

The application of colour to lithographs is among the beautiful novelties of recent times. It can scarcely be necessary here to describe a lithograph, or to state that it is printed from stone; but a few words will suffice to show the relation between a *woodcut*, an *engraving*, and a *lithograph*. A woodcut is printed from *raised lines*; an engraving is printed from *sunken lines*; a lithograph is printed from *chemically-prepared lines*. A wood-block is cut till none of the surface is left except the lines which are to be inked and printed; whereas an engraved copper or steel plate is so cut or engraved that the parts left shall be un-inked in printing. A lithograph differs considerably from both. A stone of a very peculiar quality, brought chiefly from the Danubian provinces, is carefully prepared on the upper surface. A design is sketched on the stone, either with lithographic chalk or lithographic ink—both of which are nearly alike in composition, but one is used dry and the other wet. A solution is poured over the stone to fix this device; and when about to be printed, the stone is sponged with water, which is received by the stone but repelled by the chalk or ink. The printing ink, applied by a roller, is repelled by the damp stone, but received by the device, and a press suffices to effect the transfer.

Such, then, is ordinary lithography. The *lithotint* and the *stump drawing* on stone are two methods of colour-printing practised by Messrs. Hullmandel, and of which some beautiful specimens were displayed at the Great Exhibition. Many of the specimens in the first of these two styles were drawn on the stone by Cattermole, Harding, Haghe, and Nash. They are executed by making drawings on the stone with a liquid ink applied by a brush; the quality of the ink being such as to resist the action of the chemical agent afterwards applied to the stone. The result produced has much of the beautiful effect presented by an original drawing in sepia colour. It is a style considered to be well adapted for engravings relating to engineering, architecture, and natural history. The other of these two methods, the *stump drawing*, is effected by applying the stump to designs which have been produced partly by chalk and partly by ink. The method of *lavis aquarelle*, or water-colour wash, employed by some of the French lithographers, seems to bear some resemblance to the English lithotint.

MIXED PROCESSES, IN MODERN PRINTING.

It is a matter full of instruction, in respect to the probable future of this valuable art, to watch the various combinations which are now going on, in respect to principles, materials, and processes. Engraving, lithography, xylography, stereotyping, black printing and colour printing, casting and pressing, electrograph and photograph, metal and stone, wood and paper, gutta percha and bitumen—all are being brought to afford mutual aid, each to each. The lines of demarcation are being broken down; and we are, every month or two, called upon to attend to some new and ingenious process, which, if called by a correct descriptive name, would indeed require a complex assemblage of Greek syllables.

Some of the recently-introduced modes of engraving or preparing designs of any kind for the press are really remarkable. One example, shown in the French department of the Great Exhibition, is an expeditious mode of engraving maps. It is always desirable to have some distinctive mode of engraving an uncoloured map, so that the eye shall catch readily the boundaries between land and water. In the example in question, a very delicate