

CAMERA AND DARK ROOM.

Discussion of the Suitability of Different Materials for Backings.

The suitability of different materials for backing dry plates has long been an important question which photographers. The essential conditions are that the backing shall stop reflecting from the back of the plate; that the mixture shall dry quickly, and shall remain dry. If the material used in the backing is 'tacky' on drying, or becomes 'tacky' after a short exposure to the air, various disasters will result. The backing may come off onto face of another plate or onto the fingers of the operator, being transferred thence to all sorts of undesired places. It is not essential, but extremely convenient that the backing be soluble in the developer, so that no special operation for removing the backing is necessary, either before or after development. Amongst the various materials used for backing plates caramel holds a high position. It possesses great powers of absorbing actinic light, and is soluble in water. Caramel is produced by strongly heating sugar in pans. As soon as a sudden evolution of dark fumes takes place—the exact point can only be determined by experience—the heat is withdrawn and the sugar is found to be converted into a dark brown mass of caramel. As usually supplied, it contains a varying portion of unconverted sugar and a certain amount of free acid. The presence of these two constituents causes the caramel to absorb water and becomes sticky or 'tacky' on exposure to the air. The following formula is usually employed, but the Photogram has found by experiment that the caramel is quite sufficient to stop halation without the addition of burnt sienna:

Caramel.....1½ ounces
Saturated solution of gum tragacanth.....1 ounce
Powdered burnt sienna.....2 ounces
Methylated spirit.....2 ounces
Water.....7½ parts

Add the spirit after the other ingredients are well mixed. Further experiments points to the following being a good formula:

White starch or flour.....10 parts
Caramel.....10 parts
Sodium carbonate (crystals).....2 parts
Methylated spirit.....25 parts
Water.....75 parts

Boil the water first, mix the starch into a thin paste with part of the water (cold) and pour into the boiling water, then add the caramel, and when thoroughly incorporated the spirit. Besides its use in backing plates, it has been suggested, adds the Photogram, that by means of caramel plates may be developed in full daylight. Caramel is highly non-actinic and the addition of a certain quantity to the developer stops any actinic light from reaching the plate. Under these conditions the caramel does not stain the film. It is very little trouble to back plates, and this operation should be done in every case. With lantern slides the effect is quite as marked, if not more so, than with negatives, and the backing causes a vast improvement in the resulting slide. Backed plates should be packed with the film sides face to face when there is no danger of the backing acting injuriously on the film.

When the glass is cracked on a negative, but the film remains unbroken, the film can be removed by soaking a short time in a 5 per cent. solution of hydrofluoric acid. Use rubber finger tips and stand the tray in a draft, as the fumes are not agreeable. Having ready a glass a size larger (for the film will expand some) which has been coated with a weak solution of gelatine and dried. Slip this glass under the film, carefully press it into contact and rack the plate.

The development of the platinum image may be greatly facilitated by heating the developing solution. Although this method involves a little extra trouble the prints by hot development possess certain qualities which in many instances will justify the expenditure of the extra time and labor. The cold development methods furnish brilliant prints, and good pictures may be obtained from comparatively weak negatives. For warm development dense strong negatives with deep shadows give the best prints. By this method successful prints may be obtained from negatives which will not yield satisfactory prints by the cold development process. Of particular interest is the color of the prints and their tendency towards brown shades. To brighten the shadows a small addition of potassium chlorate is recommended. An excellent process is the printing upon pure iron paper and development with the platinum solution. The consumption of platinum is small, development with a brush requiring only a few cubic centimetres of solution. Prints made by this method have clear, deep shadows and pure high lights, the half-tones show the same soft gradation as in hot development, but the color of the image is always black.

Kestner states that carbon tissue which has become insoluble on the surface may be rendered fit for use by floating the paper films downwards on hot water, by which means the insoluble film floats off, and the tissue should be immediately immersed in cold water and squeezed down to glass or ferrotype, again sensitized and dried. He states that this gives absolutely pure whites and the small quantity of film removed has no effect on the intensity of the image. It may sometimes be better to photograph a cast of medal than the medal itself, so if casts of a coin or medal or anything else be



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made with a gelatine, and to then treated with formalin, it becomes quite hard and insoluble. The medal or article is painted with oil and the melted gelatine is poured over it. When it sets it is treated with formalin (about a 50 per cent. solution.) If zinc white or tannin sulphate is added to the gelatine admirable imitations of marble may be made which if varied with streaks red or brown coloring matter give very striking results.

To take positives directly in the camera or copy a negative from a negative, either enlarged, reduced or reversed, Mr. Huillard proceeds as follows: He develops with a strong bromo-hydrochinone developer until the picture shows well on the glass side. Then he stops development by putting the plate into a solution of citric acid (two per cent), and exposes the plate to the daylight, and all the following operations can be carried on in it. He washes now and immerses the plate in the following bichromate bath:

Bichromate of potassium.....1 part.
Pure nitric acid.....2-3 parts.

The developed picture will soon disappear. The plate is washed again and put into a solution of dry sulphate of soda. This causes the plate to become white, even if it was ever so yellow before. After washing again it is developed in the above hydrochinone developer, and immersed into the above citric acid solution. Fixing is not necessary, but it may be done and hardened in a fixing bath containing alum. A good washing now finishes the plate.

Much time and trouble may be saved in making solutions of such chemicals as by sulphate of soda, alum, sodium sulphate etc., by procuring a large jar with a wide mouth. If there be a cork or cover, so much the better. Take a small muslin bag about one-third the length of the jar to be used, and of the same circumference as the neck, put a drawing string in the top of the bag of sufficient length to allow the neck of the bag to extend the width of the cover or cork. The bag may now be filled with hypo, the cork or lid put on top inside the bag and the string drawn and tied. Now fill the jar with water so that the bag hangs therein. The water will now dissolve the hypo, and the solution, being heavy, will sink, causing the water to rise and take up more of the chemical. This will go until a saturated solution is formed or until all the hypo is dissolved.

A PECULATING GOOSE.

Carried off a Gold Watch, and got a Servant in Trouble.

It is doubtful if another dumb animal ever caused greater mischief than a goose did recently in Lanesboro, N. Y. That goose stole a dozen valuable articles and brought about the discharge of a servant. For a long time the family of Mr. Albert Jenks has been missing valuables, and charged their disappearance to Miss Annie Coogan, a domestic. The girl was threatened with arrest to make her confess and when she protested her innocence she was discharged. As articles continued to disappear the family was in a quandary. A pet goose had a trick of knocking at the door in quest of dainties, and on being admitted would go all about the house. One afternoon recently Mrs. Jenks was amazed to see the goose take a gold watch and chain in its mouth and go outdoors. She followed and saw it hide the timepiece in its nest. Thus the mystery of the missing articles was explained. Among the dozen articles found in the nest were two gold timbales, two scarfins, a tortoise shell comb and a watch. The parents of the Coogan girl threaten to sue the Jenks for defaming their daughter's character.

Noosing a Sea-Lion.

A correspondent of Ram's Horn narrates a pulling match between a sea-lion and a farmer:

Near Tillamook, Oregon, an old German farmer chanced to be driving along the beach, when his watchful gaze was greeted by the sight of a large sea-lion some distance out on the sand, fast asleep.

It was the work of a moment for Jacob to make a lasso of a stout rope he had in his wagon, fasten the end of it to the hind axle, and adjust the noose over the sea-lion's head. Then Jacob jumped into the wagon and started homewards with his prize.

The sea-lion did the same, and as his team was the stronger of the two, Jacob started seaward at a good pace, and only saved himself and his "outfit" by springing quickly to the ground, grasping his jack-knife and cutting the rope.

Economical Galvanizing.

The British Government is using extensively for coating the plates of torpedo craft, steel wire, and protecting tubes in water tube boilers, the Cowper-Coles process in which zinc dust is used for revivifying the solution from which the zinc is deposited, the dust being circulated through steam heated regenerating tanks by a donkey pump or steam injector, neutralizing the free acid, and revivifying the liquid which, when the undissolved dust has settled, returns to the depositing tanks by gravity. As zinc dust is cheaper by \$35 to \$40 per ton than rolled zinc anodes the saving is notable.

The Weather for Colds.

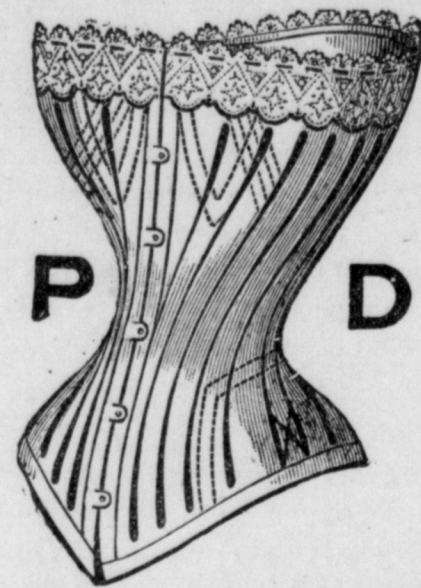
This is the time when colds are in the fashion—every body who is anybody has one, it not himself there's one in the family. For no complaint under the sun are there more remedies than for a cold in the head, but of the thousands Chase's Catarrh Cure is the best. "In twelve hours I was cured of a bad cold in the head by Chase's Cure," writes Miss Dwyer, Alliston, Ont., 25c. of all druggists, with blower free.

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AMERICAN CLOTHES WRINGERS.

The Rise of a Familiar Article of Household use all Over the World.

The first American clothes wringer produced, which was put on the market about thirty-five years ago, was a substantial and serviceable machine, but its price prevented it coming at once into common use. After some improvements the price was reduced but it is only within twelve or fifteen years that the clothes wringer has come to be the article of common household use that it now is. The present price is about one fourth of the original price. The present output of American clothes wringers is about 750,000 annually.

Clothes wringers are made with rolls of ten to twenty-four inches in length; wringers larger than that are made to order. Ten, eleven, and twelve inch are the sizes commonly operated by hand, though fourteen and even sixteen inch wringers are sometimes used in that manner. Larger machines are operated by other power. American clothes wringers are sold in many foreign countries; though in some, owing to natural conditions specially affecting the use of such appliances, comparatively few are sold. Thus, while many articles of American manufacture are exported to South America countries, there are not many clothes wringers sold there owing to climatic conditions, which are such in most of the countries that clothes dry quickly there and wringers are not much needed.

Few American wringers are sold in France, where washing is done commonly in washhouses, and few wringers of any kind are used. In Germany, Russia, all the Scandinavian countries, and in Great Britain, American wringers find a market, and they are sold also in Australia, South Africa, and other foreign lands. They cost more than German or British wringers, but they sell in competition with them, as many other manufactured American products do, because of their superiority of workmanship and better adaptability to use.

WELLINGTON AT HOME.

Some Incidents in the Life of the Hero of Waterloo.

In Dean Hole's 'Memories' are related several anecdotes of the Duke of Wellington, the first of which shows that he had the modesty common among great men, that is unconsciousness of its own greatness.

He met a lady who was going up the steps to see the model of Waterloo, and remarked to her.

'Ah, you're going to see Waterloo. It's very good—I was there, you know.'

A bishop was once preaching in the Chapel Royal of St. James, when he was much perplexed by the conduct of the vergier, who at the close of the sermon opened the door of the pulpit and suddenly closed it with all his force, so that the noise rang through the building.

'He informed me in a whisper,' reports the bishop, 'that his Grace the Duke of Wellington was asleep and that, not liking to touch him, they adopted this method of rousing him from his slumbers.' This ingenious simulation of a bombardment never failed to stir the old warrior.

Wellington left behind him three memorable sentences. 'Education without religion would surround us with clever devils.' To a vergier who pushed aside a poor man who was going up before him to the altar, with the words, 'Make way for his Grace the Duke of Wellington,' he said, 'Not so; we are all equal here.' And when a young clergyman was speaking in disparagement of foreign missions he retorted him with:

'Sir, you forget your marching orders, 'Go ye into all the world, and preach the to every creature.'

Unconventional Dress in Java.

When one has driven about the old town and seen its crowded bazars and streets he is driven into the long garden court of the Hotel Nederlanden, and there has presented a spectacle of social life and customs that nothing in all travel can equal for distinct shock and sensation. We had seen some queer things in the streets—women lolling barefooted and in startling dishabille in splendid equipage—but concluded them to be servants or half castes; but there in the hotel was an undress parade that beggars description, and was as astounding on the last as on the first day in the country. Woman's vanity and men's conventional ideas evidently wilt at the line, and no formalities pass the equator, when distinguished citizens and officials can roam and lounge about hotel courts in pajamas and bath slippers, and bare-ankled women clad only in the native sarong, or skirt, and a white dressing jacket, go unconcerned about their affairs in streets and public places until afternoon. It is a dishabille beyond all burlesque pantomime and only shipwreck on a desert island would seem sufficient excuse for women being seen in such an ungraceful, unbecoming attire—an undress that reveals every defect, while concealing beauty that no loveliness can overcome, and that has neither color, nor grace nor picturesqueness to recommend it in itself.—Century.

Lives on Insects.

There is a quaint plant which grows in pea bags. It has large flowers, with an odd umbrella like shield in the corner. The leaves are generally about half full of rain water, in which many insects are drowned. Some naturalists say that the flower lives on the drowned insects.