A New Photographic Washing Apparatus.

The importance of having photographic prints thoroughly washed can never be too strongly in-A breach of this duty proves disassisted on. trous not only to the permanency of the picture. but in many cases to the reputation of the photo grapher, and incidentally to our art-science itself. So much does it affect the photographer that it would not be difficult to point out instances in which once flourishing businesses have dwindled down to a serious extent through the bad reputation attached to the permanency of the prints issued. There are, indeed, few possessors of wellstocked albums who are not alive to this fact, that the otherwise high reputation attached to the name on the back of a photograph does not necessarily afford a proof that his photograph will resist the ravages of time for even a very limited number of years.

The majority of cases of photographic fading may be traced to the hyposulphite of soda, which, by so intimately associating itself with the fibers of the paper, is difficult of removal, and which, if not perfectly removed, induces an action by virtue of which the print eventually becomes destroyed. To remove the hyposulphite of soda in the most perfect manner, and in the shortest time possible, is to insure to photographs a longer tenure of existence than they otherwise would have held; and any means by which these requirements can be met, are entitled to the greatest consideration. Availing ourselves of an invitation from Colonel

Availing ourselves of an invitation from Colonel Stuart Wortley to visit Rosslyn House, to see a new form of washing apparatus, we went and saw it in action. It proved to be an instrument invented and patented by Mr. John E. Grisdale.

Before entering upon a minute description of this washing machine, we may state that it is capable of washing a full charge of prints in twenty minutes, and that so perfectly that at the end of this time some ordinary tests for hyposulphite of soda fail to indicate its presence. But we shall allow its inventor to describe the washing apparatus in his own language. "My invention, he says, "relates to a peculiar construction and arrangement of centrifugal machinery or apparatus for washing photographic prints, and consists, according to one arrangement, in the employment of a peculiarly-constructed revolving drum in combination with a trough, in which such drum is partially immersed. The prints to be washed are taken from the water in which they have been placed on their removal from the fixing or other bath, and are packed in one or more piles, which piles are placed round the circumference of the drum, each pile being composed of alternate prints and sheets of wire gauze or other open or reticulated fabric, so that no two prints shall be in con-tact with each other. These piles are held in their places on the drum by means of open frames or gratings, which bear against the opposite surfaces of each pile, and are secured to the arms of the drum by screws or otherwise, the whole or a portion of such frames or gratings forming part of the drum itself. Or, according to another arrangement

the piles above described may be laid flat upon a disk, which is made to revolve either vertically or horizontally in a trough or eistern, provision being made in the horizontal arrangement for allowing the piles to be brought in or out of contact with the water as required; or in lieu of the photographic prints being disposed in the form of piles or packs round a drum of revolving disk, they may be laid separately and individually round the surface of a drum, a webbing of open or reticulated fabric being wound on such drum simultaneously with the placing of the prints thereon, so as to inter-pose a thickness of the fabric between each suc-ceeding layer of prints. The process of washing consists in alternately driving out the moisture from the prints by the centrifugal action of the revolving drum or disk, and saturating the prints again. During the first part of the process, the prints are not immersed, but when the second part of the process, namely, the saturation, is to be effected, the trough or cistern is to be supplied with water, or the prints may be brought down into the water, and caused to revolve therein and thoroughly saturated, when the water may be run off from the trough again, or the drum or disk elevated, and the moisture expelled by centrifugal force as before."

The instrument is neat and compact, and immediately strikes any intelligent observer by the efficiency of its action; for, by an amount of manual labor capable of being performed by a child, the drum is rotated with extreme rapidity, and the freshly-supplied water is forced through every pore of the prints, the consequence being the elimination of every trace of hyposulphite of soda in a very brief space of time.—British Journal of Photography.

Varnishing Photographs.

In varnishing photographs M. Bussi first brushes the prints over with a solution of gum arabic, and when this is dry, applies a coating of collodion. The following are the proportions recommended;—1. Clear transparent gum arabic, 25 grammes; distilled water, IOO cub. cents; dissolve and strain. 2. Gun cotton, 3 grammes; alcohol, 60 grammes; ether, 50 grammes. By this double varnish the inventor ensures the prevention of the proof.

Photography on Silk.

The following formula for printing on silk is one that, on the whole, has given me the greastest satisfaction, and is identical with the one published by me two years ago :---

Pour 20 ounces of boiling water on 100 grains of chloride of ammonium, and 60 grains of Iceland moss.

When nearly cold filter and immerse the silk in it for 15 minutes. To sensitize, immerse the silk in a 20-grain solution of nitrate of silver for 16 minutes. Let the nitrate bath be rather acid. When dry, prepare for printing by attaching the silk to a piece of cardboard a little smaller than itself, by turning the edges over and fastening with small bits of gummed paper. Slightly overprint. Wash in two or three changes of water, and tone in a gold bath made thus:—20 ounces of water, 2 drachms acetate of soda, 4 grains chloride of gold, and a few