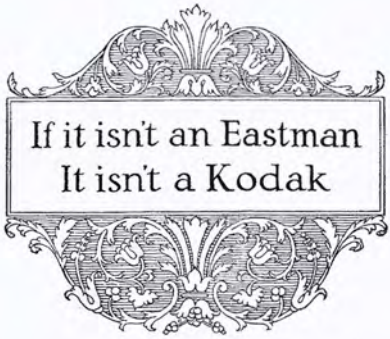
KODAKERY

A
MAGAZINE *for* AMATEUR
PHOTOGRAPHERS

JANUARY 1920

EASTMAN KODAK COMPANY
ROCHESTER, NEW YORK
The Kodak City


If it isn't an Eastman
It isn't a Kodak

LOW TIDE ON THE THAMES

Made with a 3A Kodak

KODAKERY
A Journal for Amateur Photographers

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WHILE THE SELF-TIMER DID ITS WORK
Made with a 3A Kodak

MY SILENT PARTNER

BY ARTHUR O. FRIEL
Illustrated by the Author

My Kodak, my pack, and my tin cup—these three were the basic essentials of a recent tramping trip of 150 miles through the rugged Catskills. And of the three, the Kodak proved of most enduring worth.

The cup lifted many a needed drink from tiny springs or rocky brooks. The sturdy waterproof packsack toted eighteen pounds of necessities and kept them dry during torrential mountain rains. Yet each of these, though vitally necessary to a lone trail-hitter, was at best merely a piece of equipment: a blind, insensate thing which ministered only to temporary physical

WITH "FULL EQUIPMENT"
Made with a 3A Kodak

needs. It was the 3A Special, snuggling under my right arm where it was out of the way but instantly available, that was my real partner on broad highway and in pathless wilderness—a silent partner who leaped forth when wanted and snatched clear records which in later days would revive fading Memory.

For Memory, you know, does fade. Memory blurs and becomes foggy. In a way it is like a photographic film. New things constantly stamp their image on it, and each new image makes its predecessors less clear. In time the old impression becomes nearly obliterated. Relying on Memory alone, we find that after the lapse of a few weeks or months we recall things only vaguely, in a broad general way.

But open the album and show Memory a picture made at that bygone time—then the fog of recent happenings vanishes like wind-blown smoke. Memory becomes alive, articulate. It nudges you in the ribs and chortles:

"Oh sure! Diamond Notch! Remember your noonday lunch of chocolate down beside that mossy-bowldered brook? And the gray mists that crawled along the mountain-sides as you plugged on up through the pass? And the wonderful vista when you turned at the top and looked back? And the ugly copperhead you nearly stepped on? And the fat man you met at West Kill Creek who had come for miles to fish, and who was swearing like a pirate because he had just found that he forgot to bring his bait? Ha, ha, ha!"

And so it goes. And so, being a

ON A DANGEROUS FOOTHOLD

Made with a 3A Kodak

Kodaker of some fifteen years standing, I toted everything with me, my old pal Three-A and his assistants—telescopic tripod, self-timer, color filter for landscapes, portrait lens for close work on small objects—and, of course, plenty of film. I waded leg-deep into foaming creeks, climbed steep trails obstructed by bowlders and windfalls, fought through miles of thick bush where no trails ran, crawled out on dizzy ledges where one slip meant death or broken bones far below—all for what? To "shoot a picture." And ten or twenty years hence those pictures will bring that trip back to me as clearly as they do to-day.

Yet roaring waterfalls and picturesque crags and far-flung mountain chains do not make up the sum total of the records one desires of such a hike. Besides these, I wanted photographs which would bring back to me the incidents of my long trail—the things I did as well as those I saw. And so from time to time I photographed myself also.

Pausing to rest and smoke, I would set old Three-A on his tripod, adjust the self-timer, drape myself comfortably on a roadside fence, and let the camera catch me in the act. To be sure, it might catch me with my face out of shape because of a mouthful of smoke, but what of that? A face like mine would never take a prize in a beauty-show, anyway. Toiling up a tiny path among the ledges, climbing over a tangle of uprooted trees, or tramping a swamp trail through barren lands, I would stop long enough to give my silent partner a record of that too. Even out on the face of a precipice I gave the self-timer its chance to depict me balancing on a narrow and dangerous foothold. This was a fool's stunt, and I do not advise my brother Kodakers to imitate it; but it would take a sizable sum to buy that film from me now.

That particular film, by the way, captured one of those interesting freaks which infrequently come to the Kodaker. Weeks later, when the mountains were far behind me and I was leisurely examining my prints, I was astonished by the discovery that my own face was not the only one on the side of that cliff. Directly above me was a queer, wizened head in the stone, peering down at me with an expression of amazed hostility which seemed to say: "Who are you that come climbing into this wild place to disturb my solitude? Get out before I drop something on you!"

At the time I never suspected that this grotesque little Old Man of the Mountains was watching me. But the camera saw him, and the self-timer enabled it to seize an image of that odd face to surprise me later on.

I found that little shutter-tripper invaluable, for without its aid my pictorial history of the trip would have been incomplete. It is hardly necessary to add that on such a rambling trip as mine, which led me into the mountains of three counties, the autographic feature which permits the hiker to "write it on the film" is virtually indispensable.

So now, with the greenery of forest and stream revived in the

"AND LET THE CAMERA CATCH ME IN THE ACT"
Made with a 3A Kodak

deep rich tones of Velvet Green, the cliffs and canyons printed out in their natural dark gray, and my own khaki clothing portrayed by re-development into sepia tones, I have a vivid record of that care-free expedition through the north country.

And when the grind of brain-work palls on me I have only to open the album, and presto! I am no longer a white-collared city man, but a flannel-shirted, heavy-booted hobo of the high hills, free to rove wherever fancy lures. This I owe to my silent partner Three-A. And something tells me that before long we two will again be hitting the trail together into some new place.

AN ATTENTIVE GROUP
Made with a Kodak

A FEBRUARY NIGHT

Made with a 2C Kodak, by B. O. Wilson; stop, f.7.7; 45 minutes

BY MOONLIGHT

SINCE moonlight is reflected sunlight it might seem that we should be able to make pictures by moonlight that would look exactly like those made by daylight. We doubtless could do so if the moonlight was bright enough for snapshot work, or for short time exposures, but it never is, the light of the full moon, on a

clear night, being only $\frac{1}{500,000}$ as bright, while its actinic brilliancy is only about $\frac{1}{600,000}$ as strong as that of sunlight on a clear day.

What we can do, however, is to make pictures by moonlight that will resemble those made in the daytime. This resemblance is sometimes so close that none but a careful observer will be apt to notice anything in the pictures that suggests they were not made during the hours of daylight.

The shadows that are cast by moonlight never show sharply-defined edges in a picture, because the revolution of the earth moves the shadow lines sufficiently to blend their edges during the ten minutes or longer exposure that is needed for making a fully timed moonlight picture.

But it often happens that these shadows are not prominent enough to attract attention. In looking at Mr. Wilson's picture, on page 9, very few would examine the shadows, nor would the lack of sharpness in the images of the tree tops necessarily suggest anything more than that the wind was blowing at the time the picture was made. Blurred images can be obtained from this cause in the daytime, if a time exposure is made with the smallest stop in the lens.

Those who desire to obtain daylight effects in real moonlight pictures can easily do so by giving 600,000 times as long exposures by the light of the full moon as would be needed for the same subject in bright sunshine.

The simplest way to calculate the exposure is to give 100 minutes by moonlight for every $\frac{1}{100}$ of a second that would be given by sunlight.

If the exposure, by sunlight, for a landscape that has a prominent object in the foreground, should be $\frac{1}{25}$ of a second with stop 16, which is the equivalent of $\frac{1}{100}$ of a second with stop 4 (*f*.8), then the exposure by the light of the full moon would be 100 minutes with stop 4. For a landscape that has no prominent dark-toned objects in the foreground, an exposure of 50 minutes with stop 4 will be ample.

This method of calculating the exposure provides for a fully-timed negative which will make a picture that looks like one made by daylight. If a picture that suggests night instead of day is desired the exposure should be considerably less—not more than $\frac{1}{4}$ as long. Many splendid night effects have been secured by the light of the full moon with exposures ranging anywhere from 10 to 25 minutes, when stop 4 was used.

With single lens, fixed focus cameras use the largest stop and give twice as long exposures as those we have stated.

The exposures recommended apply only to nights when the sky is clear and the moon is full. The half-moon does not give even half as much light as the full moon.

CHANGE OF ADDRESS

SHOULD you change your address kindly notify us promptly, giving both your old and new addresses, and also the date when your subscription expires.

The stencil that prints your address on the envelope in which KODAKERY is mailed also prints a

FRENCH COAST NEAR BREST

Made with 3A Kodak; f.22; 1/25 second exposure

number near the address. This number represents the date when your subscription expires. The last two figures indicate the year and the preceding figure, or figures, the month. For instance, 420 means that the subscription expires the fourth month (April) 1920.

FRENCH COAST NEAR MONTE CARLO

Made with 3A Kodak; stop 32; 1/10 second exposure

FIG. 1

HOW TO HOLD THE CAMERA STEADY

DURING the past few years our readers have sent us several thousand negatives for criticism. A large proportion of these were excellent. Quite a number of those that were not good were blurred, because the camera was not held steady while the exposure was being made.

Most of the negatives that were blurred were also over-exposed—a fact which indicates that photographers often make time exposures when they hold the camera in the hands.

While all exposures, no matter how brief they may be are, in reality, time exposures, because the length of time it takes for the shutter to open and close can be measured, yet it is customary, when speaking of exposures, to make a distinction between time exposures and snapshots.

It is evident that the only way we can make such a distinction is by selecting some one exposure period as the longest that should be classed as a snapshot.

It has been repeatedly demonstrated that comparatively few people can hold a camera steady when making a longer than $\frac{1}{25}$ second exposure, but that nearly all people can hold it steady enough for making a $\frac{1}{25}$ second or any shorter exposure.

This suggests that all exposures of $\frac{1}{25}$ second or less (faster than $\frac{1}{25}$) should be regarded as snapshots, and that all exposures that are longer than $\frac{1}{25}$ of a second should be regarded as time exposures.

Though practically all people can hold a camera steady enough for making snapshots, yet all do not hold it in the same way, and, there is no one best way of doing this. There are two successful ways that are in general use; one is making the exposure with the camera pressed lightly against the body, and the other is pressing both elbows against the sides of the body and making the exposure with the camera held slightly in front of the body.

The best way for anyone to hold a camera is, obviously, the way in which it can be held so that it will not be moved while the exposure is being made, and, in most cases, this will be the way that proves the most comfortable for the individual.

FIG. 2

We believe that movement of the camera at the instant of exposure is most often caused by the way in which the shutter release is operated.

Holding the camera in one hand without steadying it with the hand that presses the shutter release will cause the hand that operates the shutter to move the camera and spoil the picture every time. The camera should always be supported with *both* hands. This can easily be done, no matter what kind of hand camera is used.

If the exposure is made by pressing the shutter lever which is fitted to all Kodak, Premo, Brownie Graphic and Graflex cameras, the fingers of both hands should be under the camera and the shutter lever pressed with the thumb.

The movement of the thumb should be a steady push, not a punch. A steady push will not jar the camera while a punch is sure to do so.

Those who are in the habit of making a jerky movement when pressing the shutter lever will

FIG. 3

FIG. 4

easily learn how to avoid this by practicing when there is no film in the camera.

In practicing, the camera should be held the same way it would be if a picture was being made, the camera to be watched to see if it moves when the shutter clicks.

Figs. 1, 2 and 3 show how the hands should grasp the camera when the exposure is made with the shutter lever.

If the exposure is to be made with the cable release that is fitted to some of the models of Kodaks, Premos, Brownies and Graphics, one hand should be under the bed of the camera while the other one should steady it, in the manner shown in Figs. 4 and 5.

All who make pictures want to make good ones. Blurred pictures are not good. The way to avoid blurring them is to avoid moving the camera while making the exposure.

For time exposures always use a tripod and for snapshots hold the camera steady.

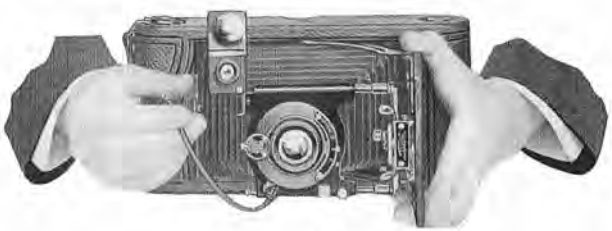
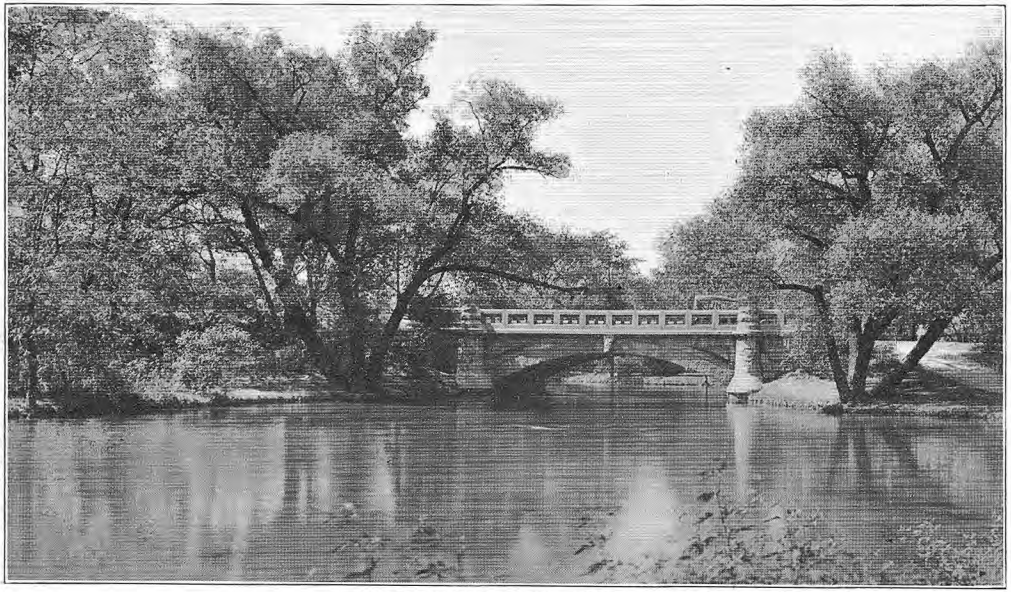
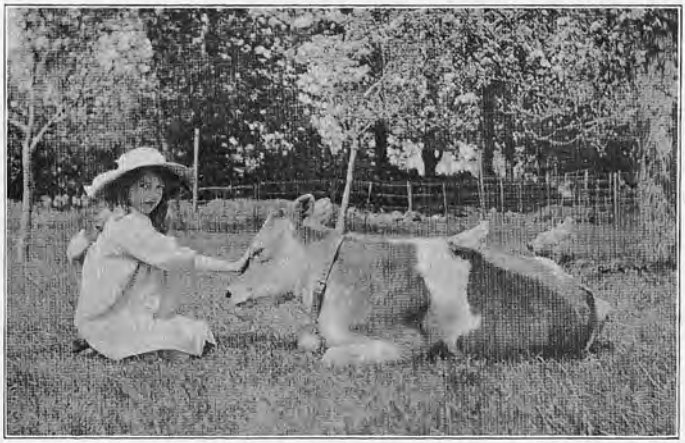


FIG. 5



IN GARFIELD PARK, CHICAGO

Made with a 3A Special Kodak, by Harvey C. Pendery, cloudy day; f.11; ½ sec. exposure



MEMOR

RECALLED
BY
THE
KODAK
ALBUM

IES OF SUMMER

LENSES OF NORMAL AND ABNORMAL FOCAL LENGTHS

THE photographic lens makes an image of what it sees, but the size of the image it makes depends on its focal length and the distance it is placed from the subject.

The greater the focal length of the lens the larger will be the image and, the nearer the lens is to the subject the larger will be the image it makes of the subject. Since this is a law of optics, it necessarily follows that when a long focus and a short focus lens are placed at the same distance from an object the former will make a larger image of it than the latter.

Should a 10-inch lens (one that has a focal length of 10 inches) make a 2-inch image of an object that is 50 feet distant, a 5-inch lens would make a 1-inch image, and a 20-inch lens would make a 4-inch image of the same object at the same distance from the object.

Should, however, the 10-inch lens be placed at a distance of 50 feet, the 5-inch lens at 25 feet and the 20-inch lens at 100 feet from the object, all these lenses would make the same size images of it; but if there were other objects, at different distances from the lenses, within their field of view, these lenses would not make the same size images of these other objects. This is shown by our illustrations.

It is because of this fact that the short focus lens has often been accused of dwarfing the distance. If this wording of the charge is correct then it is equally correct to say that the long focus lens magnifies the distance.

Both charges can be proven by using these lenses in a way that they often are, but should not be used, and for a kind of work for

FIG. 1—*Made with a lens of too short focal length*

FIG. 2—*Made with a lens of too long focal length*

which only lenses of normal focal lengths are adapted. The results that are obtained when this is done may prove surprising to those who have never compared the work of long focus and short focus lenses with the work of lenses of normal focal lengths.

In using the terms "long focus," "short focus" and "normal focus," in this article, we are using them in a relative sense, the relation being that of focal length to size of picture. When these terms are used relatively they may be defined, as follows:

FIG. 3—*Made with a lens of normal focal length*

A long focus lens has a focal length that is much greater than the diagonal of the picture it is required to make. A short focus lens has a focal length that is much less than the diagonal of the picture, and, a lens of normal focus has a focal length that is slightly greater than the diagonal of the picture.

To demonstrate what long and short focus lenses will do when they are used for the work for which a lens of normal focus is best adapted, and used in the same way as the normal focus lens would be, we selected an ornamental lamp post beyond which were some buildings, and made pictures of this subject with a short focus, a long focus and a normal focus lens. The lenses were placed at such distances from the subject as were necessary for obtaining the same size image of the lamp post. All the pictures were 3¼ x 5½—the post card size.

In photographing this subject each lens projected images of exactly what it saw.

To the short focus lens (Fig. 1) the buildings appeared to be a long distance from the lamp post. To the long focus lens (Fig. 2) the buildings appeared to be very close to the lamp post, while to the normal focus lens (Fig. 3) the buildings appeared nearer to the lamp post than is shown in Fig. 1, but farther from it than is shown in Fig. 2.

Since all these lenses agree on the size of the lamp post, but disagree about the size of every other object, and also hold very different ideas about distances, it may seem incredible that all of them have told the truth. But they have all told it, as they saw it. The trouble is that the short focus lens is short-sighted, the long focus one far-sighted, while only the lens of normal focus may be considered as having normal vision.

Are such long focus and such short focus lenses therefore to be avoided? For regular work, yes; but for special work they are very useful.

Long focus lenses are especially adapted for photographing far distant subjects, when no *nearby* objects are to be included within the picture, and short focus lenses are especially useful in photographing subjects which are so located that it is not possible to get them within range of the camera from a normal distance. This happens most frequently in a small room.

The most useful lens—the one with which all but the wide angle work of the short focus can be done—is the lens of normal focus. This lens is eminently adapted for all the work that the long focus can do. While it cannot make the same size images as the long focus makes, from the same point of view, it always does give exactly the same perspective as the long focus gives, from the same point of view. By making an enlargement from the normal focus negative the same perspective and the same sizes of images are obtained as were made with the long focus, together with a larger area of the subject than the long focus was able to picture.

Furthermore, using a lens of normal focus permits the photographer

to go afield with a compact hand camera, instead of with the bulky, extremely long bellows camera that the long focus lens needs.

These are the reasons why lenses of normal focal length are fitted to the Kodak, Premo, Brownie, Graflex and Graphic cameras.

FRIENDLY

Made with a No. 3 Kodak

COON HUNTING WITH A CAMERA

BY HOWARD TAYLOR MIDDLETON

Illustrated with a Premo Picture by the Author

IT was a mutual surprise. Crossing a strip of woodland late one autumn afternoon, we heard the crisp crackle of dead leaves, and glimpsed a fluffy ball of fur as it dashed from under a windbreak and made for the nearest tree.

Br'er 'Coon had been taking a siesta after a banquet of acorns, and we were very near before he awakened.

There was a small ravine at the edge of the woodland, from one side of which jutted a dead stump that looked "coony." We had investigated it that very morning and came away convinced that either a raccoon or an opossum had his lair within. When we flushed the game within a hundred yards of the stump, we realized that a flashlight self-portrait of his coonship was next in order.

Leaving Marie to watch the den from ambush, I raced home for our apparatus.

Upon my return, she hailed me with a shout of triumph: "He's in there!"

We set up the long focus Premo in front of the stump with the Eastman Flash Pistol beside it. Then a thread was run from the trigger of the pistol across the opening in the stump and made fast to a small tree trunk, so that the animal would push against it, and fire the flash, when making his exit.

"We'll have to make two trips to the woods to-night, and it's a good three miles each way," sighed Marie when all was *apparently* in readiness.

"Why so?" I inquired with assumed innocence, for an inspiration had come to me during my absence.

"To open and close the shutter, of course," replied my little wife resignedly.

"Do you remember the two old alarm clocks in the attic?" was my next question.

"Yes, but what have they to do with photographing a racoon by flashlight?"

I proceeded to explain as follows: "I have removed the bell from each clock, and as there will be no moon to-night, I will set the alarm of one clock to operate just after dark. Then, adjusting the camera shutter for a time exposure, I will run a thread from it to the winding key of the clock. When the alarm works the key will turn and open the shutter. The other clock I will set to operate at 4 A. M., and attach a similar thread to it. Its duty is to close the shutter before dawn."

After making the necessary additional adjustments to our outfit, and being the recipient of profuse congratulations meanwhile, I must confess that I felt a bit chesty. Especially was this true when Marie ended her laudatory comments thusly: "Twelve miles of hiking saved; you're a wonderful man, partner mine."

Then we journeyed homeward to

A SELF-PORTRAIT IN THE WOODS

await the coming of another day and with it, we sincerely hoped, a new and interesting wild life photograph.

Bright and early the following morning we visited the camera to find the flash pistol fired and shutter sprung. Curbing our impatience as best we could, we hastened with all speed to the darkroom where the developed negative proved to the superlative degree the success of our experiment.

Editor's Note

Some of our readers have asked for especially detailed information regarding the method that Mr. Middleton employs for securing self-portraits of wild animals and birds.

Mr. Middleton informs us that he ties about an inch of very fine thread (No. 100) to the shutter release of his camera, and then ties a piece, of whatever length is needed, of strong linen thread (No.

20) to the short piece of fine thread; the other end of this heavy thread being fastened to a tree or stick or any other stationary object that is available.

When a bird or animal comes in contact with the strong thread the shutter operates, after which the fine thread breaks. This fine thread is always tested to make sure of two things—that it will operate the shutter before it breaks and that it will break after the shutter has been operated.

The picture of the coon was secured by flashlight on a dark night, and, in order to make the shutter open after dark and then close before daylight, the two clocks were employed. These clocks were fastened to a big block of wood with strong rubber bands. The way Mr. Middleton's ingenious plan for photographing the coon worked out is as follows:

The winding key on clock No. 1 revolved when the alarm mechanism began to work, thus winding up the thread on the shank of the key. This steady pull on the thread opened the shutter and then broke the fine thread. The coon came out of the old stump and fired the flash pistol by coming in contact with the thread, some time after clock No. 1 had opened the shutter. Then clock No. 2 closed the shutter before daylight arrived.

The efficiency of the methods Mr. Middleton employs is attested by the superb pictures he obtains.

AN EASY METHOD OF EMBOSSING PRINTS

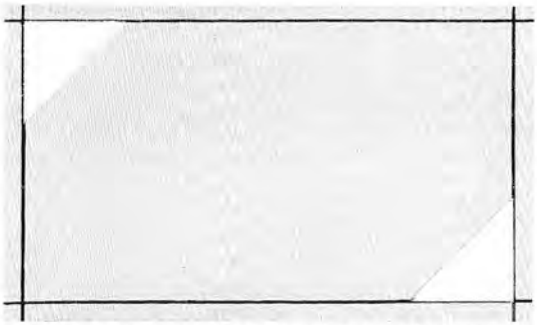
IN order to have a finished appearance a picture must be surrounded by a border. This may be a frame, a cardboard mount, the leaf of an album, or merely the plain unprinted margins that are obtained when the print is made through a mask.

Plain margins are always pleasing. They can be made as wide or as narrow as is desired, and by using the right size and shape of mask pictures can be printed from the whole negative or from any part of it.

The Eastman and the Kodaloid Printing Masks are made in various masking sizes for 3¼ x 4¼ and larger negatives. With the Kodak Auto-Mask Printing Frame practically any size of mask can be made for any negative that is not larger than 3¼ x 5½.

If the margins are made ¾ of an inch or more in width the appearance of the print can be further improved by embossing. The method of doing this is one that any amateur can successfully employ. All that is needed is a sheet of glass, a piece of thin cardboard and an implement that has a rounded end, like the handle of a tooth brush or a silver table knife, to serve as the embossing tool.

Should we wish to emboss an area that is ⅛-inch larger on all sides than the picture we must first rule the exact size and shape of the picture area on a sheet of thin



Black lines on embossing card exactly enclose picture area. Space on card outside black lines determines width of space between picture area and embossing lines

Unshaded part around picture represents depression space in paper

cardboard, and then, after the card is trimmed so that the ruled lines will be ⅛ of an inch from each of its four sides, an opening should be cut near two or more of the corners of the card, along the ruled lines, as shown in our illustration.

The card is then placed on a sheet of glass and the print laid over it, face down, and adjusted so that the marginal lines of the picture will show through the openings in the card, exactly on a line with the lines that are ruled on the card. This adjustment can easily be made by holding the glass up to the light and looking through the print. If the print is on double weight paper the adjustment must be made in front of a very strong light.

The depth of the embossing is determined by the thickness of the embossing card. A thicker card may be used for prints on single weight than for prints on double weight paper, but the most pleasing effect is usually obtained with a card that is only a little thicker than a postal card.

The embossing is done by running the rounded end of the embossing tool along the back of the print and pressing down those parts of the paper that are just outside the edges of the piece of cardboard.

This method is very simple and accurate and with a little practice anyone can do the work rapidly.

IN AN ENGLISH CHURCHYARD

Made with a 2C Folding Brownie

WHEN IN NEED OF ASSISTANCE

"Your valued reply received. You have helped me so much I am selfish enough to ask for more help."

"I wish to assure you that your prompt and accurate information on the subject was very much appreciated."

"After receiving such courteous replies to former questions I am again encouraged to take advantage of your kindness in giving advice free of charge."

THESE extracts from three of the multitude of letters we have received from amateur photographers, suggest the value they attach to the assistance we render them by correspondence.

Should you encounter any problems in your photographic work that you cannot readily solve send them to us and we will gladly help you, as we have helped others.

If you have negatives from which you cannot obtain the kind of prints you desire send us both the negatives and the prints, and we will tell you where the trouble lies.

By examining the negatives we can determine whether they were rightly or wrongly exposed and whether they were rightly or wrongly developed, and by comparing the prints with the negatives we can tell whether the prints were rightly or wrongly made.

Give us all the data pertaining to negatives and prints that you may possess, such, for instance, as the month, the time of day, the light conditions when the films were exposed, the stop and shutter speed used, whether the negatives were developed in the tank or in the tray, and the kind of developer with which the films were developed.

We would also like to know the name and the grade of paper on which the prints were made. Both negatives and prints will be promptly returned, together with our comments and suggestions, which are offered free of charge.

Address all Communications,

KODAKERY, EASTMAN KODAK COMPANY

ROCHESTER, N. Y.

The KODAK ANASTIGMATS

f.7.7 *f*.6.3 and *f*.4.5

THE *esprit de corps* of the Kodak Lens factory where Kodak Anastigmats are fashioned, logically results from the common pride of skilled workmen in exacting craftsmanship.

EASTMAN KODAK COMPANY

ROCHESTER, N. Y., *The Kodak City*