses, for drying and plating, backgrounds, D. & P. Machines, printing, Grabber, Photo-set, Process Machines for Automatic Portraiture, Photomat, Photograph, Autoposit.

LOVING'S new Stock Enamelled Steel Dishes, 8" to 6" deep, sizes up to 10 x 20. Lowest side prices. Write for List.—Porcelovod roll film, D. & P. Tanks, 20 gall., up to 10" deep x 18 x 12, 20". Tap hole and tap, 2/6.

Repairs.

Twice words 21, and 22, for every additional word.

BOWEN'S Camera Repair Service Ltd., undertake repairs to all makes of cameras, shutters, etc. Estimates submitted. Instruments insured whilst on premises. Dealers and press requires invited.—14/15, Holborn, E.C.1 (near Cavendish). Holborn 316.

Materials.

Papers, Postcards, Mounts, etc.

Twice words 21, and 22, for every additional word.

ASH Photographs, Chapel Lane, Hatfield, Herts.—Plates, up to 80 & 600 I.D., Super-line, 1/2-plate, 1/6, 6 doz. 7/6, F.C. 2/3, 6 doz. 12/1; 2 1/2 x 3 1/4 & 4 doz. 11s.

ATWOOD Flat Films, reliable. 400 & 600 I.D.—Postcard 2 1/2 x 3 1/4 doz. 12/1; 1/2-plate, 2/9, 6 doz. 15/1.

ASH Bromide and Gaslight Postcards, all grades. 80 1 1/2, 100 2/6, 500 9/1, 1,000 17/6. Commercial 1/2 100, 15s., 1,000.

ATWOOD Gaslight Paper, all grades, for D. & P.: 3 1/2 x 2 1/2, 2/- gross, 10 gross 16/8; 4 1/2 x 2 1/2, 3/- gross, 8 gross 20/.

ATWOOD Bromide Paper and Card, all grades, for D. & P.: 2 1/2 x 1 1/2, 4 1/2 x 2 1/2, 5 1/2 x 3 1/2, 1 1/2-plate, 8/- gross. Prompt delivery! All post paid. List free.

ALFENS of Manchester.—Quality Products for D. & P. Finishers, Plates, Films, Ferrotypic and Chromium Sheets. D. & P. Order Park, 7/6 dozen.

ALFENS—1/8 gross for Super Quality Gaslight Paper, 30, & 2 1/2 (12 gross 60s.). Lane Walkers, 1/6 100. Clearing Lines 10/1, 12/6 1,000.

ALFENS Super Plates, 4 1/2 x 3 1/2, 1/6 dozen; 4 1/2 x 2 1/2, 1/1 6 dozen lots. 60 orders carriage paid. Send trade card for Finishers' List and paper samples.—68, Gidham Road, Manchester 4.

BURTS for best value in Plates, Postcards, Papers, etc. Send for List E. All usual lines in stock.—Gothic Arcade, Snowhill, Birmingham.

BURTS Postcards, Bromide and Gaslight, and Singles. All Vignons and Normal. All surfaces, Strips Commercial quality 2/-, 100, 15/-, 1,000. Satisfaction guaranteed.

FLAT Films, 1/2-plate, speed 300, 2/6 dozen. 4 dozen 9/1.—Wilson's, Chemists, Wigton.

KALTON, Edinburgh—A new depot at 21, Mad-dinton Place, Leith Walk. Please call.

KALTON, Bristol, 100, Victoria street. Open 9 to 6, Wednesday 1. Please call.

KALTON, Newcastle-on-Tyne, 121, Scotchwood. Open 9 to 7, Wednesday 1. Call or write.

KALTON, Leeds, 38, Bridge End. Open 9 to 7, Wednesday 1. Please call.

KALTON, Manchester, 50, London Road. Open 9 to 7, Wednesday 1. Please call.

KALTON, Birmingham, 7, Albany Road, Har-borne. Telephone: Harborne 3609.

KALTON, Glasgow, 409, Arzyle street. Orders despatched per return. Price list free.

KALTON, London, 61, Farrington Road, E.C.1. Open 9 to 5.30. Saturdays, 12.30.

KALTON, chloro-bromide doubleweight white and cream, velvet and matt: 1/2-plate, 3/6, 72 sheets; 1 1/2-plate, 3/3 30 sheets; 9/8 gross; 10 x 8 5/8 sheets; 12 x 10, 7/3, 3/- dozen.

KALTON "Kallona" Bromide and Gaslight Postcards, all surfaces, vignons and normal: 3 1/2 x 100, 11/- 500, 20/- 1,000.

KALTON "Kallona" Cream, smooth and rough double weight, vignons: 1 1/2-plate, 3/6 36 sheets, 9/8 gross; 10 x 8, 5/1; 12 x 10, 7/3, 3/- dozen.

KALTON Plates, fast quality, H. & D. 400, 3 x 4, 8/9 4 dozen; 1 1/2-plate and lantern slide, 3 x 4, 8/9 4 dozen; 1 1/2-plate, 3/6 36 sheets, 9/8 gross; 10 x 8, 5/1; 12 x 10, 7/3, 3/- dozen.

KALTON Kallona "Kallona" Bromide and Gaslight Postcards, all surfaces, vignons and normal: 3 1/2 x 100, 11/- 500, 20/- 1,000.

KALTON Negative Card, 5 1/2 x 3 1/2, 1/6; 10 x 8, 5/1; 12 x 10, 7/3, 3/- dozen.

KALTON Flat Films, H. & D. 600, 1/2-plate, 6 doz. 5/1; Postcard, 4 doz. 8/9; 1 1/2-plate, 1/2-plate, 5/8 dozen.

KALTON Film Plates, 3 1/2 x 2 1/2, 3 packs 5/3; 4 x 3 1/2, 3 packs 8/6.

KALTON Gaslight, 3 1/2 x 2 1/2, 12 gross lots, 21/6; 4 1/2 x 2 1/2, and 10/9, 31/6.

KALTON Plates, 1/2-plate, H. & D., 1,000; 800; 600; 400; 4 doz. 12/1, postcard plates, 4 doz. 8/9.

KALTON "Kallona" Bromide, Glossy, Velvet, Matt, Normal, Vignons, Extra Vignons, single and doubleweight, 20 x 16, 6/3 dozen; 15 x 12, 4/3; 12 x 10, 7/3 36 sheets; 10 x 8, 5/1; 1 1/2-plate, 3/4, 9/8 gross; 1 1/2-plate, 2/6, 5/9 gross; 1 1/2-plate, 3/4, 2/6, 3/6; 3 1/2 x 2 1/2, 6/12, 2 gross 21/6; 3/4, 4/2 x 2 1/2, 6/12, 2 gross 21/6.

KALTON Gaslight, singleweight and Double weight, Normal, Vignons. Same prices as Bromide advertisement above. Except 1/2-plate, 6/6 gross.

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SOCIETY PROCEEDINGS

SUNDAY, JULY 15.

Hanley Photographic Society. Excursion to Market Draxton and District.
North Middlesex Photographic Society. Outing to Colne Valley.
Monday, July 16.
Southampton Camera Club. Slide Criticism Evening.
South London Photographic Society. "Colour Photographs." Agra Photo, Ltd.

TUESDAY, JULY 17.

Hackney Photographic Society. "Spotting, Intensifying and Reducing."
F. B. Dobson and F. C. Fox.
Leicester and Leicestershire Photographic Society. "Hints and Tips."
Manchester Amateur Photographic Society. "Exposure and Development." J. Chapman.

WEDNESDAY, JULY 18.

Borough Polytechnic Photographic Society. Portfolio of Work by F. M. Sautelle.
Camberwell Camera Club. Evening Ramble: Bankside.

ROYAL PHOTOGRAPHIC SOCIETY.

At a meeting of the Pictorial Group of the Royal Photographic Society some time ago, Mr. A. C. Banfield gave a talk on "New Apparatus and Materials." He apologised for his talk following so closely on the meeting held a few weeks previously, at which a number of new pieces of apparatus and material had been demonstrated, but the subjects of his own talk were perhaps of special interest to the pictorial photographer.

ELECTRIC METERS.

Mr. Banfield remarked that he had been working with photo-electric exposure meters since about the middle of last December, under the most unfavourable conditions that could be imagined, and always at the Zoo, exposing many roll films on all sorts of little holes and corners there as test objects, where it would be a matter of some difficulty always to estimate a correct exposure by one's own judgment. His experience so far had been with only two of the meters, the Weston 617 and the "Photoskop." These had proved themselves to be perfectly reliable, but they had one "snag" which could be guarded against if sufficient precautions were taken, namely, that the cell had a difficulty to contend with in the wide range of light-values with which it had to deal and of which it had to give a usable indication. Taking the ordinary moving coil electric instrument, the usual deflection was 90 deg., and one could assume that that scale represented an alteration in value from, say, 1 to 150. In daylight the instruments had to accommodate themselves to an illumination which, in terms of foot candles, might range from something like 2,000 down to, in a dim corner, possibly about $\frac{1}{2}$ foot candle. Conditions such as those made very heavy demands on any single electric instrument, and different arrangements had been made to cope with them. In the "Photoskop" the ingenious device had been adopted of rotating the instrument movement round the scale, so that the scale in effect became four times the length. On this meter a tremendous range of exposures were indicated, from about one-thousandth of a second to one hundred seconds. A very widely practised method of control of the meter itself was by the use of shunts. By suitably adjusting the resistance of the shunt one could pass as much current as one liked through the meter. In his own experience he thought the adoption of shunts in a photo-electric meter rather inadvisable. If the switch gear were absolutely faultless, with good rubbing contacts, which kept themselves clean, the shunts then could be relied upon to enable the meter to give a correct indication, but if the contacts were not good, due to faulty fitting or the fouling of a film of oxide, the resistance of the shunt would go up at once to a very high degree, and false readings on the meter might be obtained. He then showed on the Society's Epidiascope the principle of shunting, and also a series of twelve negatives which he had exposed on a roll film at the Zoo, with the help of the "Photoskop," illustrating the evenness with which the exposures had worked out. He also handed round a series of

THURSDAY, JULY 19.

Hackney Photographic Society. Outing.
HammerSmith Hampshire House Photographic Society. "Bromid Transfer." J. B. Williams.
North London Photographic Society. "Photographic Chemistry." C. J. N. Redfern.

FRIDAY, JULY 20.

King's Heath and District Photographic Society. "Mounting and Finishing."

SATURDAY, JULY 21.

Accrington Camera Club. Ramble: Ramshotton District.
Belfast Camera Club. Outing: Hillsborough.
Hanley Photographic Society. Excursion to Conall and Belmont.
Southampton Camera Club. Combined Outing with Portsmouth Camera Club to Porchester.

films exposed under all lighting conditions, ranging from a fairly thick fog to bright sunshine which he thought illustrated the great reliance which could be placed on these exposure meters, except for the chance of getting an isolated exposure giving very dense negative when the subject was one of exceptional contrast range. It seemed to him fairly obvious that ultimately cameras would be made in which the exposure was absolutely automatic, and it was almost certain that soon an exposure meter of this type, since batteries were unnecessary, would be embodied with the camera, though this might not be automatic.

A LANDMARK.

Proceeding, Mr. Banfield said that at times there came into photography some new invention which was more noteworthy than usual, constituting, so to speak, a landmark. Messrs. Gevaert had lately put on the market a paper under the name of Gevaluxe Velours, which had quite extraordinary qualities. It certainly gave remarkable results of very great beauty—lovely blacks which were fully luminous and showed all detail, the general character of these shadows much resembled the intense blackness of flock paper. These, however, fortunately, nothing unusual in the treatment of the paper; one treated it exactly like an ordinary paper, any good M.Q. developers could be used, though perhaps a little more than the usual care should be taken in the washing. It was, moreover, amply fast enough for the enlarger.

The next article he exhibited struck him as being a great novelty, namely, a really sensible measure made by Messrs. Ensign, Ltd., under the name of the Universal measure. It was accurate, and solid, and his personal experience had proved that it could even be dropped on a china sink without doing material damage; so far it had merely bounced! He thought it was made of Pyrex, but unfortunately it could only be obtained at present in the 10 oz. size.

In conclusion Mr. Banfield showed the Zeiss Super Ikon camera. Very great developments had recently been made in many directions in the production of a camera with a coupled range-finder and focussing apparatus, and Messrs. Zeiss Ikon had recently adapted the principle used in one of their military rangefinders to this end. The parallax adjustment of the range-finder was effected by the semi-rotation of two weak deviation prisms, so that in one position there was no deviation at all of the light ray, but, when the prisms were rotated mutually through 180 deg., there was a maximum deviation for the nearest object focussed on. This device was utilised in a very simple and perfect manner to focus the lens. The camera normally used a 3½ x 2½ frame, but a mask could be inserted inside with which one could halve the picture.

He acknowledged the kindness of Messrs. Sands, Hunter and Co., who had supplied most of the articles he had shown, and also the Weston Electrical Instrument Co., Ltd., who had lent him some typical meters to show to his audience.

COMMERCIAL & LEGAL NEWS

New Companies.

Stuart Hamilton, Ltd. (289,656).—Private company. Registered June 28. Capital, £500, in £1 shares. Objects: to carry on the business of photographers, portrait reproducers, agents for and dealers in art reproductions, photographic and cinematographic goods, producers of posters, signs, trade marks and advertising devices, etc. The subscribers (each with one share) are: Mrs. Margaret M. Hamilton, The Old Barracks, Westcott, Dorking; Albert S. Thraves, 2, Gray's Inn Square, W.C.1, solicitor's clerk.

Kalee Projector Company, Ltd. (289,629).—Private company. Registered July 6. Capital, £100 in £1 shares. Objects: To carry on the business of manufacturers of, and dealers in Kinetograph projectors, films and apparatus, etc. The subscribers (each with one share) are: Bernard G. Chapman, 37, Avondale Road, Finchley, N.3, clerk; Henry J. Bond, 15, Forthbridge Road, S.W.1, clerk. The first directors are not named. Solicitors: Sharpe, Pritchard and Co., 12, New Court, W.C.2.

J. Westrich, Ltd. (289,845).—Private company. Registered July 4. Capital, £100 in £1 shares. Objects: To carry on the business of dealers in, agents for and manufacturers of wireless, television, electrical, photographic and cinema apparatus and accessories, gramophones, etc. The subscribers (each with one share) are: Joseph Westrich, 78, Lynton Avenue, N.W.9.

radio dealer; Mrs. Caroline A. Bidle, 60, St. James' Street, Walthamstow, E.17; Joseph Westrich is first director. Registered office: 66, Tottenham Street, E.C.2.

Associated Irish Films, Ltd. (289,463).—Private company. Registered June 21. Capital, £2,600 in 2,500 5 per cent. cumulative preference shares of £1, and 2,000 ordinary shares of 1/1, each. Objects: To adopt an agreement with Robt. B. Morrison, and to carry on the business of producers of cinematograph plays and films, both silent and talking, celluloid and film manufacturers, photographers, etc. The subscribers (each with one preference share) are: Charles Russell, 137, Oakleigh Park Drive, Leigh-on-Sea, clerk; Robt. J. Kent, 41, Fountain Court, S.W.1, solicitor.

International Player Pictures, Ltd. (289,646).—Private company. Registered June 28. Capital, £3,000, in £1 shares (2,000 10% cumulative preference and 1,000 ordinary). Objects: to produce, acquire, exhibit, sell, distribute, and generally deal in motion or other picture films by means of records, films, television or other methods; to design, manufacture and deal in ribbon records for gramophones, combined film and record ribbons for gramophones and projectors, etc. The subscribers (each with one ordinary share) are: Marie O. Haworth-Booth, 95, Portland Place, W.1, cinematograph manufacturers' agent; Lauri L. Tavell, 91, Winchester Street, S.W.1, film production supervisor. Registered office: 21, Maddox Street, W.1.

LETTERS TO THE EDITOR

No notice is taken of communications unless the names and addresses of the writers are given. We do not undertake responsibility for the opinions expressed by our correspondents.

DIN SPEED NUMBERS.

Mr. W. B. Ferguson concluded his excellent popular explanation of the measurement of DIN speed numbers ("B.J.," June 29) with the final remark, "It does offer something which the English and American manufacturing laboratories would do well to note, and that is a clear, simple, and agreed scheme of rating the performance of sensitive products in terms which a large proportion of users can readily be educated to understand and to expect." This statement is misleading, since it implies that the German photographic technicians have advanced beyond British and American workers in devising a new system of speed measurement which is free from serious objections. It should be pointed out that British and American technicians have for years used methods of speed determination essentially

similar to the DIN method. In 1922, the British Committee for the Standardisation of Photographic Sensitometry carefully considered the DIN system, and concluded that "the proposed standard method suffered from grave objections," the chief of which related to optimal development. For this reason the British Committee could not recommend the proposals to the British manufacturers of photographic materials. The German technicians have taken no steps to answer our objections, and the lack of support in England and America is probably due rather to a greater appreciation of the difficulties which the German manufacturers will encounter than to an unwillingness to co-operate in an international method of speed determination.

G. S. MOORE,
H. BAINES.

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A selection of answers is published in the "British Journal," but the Editors cannot undertake to reply to questions through this channel, as space is not available.

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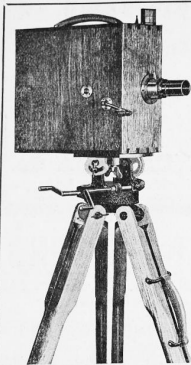
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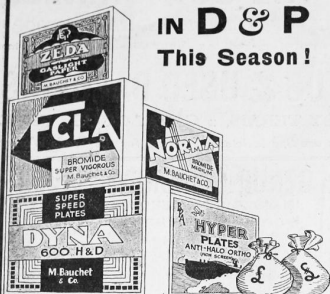
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