

## OUTING FOR SEPTEMBER.

### PHOTOGRAPHY.

LANTERN SLIDES.—I think I have in a previous *Record* called attention to the fact that very good lantern slides may be made by printing from half-tone blocks, a method of but little interest to the amateur photographer until he has acquired the knack of making the blocks, and even then only in cases where he wants to make many slides of one subject, and now, thanks to D. L. Elmendorf, I am able to introduce another method as simple as the other was complicated, and that must be invaluable to both professional and amateur lanternists.

While copying by photography will always be the method of slide making, there are few who have not wished for some simpler way of making, for a temporary purpose, a copy of a line drawing, a diagram, or a few verses of a hymn or song; a desideratum that will be satisfactorily supplied by Elmendorf's method.

In describing it he says: "A  $3\frac{1}{4} \times 4$  lantern slide cover-glass was cleaned, a suitable piece of black carbon transfer tissue—such as typewriters use—was placed on it, and then a drawing from an illustrated paper carefully placed on top of the carbon tissue. Then with a sharp pencil the lines were quickly traced, and upon removing the carbon tissue an excellent tracing was found on the glass." I have made a num-

ber of both amusing and educational slides in this way and fully realize the truth of Mr. Elmendorf's statement when he says, "the effect (on the screen) was that of a charcoal drawing, and answered the purpose beyond my wildest hopes."

Instead of the "carbon paper" I have employed paper coated with a lithographic ink made as follows, and think it answers the purpose even better:

Yellow wax, 4 parts; tallow, 4 parts; soap, 12 parts; shellac, 6 parts; lampblack, 4 parts.

Boil till incorporated, and when cold grind in water till it flows freely.

One advantage of the use of this ink for coating the transfer tissue is that it admits of various degrees of density in various parts of a drawing so as to increase or produce certain desired effects. For this purpose the glass must be chemically clean before the transfer is made, and then, on removal of the transfer tissue, if it should be desirable to increase the density of the whole, the glass should be wet by immersion in water, and an inking roller passed over it; or if only intensification in parts is necessary, it is easily got by employing a small dauber charged with printers' or lithographic ink.

JOHN NICOL.

### ANSWERS TO CORRESPONDENTS.

F. L. N.—All records at the present time are made with the assistance of "pace-makers." The pacing-machines, which may be ridden by one, two or more men, circle the track at a speed, which if maintained would gain the desired record. The record-breaker, well shielded from the wind resistance, has but to follow his pace-maker mechanically, and upon this unstable basis rests nearly every recognized time both in competition and against the watch. The changing of the pacing-machines at the quarter, third, or half, is for convenience, or more probably for spectacular effect. Many "records" have been made with but one pace-maker throughout the trial.

"Record."—It is possible to obtain greater speed and power *for a time* by bending the body well over the handle bars, but fatigue is brought on by the practice much sooner than in the more upright position. The lessened wind resistance amounts to considerable, especially when the pace exceeds twelve miles per hour, but the greater advantage consists in bringing the body to an angle where its greatest force can be exerted *temporarily*, as in a short contest on the road or track.

R. P. B., Rochester.—You will find full particulars and plans in articles on "Model Yacht Building" in *OUTING* for February and March, 1895, and March, 1896.

M. W. F., Wappinger's Falls.—We do not think such a book as you desire has ever been published. Several athletic annuals have one chapter on track-building, and several bicycle books have the same, but we do not think that any person could build a satisfactory track without other aid than could be found in them.

The proper way is to employ some man who is in that business, and who knows practically what these articles attempt to teach theoretically.

Homer, Buffalo.—The American Rules, concern only the performance, placing no restrictions whatever upon the direction in which the journeys are made, on the dates of making them, or the number of trials, or the competition. As the object is to find out the best of which a bird is capable, also the influence on different atmospheric conditions upon the speed and endurance of the bird, the owner is left free to make the arrangements best suited to his location, thus doing away with the feeling that he was hampered, and if he could have done some other way the results would have been different.

H. I. T., Jeffersonville.—The Legislatures of Ohio and Rhode Island have enacted similar measures, and the cycling interests of Massachusetts, Pennsylvania and Illinois are engaged in vigorous campaigns which will undoubtedly result in the free transportation of bicycles as baggage within those States in the near future.

BEN B.—Riders of the double machine should make liberal allowances for its liability to swerve, particularly on wet pavements and around curves or down grades. Although tandems are built in every way better than in 1895, it is impossible to handle them with the same freedom as a single wheel. The added weight and increasing wheel base of the tandem should always be taken into consideration, and greater caution should be used on the double machine than in ordinary riding.