HAND-BOOK

FOR THE

PRESERVATION OF PICTURES.

PART I.

THE DISTRIBUTION AND CARE OF WORKS OF ART.

WITHIN the last half century the Fine Arts have become universally recognised among us, as a source of intellectual gratification and instruction. In all the habitations of educated persons, some of its productions are certain to be found, and are usually prized as the type of taste in the possessor. With somewhat of this feeling, modestly repressed, and the desire of embellishing the walls of apartments beyond their former blankness of mere pannelling, or poorly-designed paper-hangings, the acquisition of oil paintings, water-colour drawings and engravings, has largely ensued for the purpose. A few remarks upon their adaptation for enjoyment, or decoration, may not be unworthy the attention

of many persons; and perhaps still more so, some instruction relative to the best means of preserving these prized objects from deterioration or decay.

Pictures, drawings, and prints, unquestionably enjoy their brightest lustre and highest perfection at the first moment of production. Every artist, either of the greatest talent or of lesser ability, endeavours to complete his work with all the resources of his skill, seeking for present approbation, and certainly not trusting to organic changes, in the lapse of years, to establish his reputation. The very nature of the materials which form the elements of works of art, are, more or less, subject to a gradual decay, particularly in our northern clime. Nearly all the pigments known and employed by artists are liable to lose their primitive hues, and become either less lustrous, dark, or changed. The wood and canvas upon which pictures are painted, suffer decay; desiccation and insect ravages lead to the remote destruction of panel, the fibres of the threads of canvas lose all tenacity; and paper from a snowy whiteness becomes an unpleasant drab colour, besides being frequently reduced to a perfect rottenness by the insidious agency of damp.

A recent official inquiry has taken place on the subject of the pictures in the National Gallery—their altered condition during a few past years, and upon their removal to a less-destroying locality. The result of this inquiry makes it evident that in London and large towns, some precautions are of absolute necessity; nor are coun-

try abodes without the continuous agency of mischief, although of another and slower kind. The Parliamentary Committee have, however, not arrived at any further conclusion, than that some means are indispensable for further protection of the great works of art belonging to the nation.

Now all persons have the same desire to preserve their own works of art, even those who are indifferent to the charms of art, for the sake of its pecuniary worth as property; and almost every person has some ideas about the means of preserving their works, generally derivable from common sense or practical notions, referable to the usual care taken of other household objects, but not always applicable to pictures.

In offering the succeeding observations on this subject, the Writer had the wish to bring together the result of some experience on his part, aided by judicious remarks made by others, with which he has been favoured in furtherance of this Essay; in the confident hope it may be acceptable and useful to many readers, by at least stimulating attention to the best means of prolonging the preservation of pictorial art, for our own enjoyment and instruction, as well as for those of our posterity.

The changes of temperature in our climate; smoke from coal fires, lamps, and candles; rooms heated by crowds of company; dust actively stirred thereby; vapours from the dinner and tea-table; the presence of

damp either internal or external; mephitic odours; and many other things are all active agencies upon the durability of oil pictures, or framed prints and drawings. That some of these causes tend to the certain diminution of the primitive lustre of all classes of works of art created by colour, is fully evidenced by the present condition of the productions of the old masters. In their oil pictures, the most fugitive colours, the greens for example, have lost the freshness of nature; the verdant hues have become sickly grey or brownish-dark. Scarcely a single landscape painted by the great masters retains the original tints in which the vegetation was painted. The two large landscapes by Gaspar Poussin, in the National Gallery, prove to what an extent changes have taken place. It were absurd to imagine that such a mass of darkness, scarcely making any details discoverable, was ever originally so produced by this great painter, living in the bright sunny land of Italy. The skies in ancient landscapes are lowered in tone, and the foregrounds, where it is earth or rock, are in the same condition. The colours of the figures have become blackened in the shades, and water, if tranquil water, has changed into pools of ink where it has received shadows; or if it be a falling torrent, excepting where the foam retains its whitish hue, it resembles rather a cascade of brown stout. In such a state do we now find a great number of the finest pictures of Ruysdael; the forms are there, the composition is

there, but the truth and freshness of nature have departed. In the historical pictures of the ancient Italian School, it would be a gross absurdity to imagine that these great artists ever painted the shades of the flesh of the intense brown and black in which we now find them. Some pictures even have lost all colour; those by Van Goyen, for instance, of which nothing remains on the canvas but a kind of sepia sketch of the subject, and a London fog for the sky. All water-colour pictures being on paper, are subject to the deterioration of tints, by the change of hue which paper acquires by age. Old books and prints testify to this loss of freshness, as well as to the change in the colour of the printing-ink from having a rich cold bluish bloom to a dry fading brown.

Although it is true that many ancient pictures have descended to us with wonderful comparative lustre, particularly those of the very earliest that were painted in oil, it may be accounted for, either by the greater care which has been taken of them by their different possessors, or by the superior intelligence of the artists in the use of their colours and vehicles. Sir Joshua Reynolds' fatal experimental practice has already destroyed a great number of his finest works. The picture, by Hilton, of "Sir Calepine rescuing Serena," exhibited first in 1831, and probably painted about that time, is now in so ruinous a state that it has been withdrawn from the walls of the National Gallery. It is undoubted

that in many instances the duration of oil paintings is dependent as much on the mode of execution, as on the care of preservation, or the advantages of climate.

There can be no question, however, that proper care, when taken by the possessors of pictures, drawings, and prints, will for a much longer period perpetuate their primary excellence, and continue the enjoyment of their fascinating qualities. What constitutes this proper care must have been heretofore greatly misunderstood, from the wreck and ruin in which at the present time many ancient pictures exist, particularly those of small value, as well as some by our modern painters.

The greater number of pictures in England are placed in the apartments of our houses which are used for social intercourse; and with the universal feeling for decoration of our houses, these apartments are become a great object of solicitude. The effect of a room having the four sides of it without anything ornamental, can hardly be imagined; perhaps such a room does not exist in any house above the merest hovel. The blankness and apparent confinement upon the nerves would be harassing, the mind seeks expanse; and in our small-sized apartments, it was first obtained by our ancestors with the aid of looking-glasses and mirrors. But since art has become a necessity, whether it be imaginative or decorative art, there appears to have been very little attempt to apply it consonant with natural ideas, or according to principles of taste. Expanse is

gained by landscape pictures especially. Interiors have a similar influence. On the contrary, place a picture containing life-sized figures, or animals of similar dimensions in a room, the idea of contraction ensues; besides the incongruity in an apartment, making it, in truth, with other pictures of small proportioned objects, an admixture of giants and pigmies. Symmetry and expanse are among the greatest delights of the human eye.

While on the subject of the adaptability of pictures to increase the delights of our dwelling-houses, a few words may be said about some other adjuncts to our comfort, which have reference to the general harmony. Where pictures are hung, the carpet should be of a small pattern, and of a dark colour; the contrast will give an apparent augmented light to pictures. But if the room is covered with carpets of gay colours — scarlet, orange, yellow, light blue, &c., in huge scrolls and forms, with roses large as red cabbages, and tulips huge as quart pots, the vision becomes distracted, and the delightful gradations of tint the talented artist has so intensely studied, are totally annihilated by this vulgar tawdriness and want of repose. The carpet on the floor of the new House of Lords is a ready reference for one suitable to give value to pictures. The predominant ground colour of the paper on the walls is a difficult problem which has puzzled many learned heads; it should however be

observed that a light ground gives space, while the dark crimson so commonly employed contracts the apartment. Above all, the paper on which pictures are hung, should neither contain flowers, nor birds, nor any natural objects; solely the combination of geometrical forms and lines. Fancy a flower-piece by Van Huysum, or one of Bartholomew's elegant groups placed in juxta-position with the paper-stainer's convolvoluses, and perhaps the carpet-weaver's roses and tulips under your feet. Where there is pictorial art, there can be no imitations of it by mechanical means.

If it were possible to have pictures of regular sizes, and to place them symmetrically on the walls, the arrangement would be agreeably harmonious to the eye. This would be easily effected if the pictures were painted expressly for situation—a practice greatly in vogue on the continent by those who patronize the living artists. This effect is greatly augmented by the picture-frames having mouldings and ornaments assimilating with the architectural features of the apartment, such as the doors, cornices, and chimney-pieces. The *ensemble* of a room thus studied and completed for the unity of all objects bearing reference to a single style, displays a triumph of taste, placing the owner on the same intellectual scale as the artist. The poverty of invention, and *rococo* design of most of the picture-frames now made, form a humiliating contrast with the chaste statuettes, bronzes, elegant

porcelain vases, and other ornamental adjuncts so profusely gathered in the drawing-rooms of genteel or exalted society. Excessively deep mouldings to oil pictures of small merit, are more indicative of purse-proud parvenuship than of a refined intelligence; it is exhibiting the weight of money instead of mental expansion. Some frames are made with such a depth of moulding, that the pictures thus enclosed appear to be fixed in the bottom of a packing case, forming a kind of grotto or cavity to gather dust, and retain all the injurious fumes which are thus stored up to operate on the surface of the picture. The general circulation of the air passing over these cavernous deposits, leaves the foul contents undisturbed. Besides, in the small-sized rooms we inhabit, every projection into the cubical space has the effect of making the room look still smaller.

There is abundant occasion to display a cultivated knowledge in the choice of picture-frames, the majority of patterns hitherto in use having but little to recommend them. Latterly an improvement has been manifested by the introduction of open-worked Florentine frames in papier-maché. The designs of these frames are very appropriate, as the idea of great weight is obviated by their lightness of appearance. The suspension, real or apparent, of heavy weights, is always uncomfortable to the eye; and there is besides a danger impending, as the cords

by which pictures in weighty frames are suspended, have sometimes broken, to the injury of the picture and the destruction of valuable articles of *vertû* placed below it. A remarkably fine Etruscan vase of great rarity was thus shivered into fragments, in the mansion of a distinguished connoisseur. The usual method of hanging pictures is by coloured strings suspended from a brass rod, which is placed round the room immediately below the cornice. The strings usually employed are hempen cords, covered with coloured worsted, being by no means so strong as their size would imply. The influence of the air leads speedily to the decomposition of their tenacity, and numerous accidents have occurred by their breaking. Where it has been the practice to place the lower edge of a picture-frame upon a rest, so that it may hang slantingly over, as is sometimes done with the notion that a picture is better seen by an oblique position, the cord is more exposed to decay. Many heavy-looking glasses and mirrors, over chimney-pieces, have formerly been ignorantly so suspended; and after the lapse of some few years their owners have paid the full penalty, by the disintegration of the strings, and the glasses being shivered into fragments in falling down.

In picture galleries, the upper ranges of pictures are sometimes so slanted over, with the lower edges of the frames resting on a continuous ledge. If the upper edges of the frames are held to the walls by metal chains, no danger

can ensue. The advantages of viewing pictures placed thus obliquely, are only gained in galleries or exhibition rooms where the light is from skylights, or from lantern-lights in the ceiling. These advantages are wholly lost in apartments receiving light from windows on the side. Besides being contrary to architectural propriety, when pictures are so placed in habitable rooms, the eye is disturbed instead of receiving the quiet repose incident on the harmony of objects. It is like living under tottering crags, or overhanging cliffs—an uncomfortable insecurity oppresses every one, instead of the cheerful tranquillity being imparted which is the sweetest delight of home.

The most desirable way of placing pictures would be to fasten them to the walls, without any visible appearance of the machinery of their suspension. Looking-glasses are now usually fixed in this manner, and if pictures were so attached they would appear as if they formed an integral part of the house, becoming an ornamental pannelling of the architect, filled in by the painter's skill. In some houses where very fine pictures belong to gentlemen desirous of their beauties being fully appreciated, which, from the depth of rooms or curtain draperies, the side light from the windows scarcely permits—the frames are fastened to folding cranes with hinges formed of flat iron bars of suitable width and nearly as thin as iron hoop. This contrivance allows the pictures to be swung forward into the room in a position with the win-

dow to receive the fullest light equally distributed. Sometimes the pictures are fastened to the walls by hinges on the sides of the frames, nearest the windows—being capable of being brought to the light by merely bringing forward the farthest end of the frames—moving exactly as a door upon its hinges. The view of pictures arranged in these manners becomes very satisfactory. In the house of the late Samuel Rogers, some of the exquisite works of art this distinguished gentleman possessed were so arranged. There is another objection to the use of strings for suspending pictures from a brass rod running round the upper part of the room. Sometimes, from the great number of pictures, they require to be placed in two or three tiers;—there are consequently a number of opposing diagonal lines formed by these strings crossing the vacant surface above the tiers of pictures with great irregularity, occasioned by their different widths. All diagonal lines distress the eye when intermingled with vertical lines. This is especially evident in the grand drawing-room of the late Sir Robert Peel's mansion at Whitehall which contains the deceased Baronet's extensive cabinet of Dutch pictures, where the multitude of strings that are seen above them, creates a deformity and begets an eye-sore incompatible with the natural laws of decoration and harmony. Most pictures placed in this mode are hung on a couple of strings; sometimes one of them, from some inherent defect, stretches unequally with the other and then this picture loses its horizontal

and perpendicular position. Nothing appears more slovenly and neglectful than a number of pictures apparently rolling about thus, left and right, which would be obviated by a permanent attachment to the walls. Besides all weights suspended on strings cause the extension of them to the utmost stretch; and although when pictures are first placed their position may be judiciously determined, they are sure to descend materially from this, by the elongation of hempen cords. The use of the newly-invented patent wire cordage appears to offer a rational security against many of the preceding inconveniences and accidents. The danger of strings being obvious, many persons for the sake of security have employed small brass chains, from the rods under the cornices, to hang pictures with, and where other pictures are placed beneath, the lower ones are attached by brass chains to hooks fastened on the under side of the frames of the upper row of pictures.

In the distribution of the productions of pictorial art throughout a mansion or a house, there are a few points deserving of consideration. The separation of oil and water-colour pictures, and engravings from each other; the choice of subject adapted to the designation of the apartment; the difference of light required for dark toned pictures, dimmed by age and discoloured by dirty varnish, from modern ones; the selection of the central places for works of the highest comparative quality; all these considerations belong to the domain of the man of

taste. The huddling together of all the classes of fine art and completely covering up the walls, without order, or disposition of lines, prove the possessor deficient in any innate perception of the beautiful, and only emulative of quantity, as in a broker's shop. The heterogeneous admixture of paintings in oil, of water-colour drawings, and of engravings in the same apartment exhibits a confusion of objects injurious to each other. The oil pictures look dark and heavy, with somewhat of a greasy effect, by the side of water-colour drawings, while they in their turn become feeble and washy against the deep solidity of oil. Engravings fare still worse and assume a total platitude and coldness from the absence of the glowing and varied tints which colour gives. Each of these three great divisions of pictorial art can only be duly estimated by being kept separate. Pictures embrace all kinds of subjects; in figures, the sacred and historical; landscape; animals; still-life; interiors; marines; peasant and domestic life; in short every variation of subject from the sublime to the most prosaic and vulgar. Large hunting subjects, fruit pieces and groups of dead game are appropriately decorative for entrance halls and corridors. Whole-length portraits of ancestors are also not misplaced here, and perhaps any large representation of a battle or conflict. In dining-rooms, subjects of a cheerful, festive or Bacchanalian character become animating accessories; the portraits of eminent or exalted persons, famous for their achievements in arms or their

distinction in the arts, sciences, or literature, looking, as it were, out of their frames upon the company, may impart something agreeably reminiscent of their great acquirements and good actions. Perhaps it would not be a great stretch of imagination to fancy they are our companions in participating of the hospitality of the table. Affectionate feelings will always determine where the portraits of relatives should be placed, most consonant with our reverence and esteem. Where the mind is free from the trammels of ordinary life and its coarse realities; where reflection is undisturbed, and where the most pure and exalted sentiments of human nature can be indulged, seem to point out the study and the library as the fitting shrine to contain these portraits.

In the drawing-room all works of art should bear the impress of its highest conceptions in elegance, purity and cheerfulness. Pictures displaying human corpses, or bodily afflictions, martyrdoms, dying and suffering saints, anything lacerating the feelings and occasioning painful emotions are ill-judged subjects here. They are only adapted for public galleries, as elucidating the triumph of the artist either in mental expression, composition, or any of the theoretical acquirements of high art. All impure nudities are equally improper for the drawing-room; and in the same category are some of the finest Dutch pictures extant, from their repulsive vulgarity or indecency. No work of art can be called an ornament to the drawing-room, which a parent cannot contemplate

in company with his daughter. Classical and rural landscape, marine scenes, highly-finished fruit and flower groups, interiors of ecclesiastical edifices, town views, conversations, historical incidents subject to the preceding reservations are all applicable to the drawing-room. If the pictures contain life-size figures, they ought to occupy the upper range. A landscape with a bird's-eye view may also be placed high; but if the perspective, meaning the horizontal line, is taken low, the best and suitable place is opposite the eye, or (as the artistic phrase goes) upon the line. This is also the suitable range for all small figure compositions in interiors; if hung above the eye, the perspective lines in these pictures become deranged. Of equal consequence in hanging pictures in rooms, is the care that should be taken to place them so that the light they receive from the windows may fall in accordance with the arrangement of light and shade of the subject painted. Nothing can be more awkward than to view the human countenance having the side of the face that is in shade, with the shade of the eyelids, and the shade and shadow down the side of the nose, all next to the daylight the picture receives; and the bright tints of the palette pourtraying light, turned to the dark part of the room from whence no natural light can possibly come. Similar remarks apply to pictures of every kind, they are all painted with reference to receiving light from the one side or the other. A

picture with figures in it, if so placed, has the absurdity of finding the shadows cast, contrary to truth, out of the window, while every natural object in the room has its shadow cast inwards from the window. Many excellent works have unquestionably failed of their attraction from this incongruity, and lost the estimation they deserved, without the cause being reflected on, or even suspected.

Water-colour drawings may be reserved for the boudoir or an inner drawing-room, and also framed prints for sleeping apartments. However, as a great number of persons have not the variety of rooms to admit of such classification, it is always possible to arrange even a few without being injuriously intermingled. The excessive variation of the sizes, shapes and forms of pictures and their frames generally prevent, if they are numerous, any other arrangement than the filling up of intervals by pieces that fit into the intermediate spaces. But it is always possible to adopt a base line for the lower edge of all the frames of the under row of pictures; and if they are few in an apartment, a similar unity of the height of the frames at top is something gained. The filling up of intervals by pieces that fit into the spaces without regard to perspective, proportions, subject or scale of colour may be seen fully practised in the public annual exhibitions of modern pictures, where this irregularity flourishes in the highest degree, and all artists

are cognizant of the injury inflicted on their works by unsuitable companionship.

Having concluded the observations on the placing of pictures for the due effect of propriety of decoration, and the estimation of their various excellencies, the next solicitude is the care and preservation of them from the ordinary agencies with which we are daily surrounded, that these excellencies may be perpetuated to the utmost duration of time possible. The greater number of pictures altogether, are placed in the apartments of our dwellings which are allotted for social and family intercourse, and they are in some respects more exposed to deterioration than pictures kept in galleries. The number of picture galleries, truly, is very limited indeed; and the few remarks required for them may be confined to, first, the keeping of a moderately warm temperature by means of fires or flues heated by hot water during the winter and taking the precaution of not opening any windows either lateral or otherwise during the many murky, damp, fog-penetrating days of this part of the year. The effects of this damp atmosphere is eminently injurious to fugitive colours; an example is unfortunately illustrative of it in one of the finest collections of Dutch pictures existing in England. The gallery was built expressly for their reception; and on one of those comfortless wintry days, the servant in charge opened a window and left it remaining so for

some hours. Opposite the window was hung an almost matchless little picture by W. Mieris, retaining the original freshness of its green tints, with which a spreading vine was painted in the upper part. The effect of these few hours of damp air has obliterated its pristine beauty; and it now presents a cold, sickly appearance, out of harmony with the more solid and durable pigments employed in the lower part of the picture.

There is another practice in frequent use with pictures, both in apartments and galleries, which is to cover them during the absence of the family with linen over the entire surface. Those who have town and country residences frequently leave them thus covered during six months of the year. It would be well if they were so protected when servants are sweeping the carpets or cleaning the floors; but this is commonly not thought of even, although the chairs, tables, and nick-nacks, are all covered during this frequently-recurring process. Excluding the light is the certain course to dim all bright colours, and render them more or less obscure. Light is the very life of colour: without light it perishes. If we notice the discoloration of paint in our houses, where the window-shutters fold over, or where pictures and looking-glasses have been for any time suspended against walls painted with oil-colour, there is no further evidence wanted to convince us, that light and air are essential to perpetuating the brilliancy of colours. Paint generally keeps its colour better on the outside

of houses than in the inside, where the atmosphere is pure and dry. In London especially, Birmingham, and some other towns, there is an exception arising from the deposit of smoke from coal fires. These observations on light are equally applicable to inhabited rooms as well as to galleries, independently of the difficulty of justly appreciating any production of pictorial art placed in obscure corners, or between windows.

Having ended the observations on the arranging of pictures for due effect, it may be stated as a general and undeviating rule, never to place pictures where there is the smallest presence of damp—it is the great and principal agent of ruin. Before proceeding with the care of pictures from mischief, a few remarks may be permitted on the subject of the gilt frames in which they are enclosed. How frequently in apartments, where everything is of the most scrupulous cleanliness, may dirty picture frames be seen. In this climate, gilding soon loses its lustre, particularly in London, where the great amount of carburetted hydrogen in the air tarnishes everything metallic; but there is no occasion to permit the dust of weeks and months to lie undisturbed upon picture frames. Dust is thrown up by sweeping carpets, tread of company, cleaning the furniture, and the removal of coal-ashes from the fire-grate. Yet in most houses servants are forbidden to touch the picture frames, although as a general rule of cleanliness, they

should be dusted regularly, which may safely be done with a hand-brush made of the hackle feathers of the male domestic fowl; the delicate fibres of which can do no injury. The common house-fly is the destroyer of gilding, the lustre particularly inviting its presence. The ordinary means of reducing the swarms may be resorted to in summer time; or the frames may perhaps be better protected from their deposits by a slight and careful covering of open leno, or lace-muslin. On the continent the little projecting parts on the outer edge of picture frames are protected from injuries occasioned by removal, or any collision which would damage these outer parts, by a very thin border of deal (as if in a case,) painted black and varnished. Besides protecting the frames from accident, the juxtaposition of a thin black edge gives additional brilliancy to the gilding, and is not without a good effect upon many pictures. The expense of regilding occasionally a number of frames is certainly a matter for consideration; but if they are allowed to remain untouched for years, they no longer adorn an apartment; and when any new acquisition is placed among them in its fresh and glittering frame, the harmony is totally destroyed, and an unfavourable comparison provoked.

That pictures should have proper care taken of them is undeniable, and their possessors are, without exception, fully desirous of so doing, although very little rule appears to direct such wishes, and in default of this pic-

tures remain for long periods of years accumulating on the surface successive adhesions of obscuring matter. The longer they remain thus, the greater becomes the difficulty of any operation on the surface to remove the veil which deteriorates and obscures to the eye the true colours. With a few and simple precautions, their enjoyment in all their beauties may be greatly prolonged, for centuries even. The climate of England, with its variations and our domestic habits, exact a certain amount of regulated attention to ensure success. The surface should be lightly cleaned once a year to remove the stains made by house-flies. In doing this, the deposits of smoke or other vapours will be cleaned off at the same time. The picture to be thus purified should be laid flat, and carefully wiped with a very fine sponge free from grit, wetted with clean cold water. This should be done gently until all fly-stains are taken off. When these stains disappear, all other of the usual adhesions on the surface will also disappear. A piece of soft leather wetted, and the water wrung out, will serve equally well as a sponge. In no case must water be allowed to float over the surface, nor is the addition of soap, soda, or indeed anything of this nature added to the water, otherwise than dangerous in inexperienced hands. If this process is undertaken on a dry and warm day, the face of the picture will almost immediately after the operation be in a fit condition to have a gentle friction bestowed on it by a

dry silk handkerchief. A silk handkerchief that has frequently been washed is better for this purpose than a new one, as it becomes softer in the fibre. This is the practice pursued in the National Gallery every year during the vacation, under the advice and direction of the most competent persons.

Damp has already been remarked as one of the most powerful and insidious enemies of every class of pictorial representation. If a picture is on panel, the wood gradually rots and decays; the same influence is exercised upon the unprotected canvas forming the back of a picture painted on this substance: thence arises the necessity for lining, and after a period re-lining is a somewhat delicate undertaking with a rotten cloth. Mr. Mulready, R.A., in his evidence before a Select Committee on the National Gallery, says, on this subject: "In my own case I have seldom painted a picture on canvas without providing against the accidents to which the exposed back of a picture is subject. I place two canvases together *back to back*, and I paint upon one side; the canvases are not fastened together throughout, they are placed together thus (describing the position); this has a painted side, and I believe in that way they afford considerable security against both damp and dust; it is a simple and obvious thing, and the easiest thing on earth to do. They are placed so together that the air would get through the very small apertures; they are

placed together and nailed upon a flat edge, and the air will find its way, probably as it does into your watch." The effects of damp penetrating between the interstices of the frame and backboard behind on water-colour drawings or engravings displays itself by the gradual advance of a brown stain, so frequently exemplified in old books and prints as to be familiar to every one. The dust which gathers behind all framed pictures should be occasionally removed, as it has a mischievous effect, for the greater the quantity of loose dust, the longer it would hold the damp; it may not attract it, but it will hold it when it gets it. Perhaps it is unnecessary to caution against hanging pictures on a newly erected, or recently plastered walls; common experience has taught us the danger to be avoided. But it has hardly yet entered into consideration that conservatories opening into rooms are so many *dépôts* of damp. It is now so growing a practice, and certainly a source of such very inviting pleasure, that the insidious enemy is not perceived. Yet the watering of the plants and the constant exhalations from the damp earth in the garden-pots and from the plants themselves, are diffused over the adjoining room to the great injury of all textile fabrics, and the certain mischievous action on the materials forming the ground of pictures whether panel, canvas, or paper. For small, highly-finished, and valuable pictures an external covering of plate glass is an expense not to be grudged,

which should be as firmly glazed in the frame as the glass in our window sashes, to exclude the penetrating of the atmosphere, or of vapours engendered in the apartment by meals, lights or any other causes. There is a slight objection to the glazing of oil pictures, that it becomes a little difficult to view them without the glass reflecting other objects; but it is more than balanced by the advantages of keeping the surfaces from any deposits of flies, or other injurious matter; and preserves the varnish in perfect lustre without ever chilling. Some of the pictures in the National Gallery which have had a covering of plate glass for some years, can be referred to in proof of their continuing in excellent condition. The surface of the picture should not be allowed to touch the glass which covers it; there is sometimes a decomposition of the salts used in the manufacture of glass which is ruinous to colours, where it comes in contact, and should be avoided by fixing the picture at least one-eighth of an inch distant. The manner in which water-colour drawings and fine prints are framed by squeezing their surfaces on the glass to make them look smooth is pregnant with danger and destruction from the above cause. Our continental connoisseurs are fully cognizant of this mischief, and frame all their water-colour drawings and prints by straining them on the back-board and placing them fully a quarter of an inch distant from the glass that covers them. The contact

of glass, often of bad quality, is very injurious to paper, acting with a kind of capillary attraction to any wet or damp that may enter at the edges, as well as by the before-mentioned decomposition. But protecting the front of pictures becomes of very little service, if we leave the back to the ravages of damaging or destroying agencies. Their effectual preservation from damp (the great enemy), the gathering of dust, admission of foul vapours, the ravages of insects and other evil influences, would be guaranteed by covering the entire back, including the frames with tin-foil carefully glued down on its edges. This could only be applied to small oil pictures, water-colour drawings, and engravings. Those which are of a larger size may be similarly covered behind with oil-skin strained entirely over and fastened round at the edges in a similar manner. The largest pictures would receive entire protection by a similar application of our common oil-cloth, such as we find in constant use in entrance halls and corridors. Pictures of the latter class in churches and public buildings require especially this kind of protection, as they are more exposed, by the absence of any heating apparatus, to the cold damp atmosphere of our long wintry months.

A few words may be permitted, in conclusion, on the choice of pictures as a prudent outlay. We are essentially a calculating people on the money value of our purchases by way of investment. The few remarks in

our former pages have been entirely relative to the decorative or instructive arrangement of pictures. The question of durability comes now to be considered, and a moment's attention to the subject is convincing that new pictures will endure much longer than those of three or four centuries old. The pecuniary value of some of the works of ancient masters is almost fabulous, but this applies to works so rarely attainable, that during a human life the opportunity may never occur to obtain a genuine work of Raffaelle, Leonardo da Vinci, or Correggio, even by the sacrifice of a sum amounting in itself to a small fortune. The whole mass of inferior old pictures are hastening to decay, already faded in colour, darkened and perhaps covered with ugly patches by unskilful restorers. Their value goes on decreasing rapidly, and will so continue, until they become valueless. Independently of this, they afford no true enjoyment by their presence in our homes; they only hang there to typify the total absence of taste and learning in art of the possessor. All these decayed and decaying fragments of mediocre execution can only harmonise with dirty walls and hangings, broken china, and threadbare carpets. They besides too frequently indicate the blinded belief of an imaginary property; proofs alike of avarice, ignorance and delusion. Similar amounts expended in modern pictures warrant a continuation of value for generations yet unborn, with a probable and most certain increase,

if well chosen; thus adding interest to the principal sum invested. Oil pictures, soundly painted, have been estimated, if preserved with ordinary precautions to possess the elements of endurance for five hundred years. Some have already reached four hundred years. Besides, the purchaser of the works of living artists will always rank as a real lover of fine art, and add his mite by his individual expenditure to the support and advancement of the national school of painting.

PART II.

REPAIRING, RESTORING, AND LINING OF PICTURES.

UPWARDS of four centuries have elapsed since the discovery of painting in an oil medium, or rather of its first application to pictorial representations. Painting in oil was certainly known earlier, as modern researches have established; but the first use of it in any authenticated picture bears the date of 1420.

In the earlier ages of this beautiful art, no experience could foresee the various causes which would lead to the loss and decay of works executed in oil-colours; and as a natural course, but little study was given to the proper means of ensuring their lengthened preservation. Although the cleaning of pictures has been considered to have originated in the present epoch, and not to have received the sanction of any distinguished artists, yet the fact is not so, for it was recommended by Buonarotti and the Carracci, as regards the pictures in the church of the Madonna di Mezzaratta, which were passing

into decay. This is related by Lanzi. The Raffaelles in the Palace of the Farnesina, belonging to Agostino Chigi, and also those in the Vatican, were restored by Carlo Maratti, as described by Bellori. The Cavalier Pecci, in his "Guide," mentions the skill of one Nicolo Franchini "in restoring injured specimens to their original beauty without applying to them a fresh pencil," &c. The Government of Venice, in 1778, very judiciously appointed a committee to watch over the preservation of the paintings which were inclined to decay, where a studio for the purpose was opened.

At the present day, however, the consequences of the absence of previous experience are becoming apparent, and many of the finest examples of the old masters have either entirely perished, or are hastening to decay. This has been particularly the case with the frescoes painted by the early Italian masters on the walls of churches and palaces. To perpetuate as far as possible the duration of the fine works which still exist, has become an object of solicitude, for which many means have been devised and applied, and not unfrequently by totally incompetent persons. A good deal of quackery has also crept in, and a constant advertising in the daily journals, announces a variety of infallible nostrums. It may indeed be relied on as a type of incompetency, that a secret should be made of a process, in itself of great simplicity, but only requiring an adequate amount of judgment and practice. In the

desire that the best means should be fully understood by the possessors of pictures, and that the object may be better attained, the author makes public, he believes for the first time in any separate form, the modes of operation pursued by the most skilful artists now practising this useful art for the preservation and restoration of paintings in oil.

The due preservation of pictures depends chiefly on dry atmosphere, exposure to light, and the absence of noxious exhalations. Among the many causes of injury, exclusive of accidents from violence, paintings are liable to obscuration from accumulated dirt and dust, the discolouration of vehicles and varnishes, the changes of colours by chemical action, the cracking of the body and surface of the work, the decay of grounds, damp, mildew, foul air, smoke of lamps, injudicious attempts at cleaning, and a variety of other causes.

Pictures by the old masters are painted on canvas or wood, some few on sheets of copper, and even on slabs of marble. The earliest oil pictures were painted on panel. These panels, composed of several boards, were so excellently put together, that in some of the early Flemish pictures it is at the present time, after a lapse of four centuries, impossible to discover the seams on the surface. The grounds or preparations to receive colour applied to these substances have been various. The pictures of the Italian school of the time of Raffaelle had the grounds composed of pipe-clay, highly

burned and finely pounded, mixed with a proportion of chalk, and formed into a substance with boiled parchment, or the skins of fish. Velasquez and Murillo painted their pictures upon the red earthy preparations with which the Spanish canvas has almost uniformly been charged. The ground of the pictures painted by Claude has frequently been prepared with an impression of chalk or pipe-clay, as was used by the old masters; the consequence is that the skies, distances and delicate passages remain as clear as the day they were painted. The ground of many of the pictures painted by Nicolo Poussin is, on the contrary, a dark brown, or red, prepared of a red earth, which in some instances has made the shadows opaque, and has even caused them to perish, an evil which is to be met with in several of the most beautiful and classical compositions of that great master. William Vandevelde also painted on these kinds of preparations. Some remarks on the dangers to be avoided in treating pictures of this description will be found in their proper places. It is unnecessary to discuss further the merits of these different preparations, the very excellent manner in which they are now got up for the artist renders this unnecessary; our object being only to point out the course to be pursued in repairing the dilapidated state into which so many pictures of value have fallen.

Having, however, availed myself of opportunities of becoming acquainted with the operative details of the

modern system of manufacturing artists' canvas, I have been enabled to observe that canvas grounds are produced of such tenacity, durability and general excellence, as were never before attainable for the purposes of art, and which must materially aid the preservation of modern works executed upon them; they have the most important merit of not being liable to crack, or to peal or tear away from the cloth they are worked on, and, beyond all, damp has but little or no influence upon them.

TRANSFERRING PICTURES FROM PANEL TO CANVAS.

If the picture is painted on wood which has much perished from the ravages of worms, it may be strengthened by being cross-barred on the back with either oak or mahogany; and the same treatment may be pursued with a small picture or panel that was merely warped; but if, from being composed of different panels, some have started from the necessary evenness of surface, it is generally desirable to transfer the painting to canvas; this is however a very troublesome and expensive proceeding, and only worth undertaking with valuable works.

The transfer is effected by pasting smooth sheets of paper all over the face of the picture, and afterwards upon this a sheet of fine muslin, it is then to be placed face downwards upon a very smooth table, and

there fixed evenly: the wood must then be planed off with the greatest care until it has become as thin as the plane can safely go, and the remainder must be scraped off with a sharp instrument like a razor. After that, the ground upon which the paint lies must be taken away by solvents, by gently scraping, or such other means as the skill of the operator may suggest, until nothing remains but the thin skin of colour composing the picture now left pasted on the paper, and held together by the muslin. A prepared canvas must then be applied to the paint in the same way as that employed in lining pictures, hereafter described; and when it is firmly glued on, the muslin and paper on the surface must be tenderly removed by damping, and the picture will appear as if it had been originally painted on canvas. It is a very delicate and tedious operation, requiring extreme caution in removing the remaining portion of wood left after planing, as also the ground, both lying so near the paint.

In transferring from panel to canvas, blisters are the most frequent difficulty. If they are open, japanner's size should be passed under and then flattened by a moderately warm iron; should there be no opening, the picture ought to be relined, although some persons in such cases cut the blisters on the surface, and then insert some adhesive medium.

This method of transferring pictures originally painted on wood, to canvas, was first practised by Monsieur

Hacquin, in Paris. On the removal by the French, during the invasion of Italy, of many of the greatest works of Italian art, it was found, on inspection, that the painting in many of them was beginning to separate from the *impression*, or ground of the picture, and that it became absolutely necessary to have the same secured to prevent the total ruin of these magnificent works. Among others which Monsieur Hacquin successfully transferred from wood to canvas, were the St. Peter Martyr, by Titian; Lo Spasimo, the Madonna de Pesche, the St. Cecilia, the Madonna di Foligno, by Raffaelle, and several other capital works. The Raising of Lazarus, by Sebastian del Piombo, in the National Gallery, was originally on wood, and has been transferred to canvas. This important specimen at once elucidates all the advantages and disadvantages of the procedure. The picture is so far preserved, that the paint lies smoothly enough on a canvas base, and will probably (that is the canvas) last for a great number of years. The evil has become apparent, for the picture is irremediably dyed throughout with a dark tone, arising from the penetration into the colours of the great mass of paste and glue which was consumed in attaching it to the new canvas. Another evil ensued: this thick mass of farinaceous and glutinous matter called into existence myriads of worms, which for a time threatened to devour the entire picture, until they were poisoned by the application of

the corrosive sublimate of mercury. A few pictures have been similarly transferred in London, but only of small dimensions. From its tediousness the expense is great, and only worth expending on pictures of consequence, always bearing in view the ultimate darkening of the entire work, which is quite as visible in those which were done by Monsieur Hacquin, now at Paris and Madrid, as by the picture of S. del Piombo in our National Gallery.

Pictures painted on copper are generally small; they usually preserve well, but are liable to receive indentations from blows. When such an accident has occurred, the only remedy is to submit the injured part to powerful pressure, by placing it between a number of mill-boards in a bookseller's screw-press, although this may occasion the displacement of the colour in the space which the indentation occupies. The greatest inconvenience with respect to pictures on copper arises from the nature of the surface preventing the ground from adhering; the paint and ground consequently scale off very readily even by the shaking to which a thin plate of metal may be subjected, and on this account when the copper has bulged, generally from its even flatness, it is dangerous to submit the picture altogether to pressure, to reduce it to the even and flat surface so desirable in all pictures.

In the early period of art, wood was very generally employed for painting on; but as canvas possessed capability of tension, lightness, and an even surface, it

soon obtained the preference over every other material. Canvas appears to have been first made use of extensively by the founders of the Venetian School.

Pictures painted on canvas are liable to be pierced in holes, or to have rents from accidents; and when placed against walls where damp is readily imbibed, or confined air allowed to act, the textile fabrics so exposed for a series of years, must, from their very nature, progress slowly and certainly to decay. The ravages of myriads of minute insects engendered by the action of damp upon the vegetable base of the canvas aid in the ultimate destruction of the web; the picture then hangs loosely on its frame, and as it cannot be wedged up flat, from the danger of coming to pieces, if strained in this rotten condition, the remedy is to line it with a new canvas.

This is one of the most important proceedings to secure a picture from farther injury. It is performed with great ability by many persons in London, and at very moderate charges.

LINING OF PAINTINGS.

Preliminary to commencing the operation of lining, the picture should be carefully cut from the old frame on which it has been fastened, and the edges perfectly squared: it should then be entirely covered on the face by having smooth clean paper pasted over it. If the

canvas is very rotten two or three sheets over each other may with propriety be used, or if it should be merely fragments in parts the safest way is to paste over the paper a fine muslin. The intention of this is to preserve the paint from scratches or injury during the subsequent processes, as well as to hold together in their proper places any parts that may have become detached or loosened by the decay of the original canvas. In most cases it is better to paste the paper on the painting before it is taken off the old frame, otherwise the contraction of the paper in drying will draw up the painting in such a manner as to endanger the success of the subsequent operation. The picture is now to be placed on a very level table, made of wood, quite free from the grain which deal possesses, as the slightest grain or indentation of the lining table will be imprinted on the painting, by the final operation of facing or ironing; or if the picture is small, it may be placed on a marble slab of very smooth surface. The back is then to be cleared of any rags, patches or adhesions, by using lightly a knife or pumice-stone, and by means of a brush the whole is covered with a mixture of glue and paste in equal proportions: a piece of new linen or fine canvas, an inch and a half every way larger, is now to be laid evenly on the picture, and pressed on it by the hand over every part until it completely adheres.

The fixing of the picture upon the new canvas is

usually effected by an equal mixture of glue with paste. It is in the progress of the decomposition of this mixture, through the influence of damp, that the insect race is engendered, and unless checked will, in the end, not merely destroy the canvas, but penetrate completely through the surface of the picture, producing a perfect dimness of appearance in colours, which were otherwise brilliant. To counteract this species of dissolution, if the adhesive medium of paste and glue is mixed with creosote, it will not only destroy the germ of mischief, and prevent the generation of animal matter, but it has a very beneficial influence in resisting the effects of damp; the creosote being, as is well known, the oil of tar, will completely prevent the accidents which sometimes occur to newly lined pictures in becoming detached from the lining, by being hung in large halls or apartments where a fire is never kept. Bookbinders use the decoction of colocynth, or ox-gall, in mixing their paste, which preserves the binding of books from the ravages of worms; but that is insufficient against damp, and less permanent than creosote. Corrosive sublimate also affords protection against insect ravages.

When the new canvas or lining has been placed on the picture by the adhesive medium, and pressed closely together by the hand, it must be left until it is nearly dry, when a heated iron of considerable weight, such as a hatter's or a tailor's iron, is to be passed over the new canvas until it is perfectly flat: it must be used

only by *gliding* over every part, and not by strokes or a succession of heavy pressures, or blows. The iron used should be four or five inches broad, and weigh from 15lb. to 20lb.

In using the iron the degree of heat is a consideration of the highest consequence, the just medium is only acquired by experience; if it is too cold, the effect of rendering the whole evenly flat, is not obtained: while on the contrary, a degree of heat at the burning point would destroy the fibres of the new canvas, and at somewhat less than this the total discoloration of the paint ensues. A careless person has sometimes thus converted a portrait into the complexion of a mulatto; white becomes tawny, and all other colours suffer a radical change.

The picture may now be placed on a new stretching or wedged frame, carefully and evenly made, and cross-barred for the smallest picture as well as the largest. The cross-barring is of great consequence to keep the picture firm and steady, and the bars should be doubled or tripled if the picture be of large dimensions. The frame must be made a little wider each way than the picture, and the part of the new canvas beyond the picture must be carefully glued to the stretching frame. Small tacks may also be used on the edges in the same manner as when prepared cloths are fastened to the frames used by artists for painting on. When the whole of this process has been completed, and a suffi-

cient time allowed for the cement to harden perfectly, the paper pasted on the surface may be carefully and gently removed by a sponge merely damped, and the wedges being driven close, the operation of lining is ended.

Professional liners use large stretching frames adapted to the width of a large canvas, and place two or more pictures together, according to their size, when the space admits, on this temporary stretching frame. This has the great advantage of preparing the picture for the new wedged frames, without requiring much driving of the wedges to obtain the perfect flatness which a newly lined picture should always possess.

Many pictures before lining are little more than a mass of fragments easily displaced from their proper position, or perhaps altogether lost. Some French liners, where the surface is very much broken up, secure the whole in its place by pasting a fine muslin over instead of paper: each mode has its advantages; but we have before said the safest way is to put the paper next to the picture. As this comes off in small fragments by damping, it is less liable to disturb the surface of a dilapidated picture which has been lined, than by wetting the muslin and skinning it off.

Should there be a hole in the picture of any size, a piece of any old worthless painting may be cut to the shape of the damage, and inserted with great accuracy before the new canvas is laid on: care, however, must be taken that it be a canvas of similar texture and

thread to that of the picture, and that the threads of the inserted piece be placed exactly parallel with those of the canvas of the picture. This is to be done by placing a piece of old canvas behind the part intended to be cut out, and by then cutting through both at the same time with a sharp knife, thus making sure that the piece to be inserted exactly fits the space cut out. This mode is every way preferable to filling the holes with large stoppings, as they are termed, inasmuch as it continues the grain equally on the surface, and assists materially to conceal the restoration of the damage.

During all operations of lining, and generally of cleaning pictures, saturation by water is highly dangerous: its utmost use should be limited to application by means of a squeezed piece of sponge, or, what is better, a piece of buff leather soaked, and wrung out. Water is a most dangerous enemy to pictures: it penetrates to the priming or grounds, loosening them by causing a decomposition of the size they are worked with, and thus laying the foundation for their entire breaking up and decay; imbibed damp will eventually destroy every woven stuff, and our daily experience shows its lamentable effects on the walls of our dwellings. It must be equally destructive to the canvas of our pictures, and to the materials which form its priming.

All the pictures of the early masters of the Italian School, with those by Claude and William Vandevelde, painted on the chalk and absorbent grounds, are in the

greatest danger if washed with water. It penetrates through the small crevices which may be in the paint, and often totally destroys the picture. If the picture be upon canvas, like those of the two latter named masters, it breaks into a thousand small lines or cracks. If upon panel, like the pictures of Raffaelle, Andrea del Sarto or Fra Bartolomeo, it breaks up the paint by scaling it off in small points of the size of a pin's head. In either case it is equally destructive. If the picture, again, is of the Spanish School, and is painted upon the red absorbent grounds, upon a rough canvas, water not only breaks the unity of its surface, but from the canvas being of a coarser texture than the pictures of Claude or William Vandevelde, it penetrates in a greater proportion, and scales it off frequently the breadth of a sixpence, especially in the dark shadows, or where the ground has not been sufficiently protected by a thick impasto of colour. At all times, and to all pictures, it is more or less dangerous, unless used with the greatest precaution, and then it ought only to be applied by the means of a piece of thick buckskin leather well wrung out, and left just wet enough to slip lightly over the surface of the picture. In the case of some masters, as those above particularly named, the free use of water may be regarded as next door to absolute destruction ; and the warmer and drier the weather, the operation becomes more active and ruinous. Instances have occurred in which an Andrea

del Sarto, a Claude and a William Vandevelde were destroyed in a few minutes by the injudicious use of simple water.

Great precaution and tenderness must be observed not to weaken or injure the threads, which are often, from the effects of age, very rotten. In using the mixture of glue and paste, it is not necessary to soak it in, or lay it on in quantity, but only to use enough to induce complete adhesion: and it ought to be here remarked, that before the business of lining any picture is undertaken, the dirt and varnish on the face of the picture should be cleaned off, as much as may be judged convenient, by the means hereafter described.

The difficult part of the proceeding is now to take place—using the hot iron. This has been previously adverted to, but cannot be too strongly impressed. The effect of heated iron brought into contact with paint, is known to every one, and a moment's reflection will bring to mind the consequences of an incautious or improper application. Tailors, hatters, and workers in other trades, by repeated practice, can tell the precise degree of heat which will answer their intended purpose: in such hands the heated iron is applied with the greatest safety. In lining pictures the least excess of heat beyond the degree required may occasion irreparable injuries. Pictures have been so burnt, that either a total and irremediable discoloration has ensued, or they have become so dried and

perished, that the particles have only been kept together by being abundantly imbued with stiff varnish. In the latter case the picture can never again be cleaned; in attempting to do so, the whole would come away from the canvas.

In using the heated iron the picture ought to be perfectly flattened by the weight alone; it is not to be rubbed over with manual force as linen is ironed by laundresses: nor ought it to be stamped down. By doing so every fragment on the surface, that had any projection from the ground, would be crushed, and all those small prominences of colour left by the artist for pictorial effect destroyed. What would become of a fine Rembrandt in his buttery manner of laying on colour, or a brilliant picture by Turner, if subjected to violent blows on the reverse side from a weighty mass of iron? If the picture has been painted in the fat manner with points or ridges of colour left by the brush standing up on the face of it, it is necessary when using the iron to place on the table a piece of close-woven woollen cloth, and let it interpose between the table and the face of the painting in the same manner as laundresses use an ironing cloth. If, on the contrary, the face of the picture is very smooth, it has most likely been painted with the colour much diluted with oil, or some similar vehicle, and in this case the iron must not be used so highly heated.

One inconvenience arising from lining paintings not

always foreseen, is, that if the picture is cracked over, or has any apertures in the paint, they sometimes become larger and so much more apparent, that after this operation, it becomes necessary to repair the cracks, or the painting looks much worse than it did before it was lined. This happens from the increased strain given to the threads of the canvas when on the stretching frame to dry; and from the expansion that takes place in driving home the keys of the new wedged frames.

As it sometimes happens that a hole is pierced in a picture which is otherwise quite sound, and still on a firm stretching-frame, it need not in such case undergo the lining operation; the damage may be made good by laying the picture down on a flat surface, and fastening a small piece of new canvas on the damaged part alone. Neither glue, gum, or paste, will cause it to adhere without leaving the form of the new patch visible on the face of the picture, but if powdered gum mastic is placed between them, and a hot iron squeezed over the place, the adhesion will be effectual, and be invisible on the surface.

CLEANING OF PAINTINGS.

The decayed, damaged, and faded conditions of pictures arise from so many and such varying circumstances, that they may be considered analogous to the diseases of human beings, and are occasioned also

by innumerable accidental causes. The following very sensible remarks on this subject are quoted from "Field's Chromatography:"—"Picture cleaning has become a mystery in which all the quackery of art has long been practised and profitably employed, and in which every practitioner has his favourite nostrum for doctoring, which too often denotes destroying, under the pretence of restoring and preserving. The restoration of disfigured and decayed works of art is, nevertheless, next in importance to their production.

"This medication of pictures is, then, no mean art, but is, when divested of quackery and fraud, as honourable in its bearing, as any other form of healing art; and to be well qualified for its practice, requires a thorough education and knowledge in everything that relates to the practice of painting, or the production of a picture, but more particularly to its chemical constitution and colouring. As, however, a picture has no natural, and little of a regular constitution, it will be difficult to give general rules, and utterly impossible to prescribe universal remedies for cleaning and restoring pictures injured by time and ill-usage."

Having seen what is to be encountered in cleaning pictures, the next consideration is the means to be employed: these may be divided into two parts, first, removing varnish: and, second, removing dirt or discoloration. For the latter purpose, ox-gall, applied with a soft brush, is an excellent detergent, and may

be freely applied without fear; it must, however, be well washed off with pure water, or it will leave a clamminess on the surface that may prevent the varnish afterwards applied from drying.

Before attempting to clean any picture which has been lined, the face of it should be carefully wiped with a damp rag, to take off the glue and paste which may have been left on the surface during this process, and afterwards slightly cleaned over with diluted ox-gall. The neglect of this, causes the attempt to clean the varnish off abortive; as the spirit has its action impeded by the interposition of the remains of this adhesive medium.

Various kinds of varnish having been in use, it is desirable to be acquainted with the nature of that which has been applied to the picture about to be cleaned, and the period when it was varnished. If the varnish is recent, it is more easily removed; but in proportion to its age it becomes difficult. In the latter case, it is frequently useful, before attempting the removal, to give the work a new coating of varnish, always previously wiping off all dust or dirt by a soft cloth, or a damp sponge: indeed this clearing off should be the very first operation in all cases. When the new varnish is dry, it will, on applying a solvent, be found to have attached itself to the old, and both may be removed without difficulty; whereas, without this preliminary coat, much friction may become necessary, and consequently injury ensue.

The solvents employed to remove varnishes are liquor potassæ, oil of tartar, spirits of wine, pure alcohol, liquor ammoniæ fortis, naphtha, ether, soda, and oil of spike lavender. The very nomenclature of these powerful agents will at once show the great risk of their being injudiciously or carelessly employed.

All pictures to be cleansed should be laid flat; for if placed either obliquely or upright, considerable danger is incurred by the solvent running down the surface of the picture. For instance, a slight stream of ammonia, or other strong solvent, may partially or entirely dissolve and carry away all the colour it meets with in its track of descent.

It must be observed, that in attempting to clean a picture, nothing short of good practice, and a knowledge of the chemical habitudes of the materials employed on the picture, can make the undertaking a safe one; so that an operator may be able, in case of accident, to fall back upon his judgment, and be prepared with an antidote instantly to arrest mischief.

For tender varnishes, such as mastic, spirits of wine may be employed with considerable safety: to make assurance doubly certain, it is desirable that the spirit, which is usually sold at 58 degrees of strength, should be diluted by a fourth part of water, or by the same proportion of rectified spirits of turpentine, or it may be used with an addition of a sixth part of linseed oil, added to the diluted, or to the pure spirit. In every

instance, the mixtures must be well shaken together every time of using.

The addition of turpentine to the spirit diminishes its action to a safer ratio, and has the beneficial effect of guarding, in some measure, against any consequences of friction. By the addition of linseed oil, the operator is enabled to see the full action of the spirit, without its being concealed by the bloom produced in its rapid evaporation.

The principal objection to the mixture of oil with spirit in cleaning, is, that the oil by affinity to the same medium with which the picture was painted, is certain to attack or soften the colours, and if the rubbing is continued from necessity, for any time, a portion of the paint may be brought away with the varnish, to the great damage of the picture.

If the picture be a figure subject, it is safest to begin with the flesh; if a landscape, with the sky, and in any subject with the brightest part. On a light colour, the action of the solvents is most readily and surely ascertained, and the necessary degree of dilution determined upon; the effect produced is more readily observed, and as all flesh tints, skies, and other bright parts are painted with colours, of which flake white forms a considerable proportion, these parts are always the hardest, and may therefore be more safely commenced upon than the thin shadows or glazes.

Having made a preliminary observation on the part

A better than cotton wool are small pieces of fine white linen (old pocket handkerchiefs) —

which it is proposed to commence upon, a small tuft of raw cotton wool must be slightly wetted with the prepared spirit, before described: hold this in the right hand; saturate another piece of wool with rectified spirits of turpentine, and hold this in the left hand. A

The picture being laid flat, commence wiping off the varnish from the already determined place on the surface of the picture with the wool that has imbibed the spirit. If it is the soft or mastic varnish so generally used it will come up with a slight friction, rubbing gently a very small portion of the surface of the picture in a circular direction. After two or three evolutions, examine the tuft of cotton wool, and you will find it discoloured, by its having taken up some portion of the varnish; turn the wool round to get a clean part, and use it till it is similarly discoloured; immediately wipe the place cleaned with the other piece of wool which is saturated with the turpentine.

The oftener clean wool is taken the better, as it is more readily seen when the paint is touched. The least deviation from the tone of the varnish on the cotton wool should be immediately attended to, as it is a sure sign of approaching danger, and the action should be stopped by applying the turpentine.

Turpentine is a counteracting medium, which instantly arrests the action of the solvent spirit. The wool must be changed as fast as it receives the dislodged varnish; for the varnish once taken on the

tuft, impedes the due action of the spirit by its interposition.

By following this process with the greatest attention to the appearance of the surface, the whole of the varnish on it may be entirely removed; and when this is completed, it should be wiped all over with spirits of turpentine; after the evaporation of which it may be immediately re-varnished; that is presuming the surface will be found in a perfect condition, and not require either retouches in slight damages, or restoration.

To re-varnish the picture, take two-thirds of mastic varnish, as sold by the colourmen who supply artists, and add one-third of spirits of turpentine; mix them well together: this ought to be done with the application of heat, but, as it is very dangerous to do so over a fire, it may be done by placing the varnish pot in a bowl of boiling water, until a vapour arises from the combined varnish and turpentine. Varnish the picture then with this preparation as thinly as possible, brushing briskly over every part with the varnish brush. This may be repeated two or three times, until it gives complete satisfaction. The only way to get it on smooth, is to repeat several of these thin layers. If the picture need restoration of colours, one coat of varnish is sufficient to bear out the colours for the purpose of repairing.

From the published Report of the Select Committee

of the House of Commons, it appears in evidence, that very many pictures have had a small proportion of oil mixed with the mastic varnish. This has been done with the idea of preventing the bloom or chilliness sometimes observed on newly varnished pictures. The practice is however much to be deprecated, as it can hardly ever be totally removed, becomes discoloured and will never afterwards admit but of its continuance, for varnish subsequently applied without the addition of the oil, would cause the pictures to crack all over.

There is another mode practised of rubbing off the varnish with the cuticle of the fingers; but this dry rubbing exacts considerable force, which is very injurious to fine pictures, often depriving them of their crispness of touch, and making the whole painting look woolly, while, by the prudent use of a solvent, in presence of a counteracting medium, no damage, with due care, will be inflicted.

In pictures representing marine vessels, the delicate lines of the rigging are certain of being rubbed out by friction, and it requires great attention to avoid disturbing them even by the use of the spirit.

When there is no varnish on a picture, and the discoloration arises from the smoke of fire-places, or is caused by the oil in which the colours are ground rising to the surface as the paint hardens, it can only be remedied by the use of a very fine grit, either of powdered pumicestone, or Flanders' brick, separate, or

united with some powdered whiting, according to the circumstances of the case; but this is more dangerous than any other mode in inexperienced hands.

For hard varnish, such as copal, a fine-edged knife or razor is sometimes employed, but it is both tedious and unsatisfactory, therefore the stronger solvents, such as liquor potassæ, or liquor ammoniæ fortis, are usually brought into action; but in proportion to the strength of the solvent, must the progress of the work be carefully watched or the least neglect may soon occasion a fatal accident.

It is hardly possible to give decided rules how to distinguish the different varnishes on a picture, so much depends on experience; but copal may mostly be known by its resistance to the use of the ordinary solvents. It is equally impossible to prescribe the exact quantities of the solvents to be employed on pictures generally, without a knowledge of the principles upon which they were individually executed, whether with solid colour, or with glazings in oil, varnish, or megilp; and what restoratives or repaints have been at various times added. Some acquaintance with the methods of the different schools and masters is necessary to account for the alterations, changes of tone, or state of decay, in which the pictures happen to be.

Any attempt to soften the varnish, by moistening, or allowing the solvent to float over the surface for a

time, before using the cotton to wipe up, is a most dangerous experiment; the necessity has already been shown of being prepared with the counteracting medium on the slightest appearance of mischief; therefore a powerful solvent allowed to remain acting chemically to decompose the varnish, may suddenly penetrate to the paint, and succeed in dislodging it in a mass from the ground.

When a picture has never received any varnish, it is not proper to apply a solvent at all to clean it. Solvents are only necessary to remove varnish. The course then to be adopted, is to wipe off as much dirt as possible by a piece of buff leather that has been damped and wrung nearly dry: and it will much assist the clearing off, if some powdered whiting is made use of, as soap usually is.

The common method of removing varnish by friction, is by rubbing the surface with the ends of the fingers, previously dipped in a little finely-powdered resin. By continuing this rubbing for some time, the varnish gives way, and may be completely removed. It will come up like an impalpable white powder, and should be constantly wiped off to allow the picture being seen, to ascertain when all the varnish is taken up, that the paint may receive no damage. The dust ought to be frequently wiped off, to ascertain that the picture is not receiving damage.

The objection to the use of friction by the fingers to

remove varnish, is the injury inflicted, more or less, on the paint. That continued friction, even of the softest bodies, will make impression on the hardest surface, is well known.

In canvas, where the threads cross each other in the weaving, they form a continuous grain of fine points. When paint is laid on this granulated surface, it sinks into the numerous depressions, and lies thinner on the raised parts forming the grain. Friction, therefore, rubs down the paint from these small eminences, particularly if a coarse canvas has been employed, so that, frequently, in cleaning a picture by friction, the colour at last remains only in the interstices of the threads, and presents an appearance of minute tracery, or reticulation, very similar to the web of bobbin net.

If the picture is painted on a panel, the fibres of the wood become more prominent with age, by desiccation, and the application of friction here will leave the painting with every minute grain marked by a fine line, showing the bare surface. The restoring of this kind of damage by colour, is a work of great tediousness and uncertainty.

The greatest difficulty met with in cleaning, is to take off those repaints which may at various times have been added. If they are of the true tints, and have been judiciously done, they should certainly be left undisturbed; but if any change of tone, destruc-

tive of the harmony of the work, is visible, they must be removed.

Caustic, soap-makers' ley, liquor potassæ, pure alcohol, and the scraper, are the ordinary means to take off repaints: all of them dangerous, if not closely watched and used without violence.

RESTORATION.

Having been sufficiently diffuse on the manner of cleaning the dirt and varnish from the surface of paintings, I now offer a few remarks on the restoration or reparation of damages or decay in pictures.

As there may be holes or fissures from accident or other causes, on the surface of either the panel or canvas on which the pictures have been painted, before proceeding to any rectification of colour, it will be necessary to fill up, or in the language of the craft, to stop up all such damages. This is usually done by working in firmly, with a palette knife, a paste made of whiting and parchment size of about the same consistence as putty; or, instead of parchment size, good stiff glue may be used with the whiting. If the picture has been painted on an oil ground, it may be very carefully filled in with white lead made into a thick consistence with linseed oil. In the first case, when the paste is quite hard and dry, the superfluous portion must be rubbed off by the gentle use of a piece of fine-grained cork, damped with a little water; and in the latter, a small

piece of soft-grained pumice-stone, with water. The picture should then be thoroughly cleaned on its surface by a rag dipped in turpentine, to take off all greasy matter; or it may be wiped over by a rag not wetted, but merely damped with ox-gall.

Should the picture have become very much obscured, through having been kept for a length of time in a very feeble light, it would be much benefitted by being placed opposite to a window, where it could receive a strong sunlight on it for two or three months. I have seen many pictures, which were nearly obscured from the preceding cause, restored to a greater lustre and brilliancy by such exposure alone. This is particularly the case with the early pictures of our English school, which may have been constantly placed in dark portions of apartments, or in ill-lighted halls and staircases.

Before any repair of the painting takes place, a very thin coat of mastic varnish, diluted and prepared as I have before described, must be laid on; this is necessary, to enable us to view the colours in their proper tone.

To obtain purity of colour, and durability of tint, it is absolutely necessary, firstly, to make use of those pigments only that are permanent. Secondly, that in mixing the tints to match the parts to be repainted, none but very clear and pure tints be used: by this I mean tints formed of as few colours as possible. It is

allowed, that a tint compounded of two colours or pigments only, is more permanent than one compounded of three; and equally so is a tint compounded of three colours, in preference to one compounded of four. Therefore, all tints used in repairing should be mixed as simply as possible, and not made up, as modern painters too frequently do, from a scumbling together of all the contents of the palette. Fuseli, in his lectures, remarks on the combination of tint, "two colours make a fine tint, three colours are less satisfactory, but four colours make *mud*." The next precaution is to mix all colours thoroughly, to work them well together with the palette-knife. The importance of this is not at first striking, but is of primary consequence; the neglect of doing so, will cause an unexpected change of tint. This ensues from the different density of the various pigments composing the tints, which, if not well worked together, the weighty colour sinks, and the less weighty one rises to the surface. With all colours prepared from lead and mercury, a horn or ivory palette knife should be used instead of the steel one; the abrasion of the latter in working together the tints required becomes an active cause of foul discoloration.

The colour should be worked as thick and pasty as is possible to use it, and not in the oily and sloppy condition of modern practice. Reference to the works of the old, and particularly to the earlier, masters,

which have stood the test of centuries, and come down to the present time in their primitive brightness, will convince us that it was their method to use pure tints, in the least fluid condition.

The tints used should always be a degree or shade brighter than the part they are matched to, otherwise, as they sink or acquire a darker tone in drying, the repairing touches will appear visible and detached; the neglect of this precaution will be apparent on hundreds of pictures, if connoisseurs carefully examine them.

The artistic part of the restoration of damage or decay requires little comment; it is evident that the possession of ability must be desirable, almost necessary in the restorer, in the same degree as in the original artist. Whoever presumes to add colour to a work of art should have a thorough understanding, a just appreciation of the fine qualities of the master, to be enabled to do so without deterioration of his excellencies. Who will question that a picture of Raffaelle may have an injury safely restored by the hand of an Eastlake, or a fine Claude by the magical pencil of a Danby, if they would so employ their great abilities?

When all the parts of a damaged picture are restored by the pencil of the artist, to ensure complete success, the work should be laid aside for some considerable time, perhaps three, or even six, months. If kept in a tolerably dry atmosphere, and not varnished, the paint

hardens, and the oil of the renewed paint will, by the process of desiccation, rise to the surface; it should then be carefully wiped off with turpentine, when the body of the colour will be left in the purest state possible: every damage or repair, if judiciously executed, being unobservable by the most scrutinizing eye. The same process would give the greatest light, purity of tone, and dazzling brilliancy to a modern picture, if this practice were pursued of getting off all superfluous oil which is thrown out by the drying of the colour, always using the colour in the most pasty condition possible to work with, and allowing some months to elapse before varnishing. But modern practice must oil out, as it is termed, to saturate the picture in process of painting, besides the employment of a multitude of nostrums rather than solid painting, after which an immediate varnish completes the heterogeneous combination.

Previous to varnishing a repaired picture, it may receive over its surface a slight layer of weak isinglass size. This is perfectly transparent, and has the advantage of offering an interposing medium between the varnish, and the new paint, which prevents their combination, and consequently, breaking up or cracking, should the new paint not have become sufficiently hard to resist the varnish.

It has been suggested that the use of body colours with a water medium would be the safest to prevent

the change of colours in the repairs. It might perhaps answer in the bright painted skies in landscape, water, &c., but it requires great artistic skill to manage its exact tone: there is no question of its being unchangeable, and this seems its only advantage.

There is another method adopted in the restoration of damages, which consists in the use of powder colours with copal varnish, or varnish megilp.

It cannot be denied that all pictures suffer some deterioration by being touched at all; the less that can be done to them the better: it should be just sufficient to bring them back as near to their original state as possible; and in every case works of value should be trusted to efficient hands only, if we would retain our property and have their excellencies perpetuated for the instruction and admiration of future ages.

THE END.

LONDON:
Printed by A. Schulze, 13, Poland Street.

Prize Medal of the Great Exhibition of 1851.

AWARDED TO WINSOR AND NEWTON,

CLASS II. (CHEMISTRY) FOR ARTISTS' COLOURS.

This was a Competitive Exhibition. Messrs. Winsor and Newton carried off the ONLY Medal that was awarded to the competitors, English and Foreign, for Artists' Colours.

Prize Medal of the International Exhibition, 1862.

AWARDED TO WINSOR AND NEWTON,

CLASS II. CHEMISTRY. SECTION A. NO. 627.

The award of a Prize Medal to Messrs. Winsor and Newton for their UNEQUALLED display of fine and costly Pigments, was accompanied by the following remarks from the Jurors, viz.:

"For a magnificent display of Artists' Colours, **and for their endeavours to substitute permanent colours for the more fugitive pigments used by Artists.**"

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WINSOR AND NEWTON'S

AUREOLIN.

A NEW PRIMITIVE YELLOW.

This beautiful and eminently valuable Yellow, the latest and certainly one of the most important contributions of science to the Artist's Palette, possesses so rare a combination of remarkable qualities, that it ranks in importance with genuine Ultramarine, on a perfect equality with that noble colour.

Pure, transparent, and lustrously *brilliant,* AUREOLIN is also absolutely *permanent.* It has been subject to every variety of the severest test and trial, and it has uniformly demonstrated in the most triumphant manner its powers of endurance—indeed, it may be said to defy every prejudicial influence, and to retain unimpaired its distinctive characteristics under all possible conditions.

Thus, AUREOLIN fills a void in their group of pigments that hitherto has been severely felt by artists, and, with ULTRAMARINE and ROSE MADDER, it completes *a triad of pure primitive colours of the highest order.*

AUREOLIN has a rich and vivid hue, which is remarkable from the fact of its closer resemblance to the pure colour of the solar spectrum than any other known Yellow. Its tints are well defined, and of exceeding purity. The lighter and fainter tints are at once clear and delicate, and admit the most subtle gradation of tone ; their permanence also is unquestionable.

AUREOLIN mixes readily with all other colours, and it forms combinations of the utmost variety and value. With Blues it produces a series of Greens of unrivalled brilliancy, and having a wide range of tone. With Cobalt, and more particularly with genuine Ultramarine, Rose Madder, and White, and also with Brown Madder, AUREOLIN forms Greys of exquisite delicacy and purity admirably adapted for the representation of transparent aërial tints, and for rendering with the happiest fidelity, soft, light, and thin effects of atmosphere. In the treatment of Foliage, AUREOLIN imparts the vividness and freshness of Nature to every colour with which it is combined ; and with Cobalt and Rose Madder, or Sepia, it gives most agreeable and delicate tints for distant trees.

As a colour for draperies, AUREOLIN has been pronounced to be without a rival. And, in like manner, it will invariably be found to realize the highest expectations, whether used by itself or with any of the other pigments.

Aureolin is prepared in Cake and Moist Water Colour, Oil Colour, and Powder Colour, and will be found in the lists of these preparations.

WINSOR AND NEWTON'S

LIST OF

WATER COLOURS,

DRAWING PAPERS,

WATER COLOUR BRUSHES,

AND MATERIALS FOR WATER COLOUR PAINTING.

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Manufacturing Artists' Colourmen, and Drawing Paper Stationers,
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WINSOR AND NEWTON'S COLOURS AND MATERIALS

CAN BE OBTAINED OF

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FINELY PREPARED

WATER COLOURS

IN CAKES AND HALF CAKES.

Whole Cake.

Half Cake.

List of Colours and Prices.

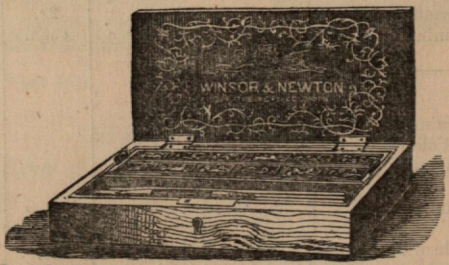
WHOLE CAKES 1*s.* each.	HALF CAKES 6*d.* each.
Antwerp Blue	King's Yellow
Bistre	Lamp Black
Blue Black	Light Red
British Ink	Naples Yellow
Brown Ochre	Neutral Tint
Brown Pink	New Blue
Bronze	Olive Green
Burnt Roman Ochre	Orange Chrome
Burnt Sienna	Payne's Grey
Burnt Umber	Prussian Blue
Chinese White	Prussian Green
Chrome Yellow	Raw Sienna
Cologne Earth	Raw Umber
Constant White	Red Chalk
Deep Chrome	Red Lead
Dragon's Blood	Red Ochre
Emerald Green	Roman Ochre
Flake White	Sap Green
Gamboge	Terre Verte
Hooker's Green, No. 1	Vandyke Brown
Hooker's Green, No. 2	Venetian Red
Indigo	Vermilion
Indian Red	Yellow Lake
Italian Pink	Yellow Ochre
Ivory Black	

	Whole Cakes.	Half Cakes.
Black Lead Brown Madder Chalon's Brown Crimson Lake Indian Yellow Mars Yellow Neutral Orange Purple Lake Roman Sepia Rubens' Madder Scarlet Lake Scarlet Vermilion Sepia Warm Sepia	1*s.* 6*d.* each.	9*d.* each.
Cobalt Blue Orange Vermilion Violet Carmine	2*s.* each.	1*s.* each.
Aureolin Burnt Carmine Cadmium Yellow Cadmium Orange Carmine French Blue Gallstone Green Oxide of Chromium Indian Purple Intense Blue Lemon Yellow Pale Cadmium Yellow Pink Madder Pure Scarlet Rose Madder Viridian	3*s.* each.	1*s.* 6*d.* each.
Field's Orange Vermilion Madder Carmine Mars Orange Purple Madder Smalt Ultramarine Ash	5*s.* each.	2*s.* 6*d.* each
Genuine Ultramarine	21*s.* each.	10*s.* 6d. each.
Ditto Quarter Cakes	5*s.* 6*d.* each.	

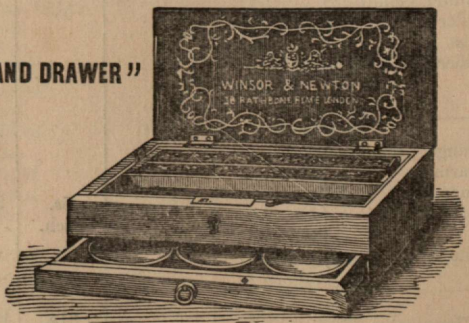
WINSOR AND NEWTON'S
WHOLE CAKE
WATER COLOUR BOXES, FITTED.

"SLIDE"  BOXES.

			£	s	d
6 Cake French Polished Mahogany "Slide" Lid Box, with brushes			0	6	0
12 Ditto	ditto	ditto	0	12	0
18 Ditto	ditto	ditto	0	18	0
24 Ditto	ditto	ditto	1	4	0

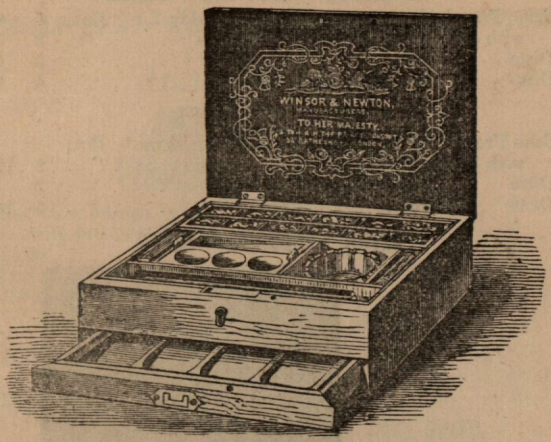
"LOCK"  BOXES.

			£	s	d
12 Cake French Polished Mahogany "Lock" Box with brushes, pencils, &c.			0	14	0
24 Ditto	ditto	ditto	1	0	0

"LOCK AND DRAWER"  BOXES.

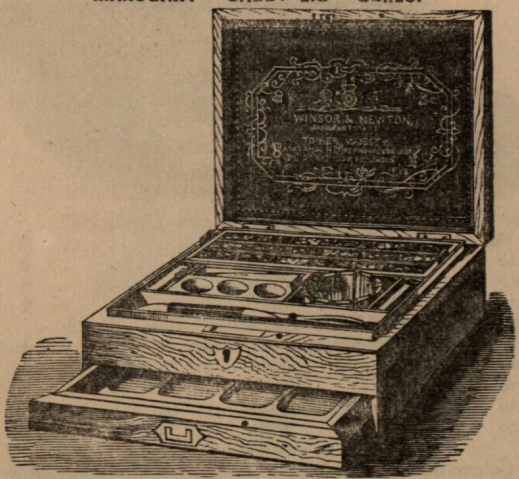
			£	s	d
12 Cake French Polished Mahogany, "Lock and Drawer" Box with brushes, saucers, pencils, &c.			0	15	0
24 Ditto	ditto	ditto	1	1	0

"COMPLETE" BOXES.



12	Cake French Polished Mahogany, 'Complete' Box, fitted	1	1	0
18	Ditto ditto ditto	1	10	0
24	Ditto ditto ditto . . .	2	2	0

MAHOGANY "CADDY LID" BOXES.



12	Cake French Polished *Mahogany* 'Caddy Lid' Box, fitted	1	11	6
18	Ditto ditto ditto	2	2	0
24	Ditto ditto ditto	3	3	0

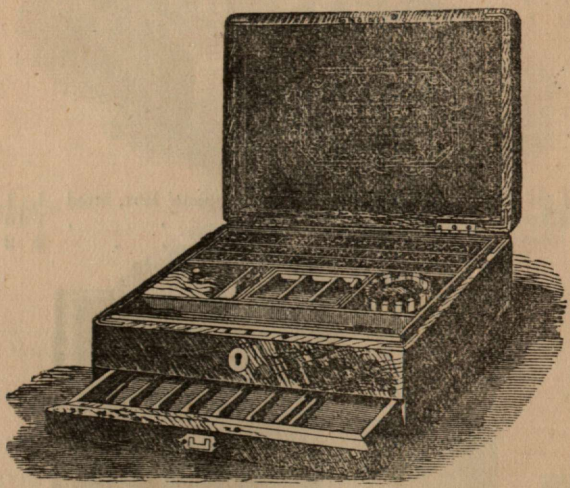
"ROSEWOOD CADDY LID" BOXES.

			£	s	d
12 Cake	French Polished *Rosewood* "Caddy Lid" Box, with sable brushes, and extra fittings . . .		2	5	0
18 Ditto	ditto	ditto	3	0	0
24 Ditto	ditto	ditto	4	0	0

"HANDSOME" BOXES.

			£	s	d
12 Cake	French Polished Mahogany "Handsome" Box, with best brushes and complete fittings . . .		2	12	6
18 Ditto	ditto	ditto	3	3	0
24 Ditto	ditto	ditto	4	12	6

"EXTRA HANDSOME" BOXES.



			£	s	d
12 Cake	French Polished Mahogany "Extra Handsome" Box with first class fittings		3	10	0
18 Ditto	ditto	ditto	4	5	0
24 Ditto	ditto	ditto	6	0	0
36 Ditto	ditto	ditto	9	0	0
12 Cake	Mahogany "Extra Handsome" Box, French Polished throughout, and with chocie fittings .		4	10	0
18 Ditto	ditto	ditto	5	10	0
24 Ditto	ditto	ditto	8	0	0
36 Ditto	ditto	ditto	12	0	0
50 Ditto	ditto	ditto	20	0	0

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"SLIDE" HALF CAKE BOXES.

		£	s	d
6	Half Cake French Polished Mahogany "Slide" Lid Box, with brushes	0	4	0
12	Ditto ditto ditto	0	6	6
18	Ditto ditto ditto	0	9	6
24	Ditto ditto ditto	0	12	6

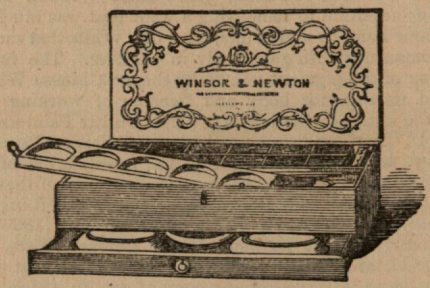
"LOCK" HALF CAKE BOXES.

		£	s	d
12	Half Cake French Polished Mahogany "Lock" Box, with brushes and pencil	0	10	0
18	Ditto ditto ditto	0	13	0

"LOCK AND DRAWER" HALF CAKE BOXES.

		£	s	d
12	Half Cake French Polished Mahogany "Lock and Drawer" Box, with fittings	0	12	0
18	Ditto ditto ditto	0	15	0

"COMPLETE" HALF CAKE BOXES.



		£	s	d
12	Half Cake French Polished Mahogany "Complete" Box with brushes and fittings	0	14	0
18	Ditto ditto ditto	0	18	0

"CADDY LID" HALF CAKE BOXES.

		£	s	d
12	Half Cake French Polished Mahogany "Caddy Lid" Box with brushes, pencils, stumps, and full fittings	1	0	0
18	Ditto ditto ditto	1	5	0

Rosewood and other Half Cake Colour Boxes made to order.

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A PREPARATION OF WHITE OXIDE OF ZINC,

THE MOST ELIGIBLE WHITE PIGMENT FOR WATER COLOUR PAINTERS.

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It is now upwards of *twenty years* since WINSOR and NEWTON turned their attention to remedying a want that was much felt by the Water Colour Painters of that day, viz. : of a White that should combine perfect permanency with good body in working. The invention and introduction of the pigment named by them "Chinese White" was the result, and its superior body and freedom of working immediately attracted the notice of the leading Water Colour Painters.

Mr. J. D. Harding being particularly desirous of ascertaining its permanency, and by submitting it to the examination of one of the greatest Chemists in Europe, having satisfied himself that it might be employed with perfect safety, strongly recommended it in preference to all the other white pigments. Ever since that time (1834) it has been in use by nearly all the Eminent Water Colour Artists, and it is a source of great satisfaction to WINSOR and NEWTON that they are able to say, that in no instance has any work of art, in which *their* White has been used, suffered from its employment, while prior to its introduction the complaints of Whites changing were of every day occurrence.

From the "Principles and Practice of Art," by J. D. Harding.

"When this pigment, which is prepared by Winsor and Newton under the name of Chinese White,' was first put into my hands, some years ago, I applied to one of my friends, whose name as a chemist and philosopher is amongst the most distinguished in our country, to analyze it for me, and to tell me if I might rely on its durability; the reply was, that if it would in all other respects answer the purposes I required of it, I had nothing to fear on account of its durability."

PRICE. 1*s.* per Bottle (or Tube).

WINSOR AND NEWTON'S

MOIST WATER COLOURS.

WINSOR AND NEWTON'S Moist Water-Colours are prepared after peculiar processes, and by a system of treatment known only to the Makers. Their characteristic qualities of easy solubility and prompt readiness for use are retained, unimpaired, for an unlimited period of time; so that a box of them, which may have been laid aside for two or three years, when required for use will be found *no less serviceable than when first purchased*. Climate also fails to affect these colours. Unlike the dry-cake colours, which are always liable to crack and crumble from the influences of atmosphere and heat, WINSOR AND NEWTON'S *Moist Colours* are found to be, and to remain, no less "Moist" in Tropical countries than in England; accordingly, they are confidently recommended to persons who are going to INDIA, and to all residents in the East.

In Sketching from Nature, and, when representing transient and evanescent effects, the superiority of the *Moist Colours* is at once felt and appreciated. Ever ready for instant application, they enable the desired colour to be produced *at once*—a result unattainable by the old tedious method of rubbing *dry cakes*, which not unfrequently permits the effect, and with it the *thought* of the artist to vanish, before the *material* can be obtained. It was this quality which, on their first introduction, secured for Winsor and Newton's *Moist Colours* the eminent popularity that they still enjoy with both professional and amateur artists.

The *Moist Colours* are placed in pans (in their size resembling the ordinary dry-cakes) of thin porcelain, and they are afterwards enclosed in tin-foil for greater security. When required for use, the foil is removed. A surface of colour is thus presented to the artist, which is obtainable in any quantity, simply by the application of a wet brush.

Extract from Mr. J. D. HARDING'S *Work, "The Principles and Practice of Art."*

"The Art of Painting in Water Colours has been greatly assisted by improvements in the preparations of the pigments; the greatest advantage, however, has been the introduction of *Moist Colours*, which, I believe, are a French invention, *but greatly improved by* Messrs. Winsor and Newton."

WINSOR AND NEWTON'S

MOIST WATER COLOURS

IN WHOLE AND HALF CAKE PANS.

Whole Cake Pan.

Half Cake Pan.

List of Colours and Prices.

WHOLE PANS, 1*s.* each.	HALF PANS, 6*d.* each
Antwerp Blue	Light Red
Bistre	Naples Yellow
Blue Black	Neutral Tint
Brown Ochre	Olive Green
Brown Pink	Orange Chrome
Burnt Roman Ochre	Payne's Grey
Burnt Sienna	Prussian Blue
Burnt Umber	Prussian Green
Chinese White	Raw Sienna
Chrome Yellow	Raw Umber
Cologne Earth	Red Chalk
Deep Chrome	Red Ochre
Emerald Green	Roman Ochre
Gamboge	Sap Green
Hooker's Green, No. 1	Scarlet Chrome
Hooker's Green, No. 2	Terre Verte
Indigo	Vandyke Brown
Indian Red	Venetian Red
Italian Pink	Vermilion
Ivory Black	Yellow Lake
Lamp Black	Yellow Ochre
Leitch's Brown	

MOIST WATER COLOURS

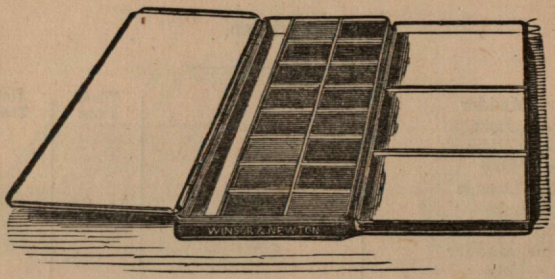
IN WHOLE AND HALF CAKE PANS.

CONTINUED.

	Whole Pans.	Half Pans.
Brown Madder Crimson Lake Indian Yellow Mars Yellow Neutral Orange Purple Lake Roman Sepia Rubens' Madder Scarlet Lake Scarlet Vermilion Sepia Warm Sepia	1*s.* 6*d.* each.	9*d.* each.
Cobalt Blue Orange Vermilion Violet Carmine	2*s.* each.	1*s.* each.
Aureolin Burnt Carmine Cadmium Orange Cadmium Yellow Carmine French Blue Gallstone Green Oxide of Chromium Indian Purple Intense Blue Lemon Yellow Pale Cadmium Yellow Pink Madder Pure Scarlet Rose Madder Viridian	3*s.* each.	1*s.* 6*d.* each.
Mars Orange Purple Madder Smalt Ultramarine Ash	5*s.* each.	2*s.* 6*d.* each.

WINSOR AND NEWTON'S

BOXES OF MOIST WATER COLOURS.



The boxes are made of japanned tin, and their flaps, being of a dead white colour inside, serve as palettes. *The selections of Moist Colours placed in them have been made with great care, and after due study of the various lists of the first Water Colour Artists.*

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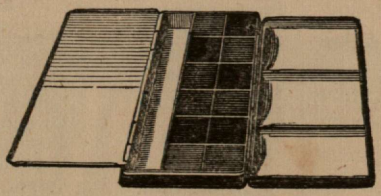

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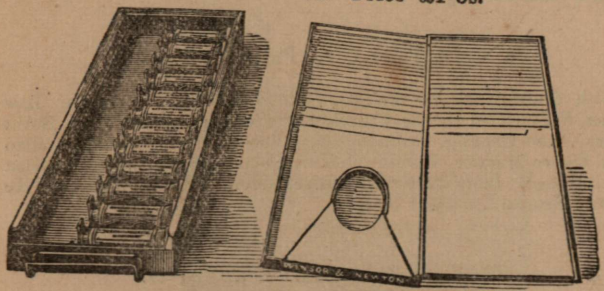

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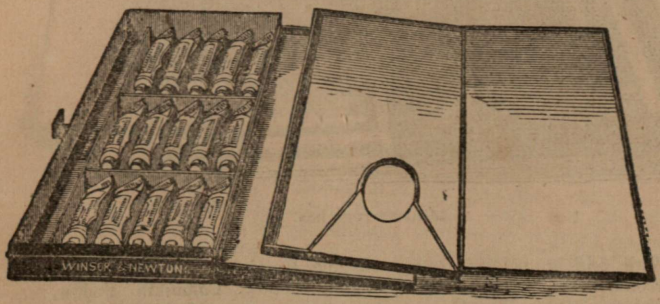

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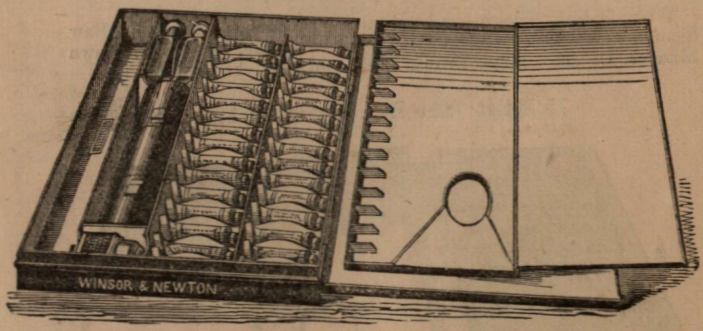

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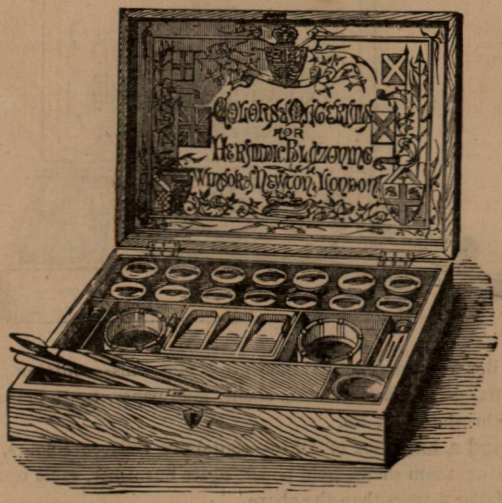

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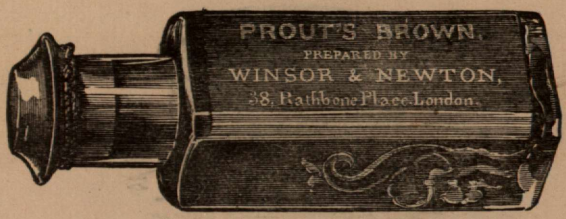

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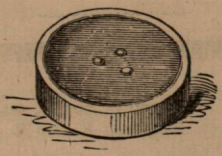

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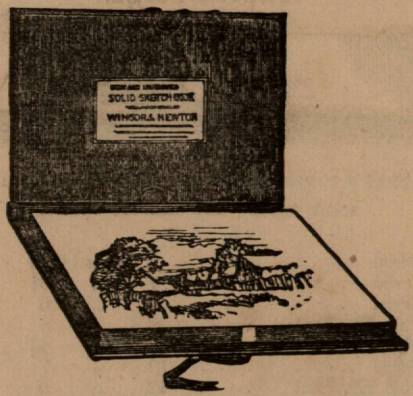

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IN WHATMAN'S PAPER, OR TINTED CRAYON PAPER, ASSORTED.

HALF BOUND, AND ELASTIC BANDS.

						s.	d.
32mo.	Imperial	. . . .	5	inches by	3½	each	1	6
24mo.	Imperial	. . . .	7	„	3¼	„	2	0
16mo.	Imperial	. . . .	7	„	5	„	2	6
16mo.	Double Elephant	. .	9	„	6	„	3	6
12mo.	Imperial	. . . .	10	„	4½	„	3	6
8vo.	Imperial	. . . .	10	„	7	„	4	6
8vo.	Double Elephant	. .	12	„	9	„	6	0
4to.	Imperial	. . . .	14½	„	10	„	7	6

SOLID SKETCH BOOKS AND BLOCKS.

MADE OF WHATMAN'S 90LBS. PAPER.

Not, Hotpressed, or Rough.

						Half bound. s.	Half bound. d.	Blocks. s.	Blocks. d.
16mo.	Royal	. . .	5½	inches by	4½ each	2	6	1	6
16mo.	Imperial	. . .	7	„	5 „	3	0	2	0
8vo.	Royal	. . .	9	„	5½ „	3	6	2	6
8vo.	Imperial	. .	10	„	7 „	5	0	3	6
4to.	Royal	. . .	11½	„	9 „	7	0	4	6
4to.	Imperial	. .	14	„	10 „	9	6	6	6
½	Royal	. . .	18	„	11½ „	14	0	9	6
½	Imperial	. .	20	„	14 „	18	6	12	6

BLOCKED SKETCH BOOKS,

HALF BOUND WITH ELASTIC BANDS.

Made of Whatman's and other Papers to order.

DRAWING BOOKS.

Paper sides, &c., at 3*d*., 6*d*., 9*d*., 1*s*., and 1*s*. 6*d*. each.

London, 38, Rathbone Place,

November, 1870.

Messrs. Winsor and Newton beg respectfully to state that the cost of

Brown and Red Sable Hair

having gradually increased for some time past, and having culminated in a rapid and enormous rise, they are compelled to raise the prices of many of their Brushes as follows, viz.:—

FINEST BROWN AND RED SABLES IN QUILLS.

	s.	d.
Crow Quill . . . . . each	0	6
Duck „ . . . . . „	0	8
Goose „ . . . . . „	1	0
Small Goose Quill . . . . . „	0	10
Extra Goose „ . . . . . „	1	6
Extra Small Swan Quill . . . . . „	4	0
Small Swan Quill . . . . . „	6	0
Middle „ . . . . . „	8	0
Large „ . . . . . „	10	0

FINEST BROWN AND RED SABLES IN ALBATA.

FLAT AND ROUND.

	s.	d.		s.	d.
No. 1 . . . each	1	0	No. 5 . . . each	2	6
„ 2 . . . „	1	3	„ 6 . . . „	3	0
„ 3 . . . „	1	6	„ 7 . . . „	4	0
„ 4 . . . „	2	0			

FINEST BROWN AND RED SABLES IN ALBATA.

FLAT AND ROUND.

EXTRA LARGE SERIES.

	s.	d.		s.	d.
No. 1 . . . each	6	0	No. 4 . . . each	15	0
„ 2 . . . „	9	0	„ 5 . . . „	18	0
„ 3 . . . „	12	0	„ 6 . . . „	21	0

Note.—Nos. 4, 5, and 6 made in Brown Sable only.

Glass Painting Brushes—Same Prices as Water Colour Sables in Tin.

Foliage Brushes—Same Prices as Dyed Sables in Tin.

BROAD RED SABLES IN ALBATA.

FOR WASHES, DELICATE VARNISHING, &c.

	s.	d.		s.	d.
½ inch . . . each	2	0	1½ inch . . . each	6	0
¾ „ . . . „	3	0	2 „ . . . „	8	0
1 „ . . . „	4	0	2½ „ . . . „	10	0

SKY OR WASH BRUSHES.

	s.	d.
Siberians in Tin, Flat . . . . . each	1	0
„ Quill, Round . . . . . „	2	0
Wash Dyed Sables in Tin, Flat and Round . . . „	3	6
Wash Dyed Sables in Albata, Flat and Round . . . „	4	6

RED SABLES IN TIN FOR OIL PAINTING.

FLAT AND ROUND.

	s.	d.		s.	d.
No. 0 and 1 . . each	0	6	No. 6 . . . each	1	6
„ 2 . . . „	0	8	„ 7 . . . „	2	0
„ 3 . . . „	0	10	„ 8 . . . „	2	6
„ 4 . . . „	1	0	„ 9 . . . „	3	0
„ 5 . . . „	1	3			

RED SABLE "FAN BRUSHES" IN TIN.

FOR LIGHT GLAZING, SOFTENING, HAIR, FOLIAGE, &c.

	s.	d.
Nos. 1, 2 and 3 . . . . . each	1	6
Nos. 4, 5 and 6 . . . . . „	2	0

SKETCH BOOKS,

STIFF CLOTH SIDES AND STITCHED.

Made of Hollingworth Papers.

			Plain.		Interleaved	
			s.	*d.*	*s.*	*d.*
8vo. Demy	7 inches by 4½	each	0	9	1	0
8vo. Medium	8 „ 5	„	1	0	1	3
8vo. Royal	9 „ 5½	„	1	3	1	6
4to. Demy	9½ „ 7	„	1	6	1	9
8vo. Imperial	10 „ 7	„	1	9	2	0
4to. Medium	10½ „ 8	„	2	0	2	6
4to. Royal	11½ „ 9	„	2	6	3	0
4to. Imperial	14½ „ 10	„	3	6	4	0

SUPERIOR PORTFOLIOS.

CLOTH SIDES, ROAN BACKS AND CORNERS, AND SILK STRINGS, WITH OR WITHOUT HOLLAND FLAPS.

Half Demy	15½ in. by 10½
4to Imperial	15 „ 11
Music	16 „ 11
Half Medium	17 „ 11½
Half Royal	19 „ 13
Demy	21 „ 15½
Half Imperial	22 „ 16
Medium	22 „ 17
Royal	25 „ 19
Super Royal	27 „ 20
Imperial	31 „ 22
Atlas	34 „ 26
Columbier	36 „ 24
Dble Elephant	40 „ 28

Superior Portfolios, half bound, Morocco backs and corners, with or without Patent Locks, also kept in stock.

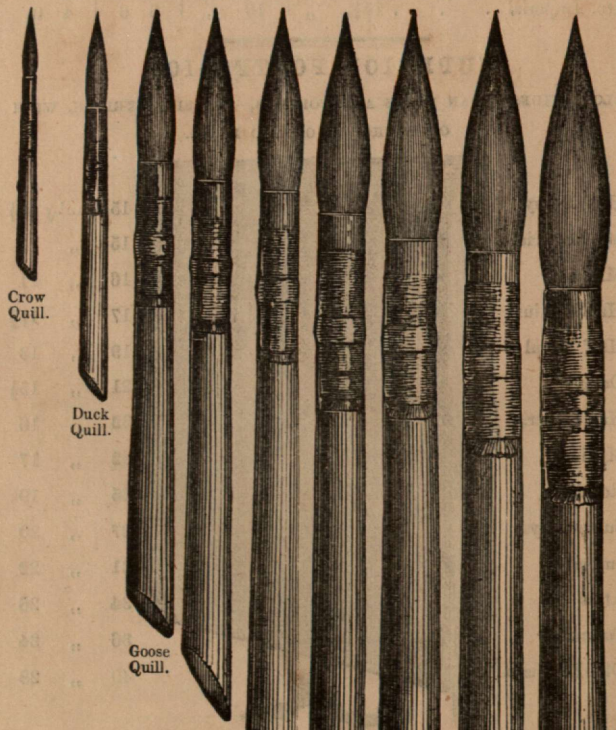
WINSOR AND NEWTON'S

BRUSHES

FOR WATER COLOUR PAINTING.

Messrs. Winsor and Newton solicit especial attention to their stock of Water Colour Sable Brushes which will be found most complete and of the finest quality; being manufactured by the most skilful makers, and of pure and genuine sable hair of the most costly description.

FINEST SABLE BRUSHES IN QUILLS.



For prices see next page.

FINEST BROWN SABLE BRUSHES IN QUILLS.

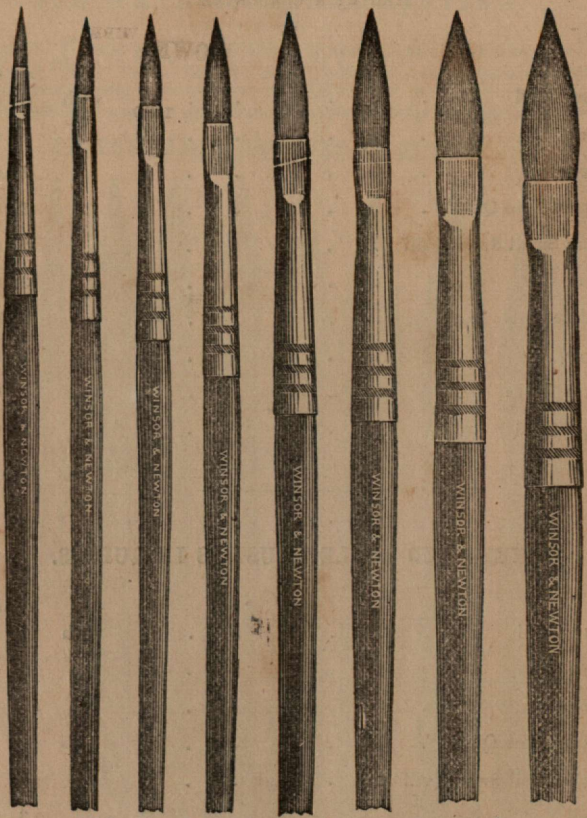
TIED WITH GOLD WIRE.

		s.	d.
Crow Quill	each	0	6
Duck „	„	0	8
Goose „	„	1	0
Extra Goose Quill	„	1	6
Extra Small Swan Quill	„	2	6
Small „	„	3	6
Middle „	„	5	6
Large „	„	7	6
Extra Large „	„	10	0
Eagle Quill from	„	21	0

FINEST RED SABLE BRUSHES IN QUILLS.

		s.	d
Crow Quill	each	0	4
Duck „	„	0	6
Goose „	„	0	9
Extra Goose Quill	„	1	3
Extra Small Swan Quill	„	2	0
Small „ „	„	3	0
Middle „ „	„	4	0
Large „ „	„	5	6
Extra Large „	„		—

WINSOR AND NEWTON'S
WATER COLOUR
FLAT SABLES IN ALBATA.



0 1 2 3 4 5 6 7

BROWN OR RED.

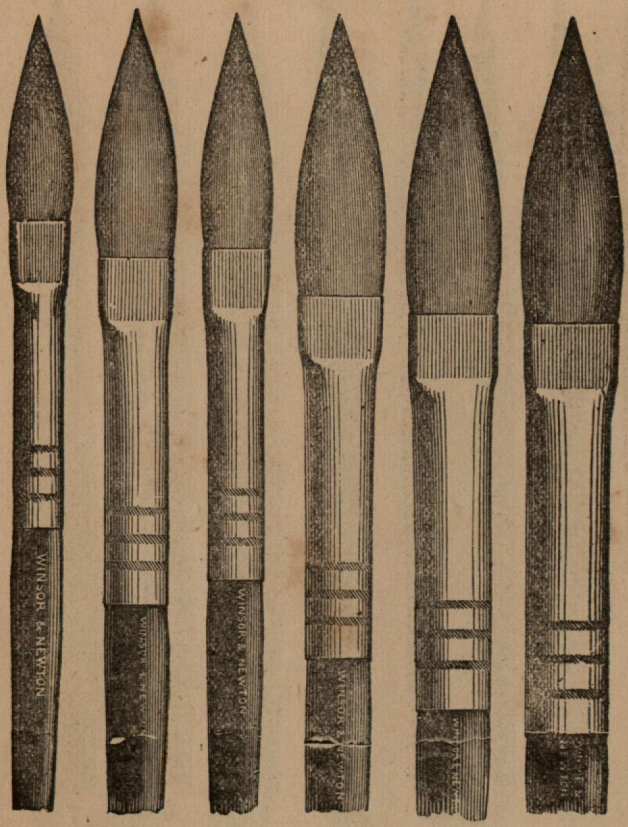
		s.	d.			s.	d.
No. 0	each	1	0	No. 4	each	1	9
No. 1	„	1	0	No. 5	„	2	0
No. 2	„	1	3	No. 6	„	2	6
No. 3	„	1	6	No. 7		3	0

WINSOR AND NEWTON'S

WATER COLOUR

FLAT SABLES IN ALBATA.

EXTRA LARGE SERIES.

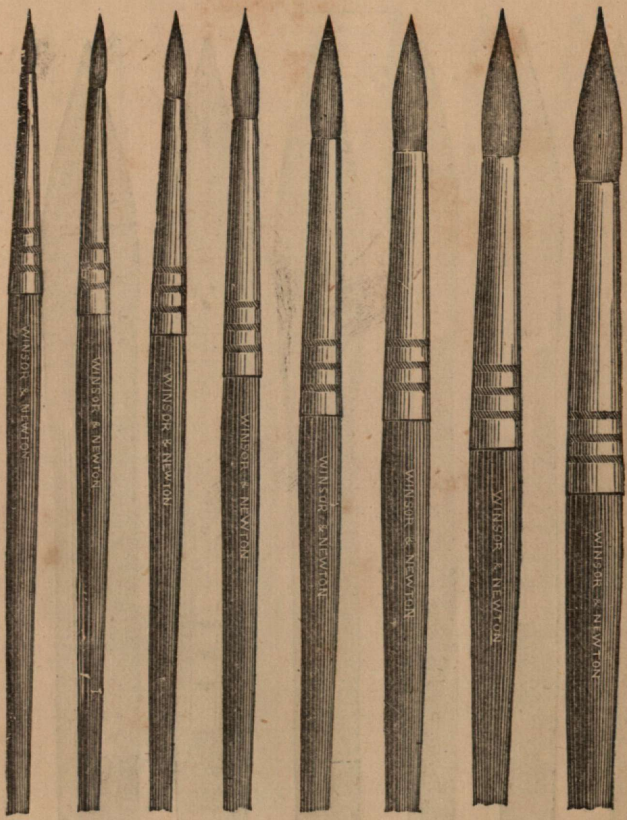


1 2 3 4 5 6

BROWN OR RED SABLE.

		s.	d.			s.	d.
No. 1	each	3	6	No. 4	each	9	0
No. 2	„	5	0	No. 5	„	11	6
No. 3	„	7	0	No. 6	„	14	

WINSOR AND NEWTON'S
WATER COLOUR
ROUND SABLES IN ALBATA.



0 1 2 3 4 5 6 7

BROWN OR RED SABLE

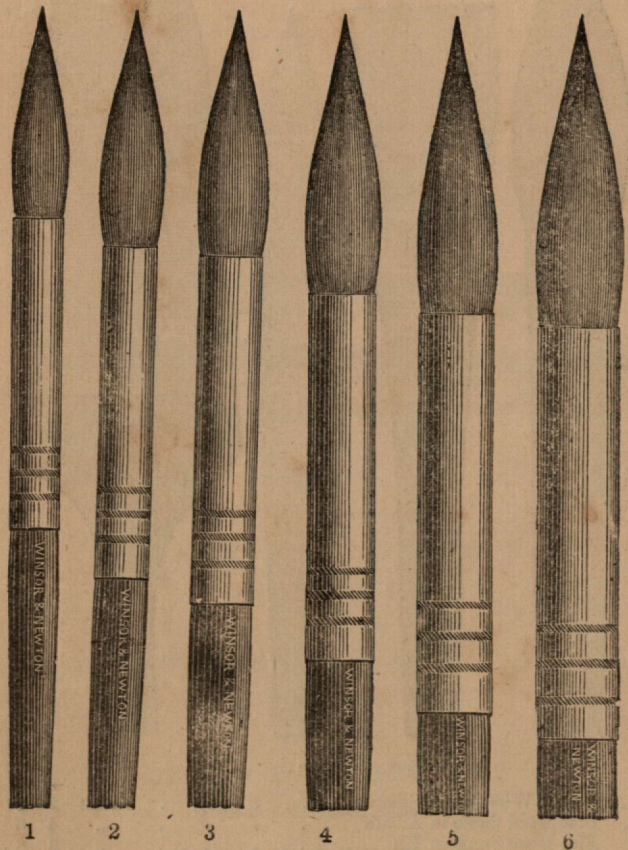
		s.	d.			s.	d.
No. 0 . .	each	1	0	No. 4 . .	each	1	9
No. 1 . .	„	1	0	No. 5 . .	„	2	0
No. 2 . .	„	1	3	No. 6 . .	„	2	6
No. 3 . .	„	1	6	No. 7	„	3	0

WINSOR AND NEWTON'S

WATER COLOUR

ROUND SABLES IN ALBATA.

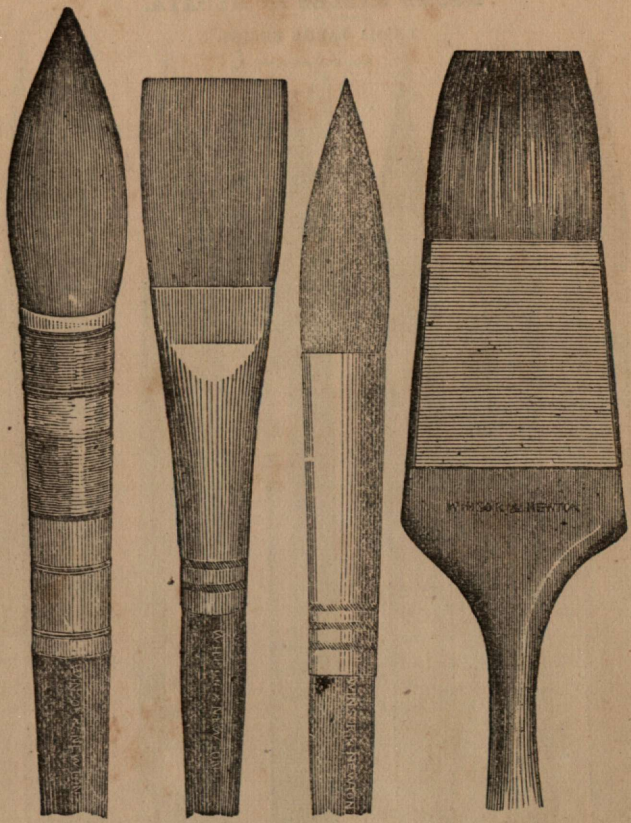
EXTRA LARGE SERIES.



1 2 3 4 5 6

BROWN OR RED SABLE.					BROWN SABLE ONLY.				
			s.	d.				s.	d.
No. 1	. .	each	5	6	No. 4	. .	each	13	0
No. 2	. .	„	7	6	No. 5	. .	„	15	6
No. 3	. .	„	10	0	No. 6	. .	„	18	0

WINSOR AND NEWTON'S
SKY OR WASH BRUSHES.



A. B. C. D.

			s.	d.
A.	Round Wire bound Siberian	each	2	6
B.	Flat Dyed Sable in Albata	„	4	6
	Flat Dyed Sable in Tin	„	3	6
C.	Round Dyed Sable in Albata	„	4	0
	Round Dyed Sable in Tin	„	3	0
D.	Flat Red Sable in Albata	per inch	2	0
	Flat Camel Hair in Tin	„	0	6

FINE SIBERIAN HAIR BRUSHES IN QUILLS.

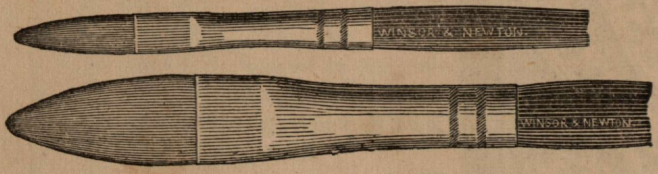
TIED WITH SILVER WIRE.

		s.	d.
Crow Quill	each	0	1
Duck „	„	0	2
Goose „	„	0	3
Extra Small Swan Quill	„	0	8
Small „	„	1	0
Middle „	„	1	6
Large „	„	2	6

These Brushes correspond with Illustrations at page 30.

J. D. HARDING'S STIFF WATER COLOUR BRUSHES.

MADE OF THE FINEST LYONS HAIR.



		s.	d.
Nos. 1 to 6, each size or assorted	each	1	0

FLAT FOLIAGE BRUSHES.

MADE OF DYED SABLE HAIR.

BRUSHES FOR GLASS PAINTING.

MADE OF RED SABLE HAIR.

CAMEL HAIR BRUSHES

OF EVERY DESCRIPTION.

Artists' Brushes of every description made to order.

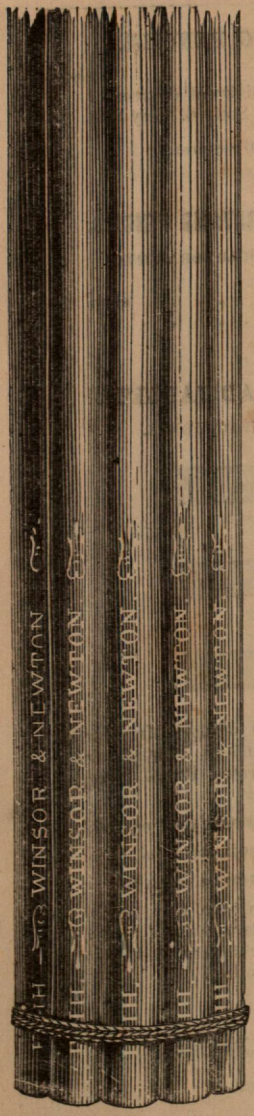
WINSOR AND NEWTON'S

EXTRA CUMBERLAND LEAD

DRAWING PENCILS.

These Drawing Pencils are manufactured of the finest Cumberland Lead, warranted perfectly free from grit. As they contain double the quantity of Lead usually placed in Pencils of this description, they give forth a good volume of colour, and when in use they work smoothly and evenly, and may be handled with perfect freedom.

		Each.
HHHH.	Extremely hard (for Engineering or Drawing on Wood)	6*d.*
HHH.	Very hard (for Architectural Drawing)	
HH.	Hard (for fine Outline Drawing)	
H.	Moderately hard (for light sketching)	
FF.	Very firm (for light shading)	
F.	Firm (for fine Drawing)	
HB.	Hard and Black (for free sketching)	
B.	Black (for ordinary shading)	
BB.	Soft Black (for deep shading)	
BBB.	Very Black (for extra deep shading)	9*d.*
EHB.	Extra Hard and Black (for very bold sketching)	
BBBB.	Extra Soft and Black (for full, rich, deep shading)	1*s.*



WINSOR AND NEWTON'S

IMPROVED

DRAWING PENCILS.

IN POLISHED CEDAR, WITH GILT LETTERS.

These improved Drawing Pencils are strongly recommended for their richness of colour, variety of tint, evenness of texture, and strength of Lead. They combine freedom of handling with firmness of *matériel* (they can be cut to the finest point without fear of its being broken.) With Artists and Professors of eminence they are now in general use, and on their recommendation have been adopted by the Schools of Art, Colleges, and large Drawing Academies.

		Each
HHHH.	Extremely hard (for Engineering or Drawing on Wood)	2*d.*
HHH.	Very hard (for Architectural Drawing)	
HH.	Hard (for fine Outline Drawing)	
H.	Moderately hard (for light sketching)	
F?.	Very firm (for light shading)	
F.	Firm (for fine Drawing)	
HB.	Hard and black (for free sketching)	
EHB.	Extra Hard and Black (for very bold sketching)	
B.	Black (for ordinary shading)	
BB.	Soft Black (for deep shading)	
BBB.	Very Black (for extra deep shading)	4*d.*
BBBB.	Extra Soft and Black (for full, rich deep shading) . . .	6*d.*
6 B.	Ditto with very broad Lead .	8*d.*
10 B.	Ditto with the broadest Lead .	1*s.*

J. D. HARDING'S DRAWING PENCILS.

Per Case.

In cases each containing a set of six or four different degrees of lead, and numbered 1. Hard, 2. Medium, 3. Soft, 4. Very Soft 3*s*.

The Pencils can be had separately if required.

WINSOR AND NEWTON'S OBLONG DRAWING PENCILS.

MADE OF VERY BROAD LEAD FOR BOLD DRAWING.

4 H to BB . . .	each 6*d*.	4 B . . .	each 10*d*.
3 B and EHB . .	„ 8*d*.	6 B . . .	„ 1*s*.

J. D. HARDING'S PATENT LEAD TABLETS.

WINSOR AND NEWTON SOLE MANUFACTURERS.

The very limited range of the Lead Pencil induced Mr. Harding many years ago to contrive these Tablets, which he ever afterwards used, and with which he executed his celebrated Pencil Sketches, Studies, and Drawings.

One star (hard), two stars (middle), three stars (soft) each 6*d*.

Extra hard, each 6*d*. Extra soft, each 9*d*.

Holders (with propellors) each 1*s*. Stumps, each 6*d*

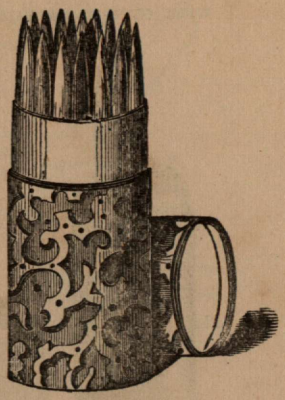
Complete Working Set comprising two each, one, two, and three star Tablets; three holders with propellors; two stumps (one each size); box with file and pad; japanned box for Tablets; and japanned box for containing Tablets, Holders, and Stumps . . . 10*s*.

Creta Levis Pencils. Chalk Pencils.

Conté Black Chalk Crayons.

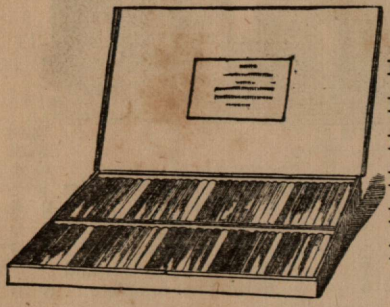
HARD FRENCH PASTEL CRAYONS.

BEST QUALITY.



			s.	d.
Boxes containing	12	each	1	0
„	18	„	1	6
„	24	„	2	0
„	30	„	2	6
„	36	„	3	0
„	48	„	4	0

SOFT FRENCH CRAYONS.



				s.	d.
No. 1	containing	26	each	3	6
No. 2	„	42	„	5	0
No. 3	„	56	„	7	6
No. 4	„	62	„	10	6
No. 5	„	129	„	21	0
No. 6	„	156	„	31	6

STUDENTS' CRAYONS.

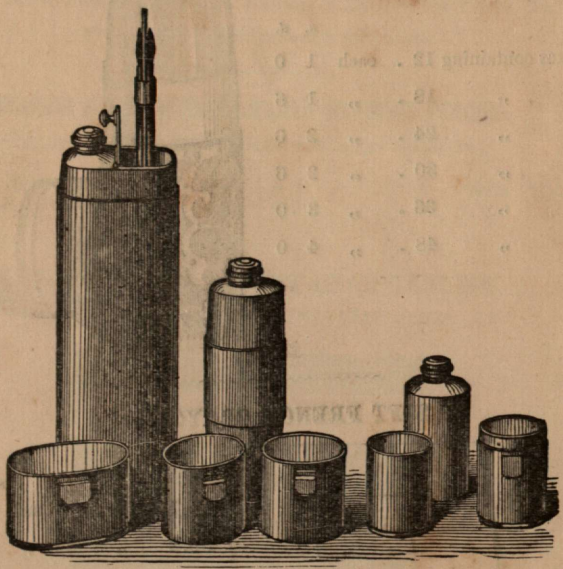
These Crayons are of superior quality. They work very smoothly and evenly, freely give out colour, are carefully gradated in point of tone, and constitute a perfect chalk drawing *matériel.*

Hard, Middle, and Soft Black Students' Crayons	.	per dozen	6*d.*
White and Red ditto	.	„	6*d.*
Boxes containing 1 dozen assorted Students' Crayons	.	each	6*d.*

Pure White Chalk. Stumping Chalk. Lithographic Chalks.

JAPANNED WATER BOTTLES

WITH CUPS TO CONTAIN THE WATER WHEN IN USE.



	Each. s.	d.
Oval Copper plated Water Bottles and Cups .	4	6
Ditto larger .	5	6
Broad Oval Copper Plated . . .	7	6
Ditto larger .	8	6

	Each s.	d.
Round Tin Water Bottles and Cups . . .	2	6
Oval Imitation plated ditto	3	0
Ditto larger .	3	6
Sketcher's Bottle and Brush Case complete .	6	0

EMPTY JAPANNED MOIST COLOUR BOXES.

See illustration at page 12.

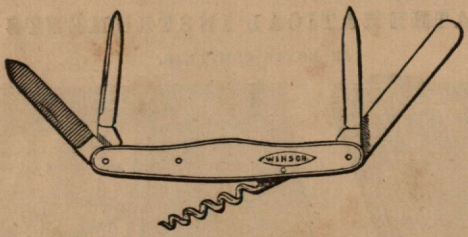
	Each s.	d.
For 3 Colours	3	0
For 6 „	4	0
For 8 „	4	6
For 10 „	5	0

	Each s.	d.
For 12 Colours	5	6
For 14 „	6	0
For 16 „	6	6
For 18 „	7	0

	Each s.	d.
For 20 Colours	7	6
For 22 „	8	0
For 24 „	9	0
For 30 „	11	6

Half Cake Boxes also kept in Stock.

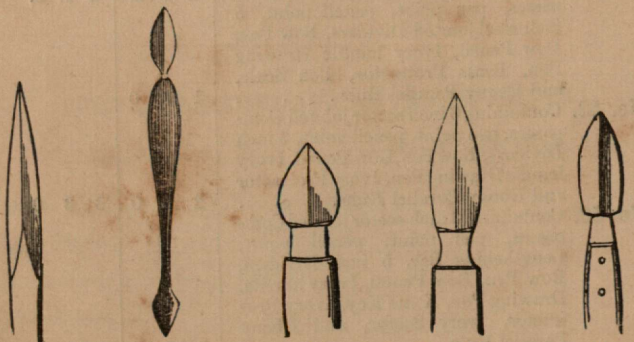
POCKET KNIVES.



No. 7. Artist's Knife, complete.

Pencil Knives No. 1, 2, and 3 at 9*d*., 1*s*., and 1*s*. 6*d*. each.
Erasing Knives Nos. 4 and 5 at 2*s*. 6*d*., and 3*s*. 6*d*. each.
Artists' Knives Nos. 6 and 7 at 4s. 6*d*., and 6*s*. 6*d*. each.

SCRAPERS AND ERASERS.



1 3 4 5 and 6 7

	Each s.	Each d.		Each s.	Each d.
Plain Steel Scrapers No 1.	0	6	Cocoa handled Erasers No 5	1	3
Illuminating Erasers No 3.	1	0	Ebony handled Erasers No 6	1	6
Cocoa handled Erasers No 4	1	0	Ivory handled Erasers No 7	2	0

PORTCRAYONS

Best Brass Portcrayons each 6*d*. Albata ditto each 9*d*. Steel ditto each 1*s*.

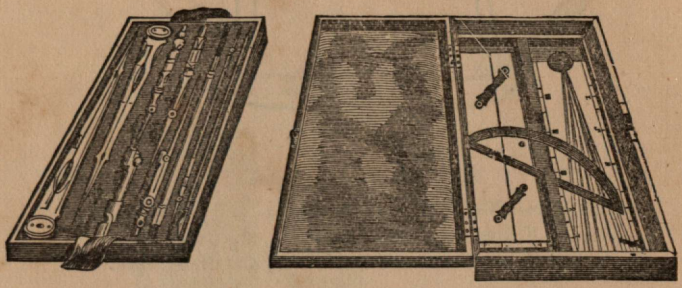
DRAWING PINS.

Common Brass Drawing Pins, per doz. 6*d*. Best ditto, per doz. 1*s*.
Best Albata ditto, per doz. 1*s*. 6*d*. Large Sizes extra.

BEST LONDON MADE

MATHEMATICAL INSTRUMENTS

IN BOXES COMPLETE.



		Best Brass £ s. d.	Best Electrum £ s. d.
No. 51.	Containing 6 inch steel jointed Compasses, pen point, pencil point, 5 inch steel jointed Dividers, Bow Pen, Bow Pencil, Ivory handle Drawing Pen, Brass Protractor, Box Scale, and Ebony Parallel Rule . . .	1 5 0	
No. 52.	Containing 6 inch sector jointed Compasses, pen point, pencil point, 5 inch Dividers, Bow Pen, Bow Pencil, Ivory handle Drawing Pen, Ivory Protractor and Ebony Parallel Rule . . .	2 2 0	3 3 0
No. 53.	Containing 6 inch sector jointed Compasses, pen point, pencil point, Lengthening Bar, 5 inch Dividers, Bow Pen, Bow Pencil, Ivory handle, Drawing Pen, Knife Key, Ivory Protractor, Ivory Sector, and Ebony Parallel Rule	2 15 0	3 15 0
No. 54.	Containing 6inch sector jointed Compasses, pen point, pencil point, Lengthening Bar, 5 inch Hair Dividers, Bow Pen, Bow Pencil, Ivory handle Drawing Pen, Knife Key, Ivory Protractor, Ivory Sector, and Ebony Parallel Rule . .	3 10 0	4 10 0
No. 55.	Containing 6 inch double jointed Compasses, pen point, pencil point, Lengthening Bar, 5 in. Hair Dividers, double jointed Bow Pen, double jointed Bow Pencil, 2 Ivory handle Drawing Pens, Knife Key, Ivory Protractor, Ivory Sector, and Ivory Parallel Rule	4 15 0	5 15 0

	Best Brass. £ s. d.	Best Electrum. £. s. d.
No. 56. Containing 6 inch double jointed Compasses with shifting needle points, pen point, pencil point, Lengthening Bar, 5 inch Hair Dividers, double jointed Bow Pen with needle points, double jointed Bow Pencil with needle points, Set of Spring Bows complete, 3 Ivory handle Drawing Pens, Road Pen, Pricker, Knife Key, Ivory Protractor, Ivory Sector, and Ivory Parallel Rule. . . .	7 0 0	8 10 0
Addiscombe Set. Containing 6 inch Sector jointed Compasses, pen point, pencil point, Lengthening Bar, 5 in. Hair Dividers, Bow Pen, Bow Pencil, Ivory handle drawing Pen, all steel Drawing Pen, Knife Key, Set of Marquoise Scales, Ivory Military Protractor, Ivory Sector, and Parallel Rule .	4 4 4	5 5 0

FOREIGN MATHEMATICAL INSTRUMENTS.

In English made Boxes and fitted with English Rules.

Four Shilling Set in Box complete

Five Shilling ditto

Seven Shilling and Sixpenny ditto

Ten Shilling ditto

Fifteen Shilling ditto

Twenty-one Shilling ditto

Thirty Shilling ditto

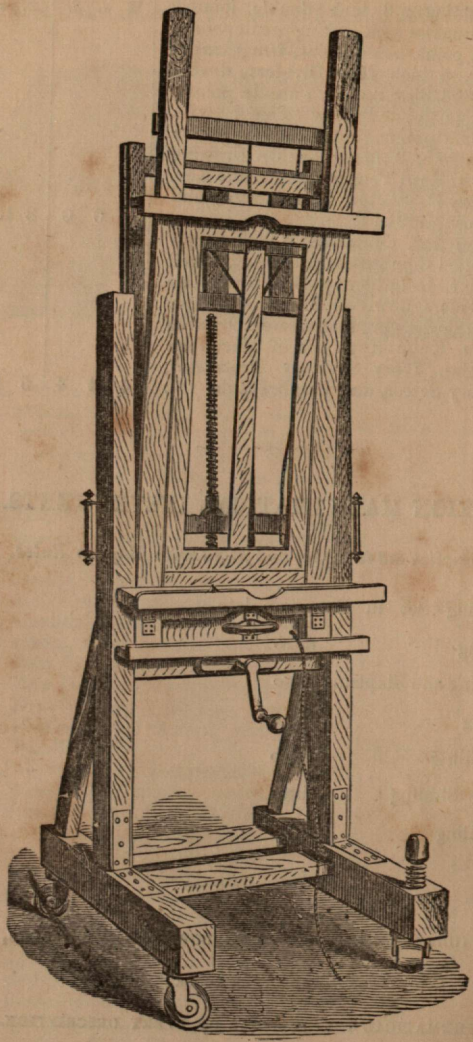
DIVIDERS, COMPASSES, SPRING BOWS, DRAWING PENS,

AND OTHER LOOSE

MATHEMATICAL INSTRUMENTS OF EVERY DESCRIPTION.

WINSOR AND NEWTON'S IMPROVED STUDIO EASEL,

In Stained Wood, £10 10*s*.



In Polished Oak or Polished Walnut Wood, £16 16*s*.

Smaller Sizes are made.

Winsor and Newton's IMPROVED STUDIO EASEL will carry canvasses of any size from 6 inches to 9 feet in height; and, by a simple alteration of the slide movement, it may be adapted to the requirements of canvasses of still larger dimensions.

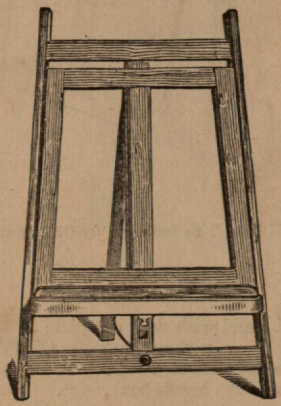
It has a powerful screw winding-up movement which can be managed with the utmost facility. This screw is made of iron by an experienced engineer, and it will raise with ease a much greater weight than that represented by the largest canvas.

Among the many Artists of eminence who have adopted Winsor and Newton's IMPROVED STUDIO EASEL may be mentioned the names of the following gentlemen, viz.:—

Ansdell, R., Esq., R.A.
Brett, J., Esq.
Buckner, R., Esq.
Burton, W. S., Esq.
Calderon, P. H., Esq., R.A.
Chester, G., Esq.
Corbould, E., Esq.
Davis, H. W. B., Esq.
Desanges, L. W., Esq.
Dowling, R., Esq.
Edwards, Edwin, Esq.
Elmore, A., Esq., R.A.
Faed, T., Esq., R.A.
Girardot, E. G., Esq.
Graves, H. the Hon.
Hunt, W. Holman, Esq.
Knight, J. P., Esq., R.A.
Leech, J., Esq.
Legros, A., Esq.
Linnell, W., Esq.
Naish, J. G., Esq.
Napier, J., Esq.
Philip, J., Esq., R.A.
Poole, P. F., Esq., R.A.
Roberts, D., Esq., R.A.
Rossetti, D. G., Esq.
Sant, J., Esq., R.A.
Selous, H. C., Esq.
Swinton, J. R., Esq.
Thomas, W. Cave, Esq.
Walton, Elijah, Esq.
Walton, J. W., Esq.
Wilson, Herbert, Esq.
Watts, G. F., Esq., R.A.
Whistler, J., Esq.
&c. &c. &c.

TABLE EASELS.

Made in Deal and Mahogany, with Pegs and Tray.



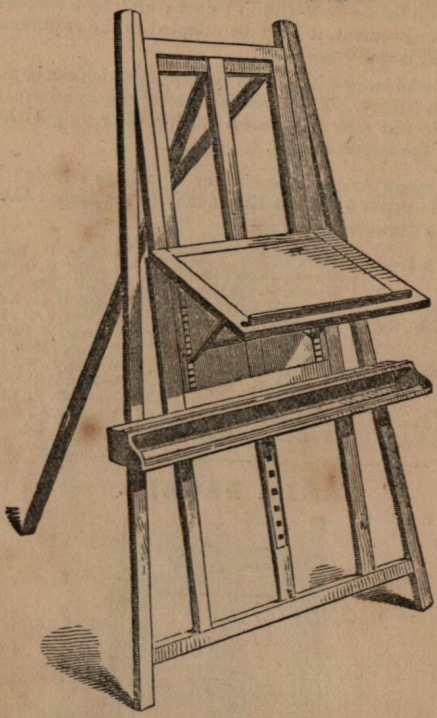
And also with Rack Sliding Movement.

18 inches high, 21 inches high, and 24 inches high.

AARON PENLEY'S
MAHOGANY RACK PAINTING DESK.

With Frame for holding Copy. Price 18*s.*

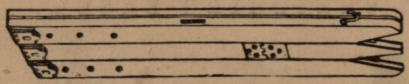
RACK EASELS.



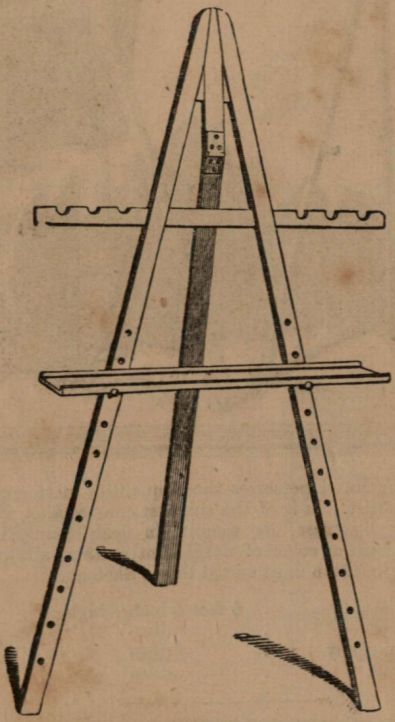
"Mahogany Corbould Easel," six feet high, for Oil or Water Colour Painting.

	£	s.	d.
Mahogany Corbould Easel with desk complete . . .			
Ditto without desk (for Oil Painting)			
Mahogany Rack Academy Easel . . . 6 feet high			
Mahogany Rack Easel with brush box . . „			
Mahogany Rack Easel with tray . . . „			
Dwarf Polished Walnut Wood Rack Easel . 4 feet high			
Ditto Oak ditto . . „			
Ditto Mahogany ditto . . „			
Dwarf Plain Mahogany ditto . . „			
Ditto Deal ditto . . „			

ORDINARY EASELS.



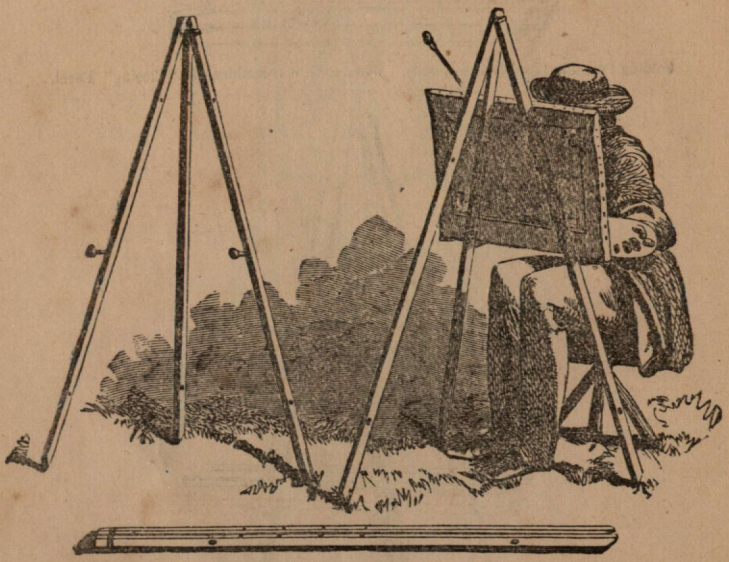
Folding Portable Easel (when closed). When open it resembles the "Closing" Easel.



"Closing Easel."

Mahogany Folding Portable Easel . .	6 feet high
Deal ditto ditto . .	„
Mahogany Framed (or Standing) Easel .	„
Deal ditto ditto . .	„
Mahogany Closing Easel	„
Deal ditto ditto . .	„

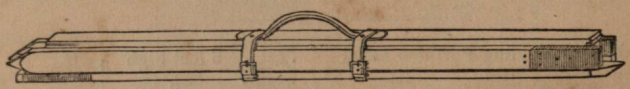
WINSOR AND NEWTON'S
SKETCHING EASEL.



This Sketching Easel possesses those qualities most required by the Sketcher and Tourist. It is of the simplest construction, very portable, and of extreme lightness, its weight, in deal, being 1¾ lbs. The adaptation of a joint or collar of novel construction, allows the legs to be placed in any position most suited to the Sketcher.

		s.	d.
The Easel in Deal . . .	4 feet 4 inches high . .	5	6
Ditto Polished . .	ditto . .	7	0
The Easel in Mahogany .	ditto . .	10	6
Ditto Polished . .	ditto . .	12	0

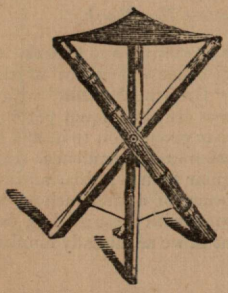
COMPANION SKETCHING EASEL.



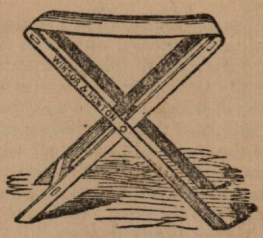
Similar to the Sketching Easel, but with socket joints so as to be more compact for carriage.

The Easel in Mahogany, 12*s*.

SKETCHING STOOLS AND SEATS.



Pocket Sketching Stool, fixed seat.

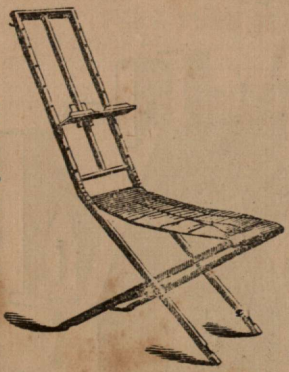


Square top Sketching Stool.

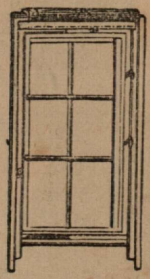
Gentlemen's Sketching Seat and Easel combined (as Illustrated below) . . . . . „

Ditto ditto improved . „

Ladies' ditto ditto . „



The Easel open for use.



The Easel closed; occupying a space of 24 inches by 33 inches.

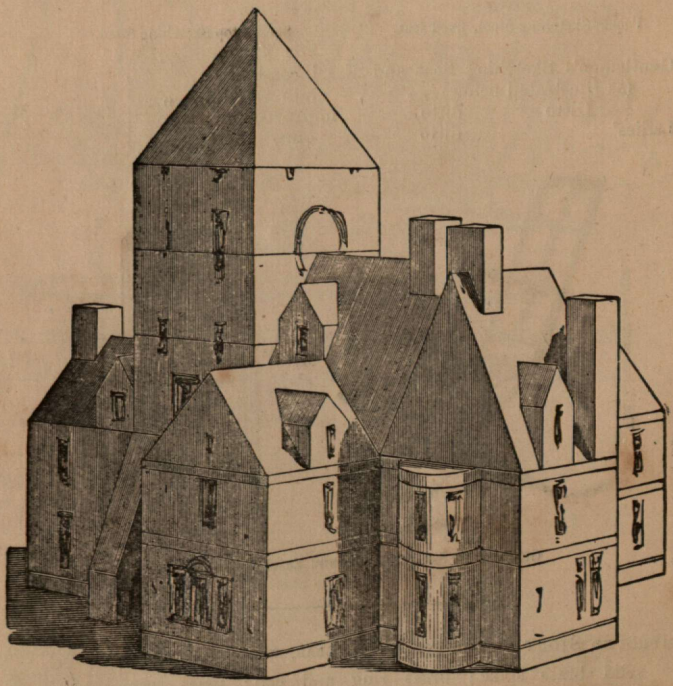
Gentlemen's Sketching Seat and Easel combined.

IMPROVED STOUT SKETCHING UMBRELLAS, with wind valve at top; solid brass spike; brass ring and cap; brass screw; &c., complete, in Grey or white Holland, price £1 10*s.*; or with fly joint, £1 13*s.*

J. D. HARDING'S DRAWING MODELS.

Extract from Preface of Explanatory Handbook.

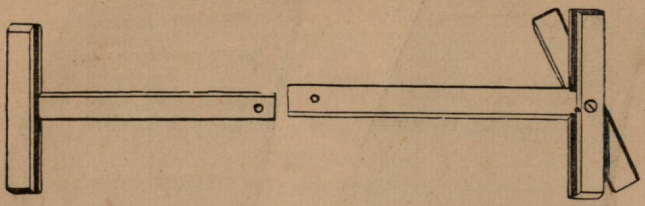
"To render the study of Perspective more attractive, and to make its acquisition more easy, as well as to surmount other difficulties in the study of Art, led to the construction of the "Drawing Models," which are simply Cubic sections, and as these sections are the aliquot parts of the cube of which they are sections, they are in proportion to it, and to each other, and therefore have a mutual relation and dependence. As a cube is the unit and basis of all solid rectangular figures; this, and its sections combine into any variety of solid forms, of a kind such as we see adopted in architectural construction; hence, with these models, can be produced very great varieties of such forms as we are already familiar with; or may at any time see."



The Models, made of hard wood, complete in Box, together with explanatory Handbook by J. D. Harding.

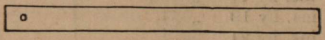
PRICE £1 11*s.* 6*d.*

T SQUARES.



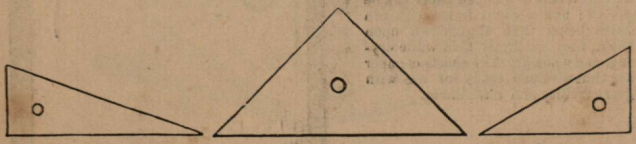
	FIXED STOCK.	MOVING STOCK.	
		Pear Tree, Fixed Stock.	Mahogany, Fixed Stock.	Mahogany, Moving Stock.
		s. d.	s. d.	s. d.
12 inches long	each			
15 „	„			
18 „	„			
21 „	„			
24 „	„			
30 „	„			
36 „	„			

PEAR TREE STRAIGHT EDGES.



	s. d.		s. d.
12 inches long		24 inches long	
18 „		30	

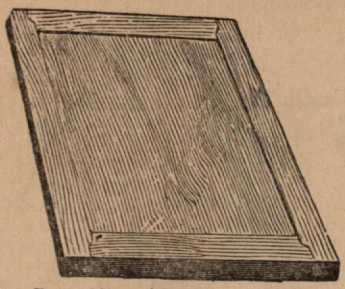
PEAR TREE SET SQUARES.



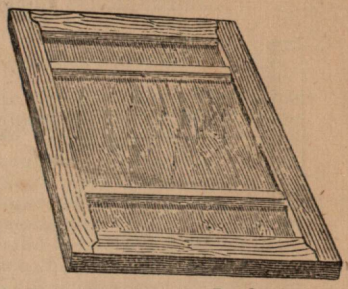
75 Degrees 45 Degrees 60 Degrees

75 DEGREES.		45 DEGREES.		60 DEGREES.	
	s. d.		s. d.		s.
6 inches		4 inches		6 inches	
7 „		5 „		7 „	
8 „		6 „		8 „	
9 „		7 „		9 „	
10 „		8 „		10 „	
11 „		9 „		11 „	
12 „		10 „		12 „	
		11 „			
		12 „			

DRAWING BOARDS.



Front of Framed Drawing Board.

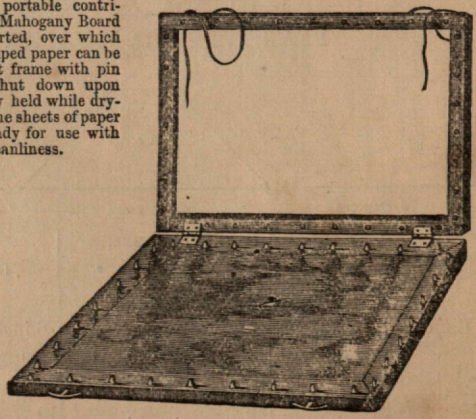


Back of Framed Drawing Board.

		Plain Clamped Deal. s. d.	Panelled Deal. s. d.	Framed Deal. s. d.	Framed Mahogany. s. d.
4to. Royal .	10½ ins. by 8 each				
4to. Imperial .	13 ins. by 9½ „				
4to. Columbier	15 ins. by 11 „				
½ Royal .	17 ins. by 10½ „				
Demy . .	18 ins. by 13½ „				
½ Imperial .	19 ins. by 13½ „				
Medium .	20 ins. by 15½ „				
Royal . .	22 ins. by 17 „				
Imperial .	28 ins. by 19 „				
Impl. full size	30 ins. by 21 „				

MAHOGANY SKETCHING BOARDS.

A very light and portable contrivance, being a thin Mahogany Board with iron pins inserted, over which several sheets of damped paper can be placed; and a slight frame with pin holes being then shut down upon them, they are firmly held while drying, and when dry. The sheets of paper are thus strained ready for use with great facility and cleanliness.



Best Framed; brass bound, 4to Imperial, Plain, 7*s*. 6*d*. each; Polished, 10*s*. 6*d*.
Ditto, ditto, Half Imperial, Plain, 12*s*. 6*d*. each; Polished, 18*s*.

PEARTREE CURVES

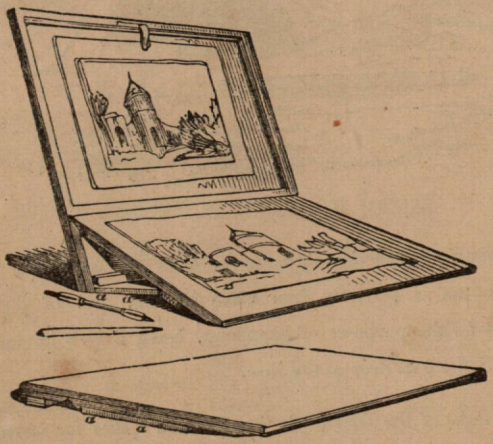
IN GREAT VARIETY.

EBONY PARALLEL RULES,

MADE OF THOROUGHLY SEASONED WOOD.

J. D. HARDING'S LESSON DESK.

(Registered.)



In Deal.	s.	d.
15 inches by 11 . .	4	0
18 „ 14 . .	5	6
22 „ 16 . .	7	6

In Mahogany.	s.	s.
15 inches by 11 . .	8	0
18 „ 14 . .	12	6
22 „ 16 . .	15	0

WINSOR AND NEWTON'S

SKETCHING TENT.

This simple and serviceable contrivance for the use of the Sketcher from Nature is perfectly firm when in use, and of dimensions sufficient for the purposes of Sketching, being 6 ft 6 in. high, and 6 ft. wide, by 5 ft. deep at the base.

The weight of the Tent (including the iron spikes for fastening the ropes into the ground,) is under 8 lbs. It is very portable and compact when folded up, and is pitched and struck with great facility.

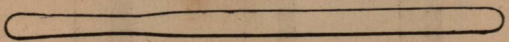
PRICE £2 2*s*. 0*d*.

IVORY, &c.

PREPARED IVORIES FOR MINIATURE PAINTING.

	SIZE.		SIZE.
No. 0	2 inches by $1\frac{3}{4}$	No. 7	$3\frac{7}{8}$ inches by $3\frac{1}{8}$
„ 1	$2\frac{1}{8}$ „ 2	„ 8	$4\frac{3}{8}$ „ $3\frac{1}{4}$
„ 2	$2\frac{5}{8}$ „ $2\frac{1}{8}$	„ 9	$4\frac{7}{8}$ „ $3\frac{5}{8}$
„ 3	$2\frac{7}{8}$ „ $2\frac{3}{8}$	„ 10	$5\frac{1}{8}$ „ $4\frac{1}{8}$
„ 4	$3\frac{1}{8}$ „ $2\frac{1}{2}$	„ 11	$5\frac{3}{8}$ „ $4\frac{1}{4}$
„ 5	$3\frac{3}{8}$ „ $2\frac{3}{4}$	„ 12	$6\frac{1}{8}$ „ $4\frac{5}{8}$
„ 6	$3\frac{3}{4}$ „ $2\frac{7}{8}$		

IVORY PALETTE KNIVES.

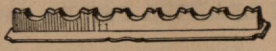


		s.	d.
No. 1 Small Ivory Palette Knives	each	0	6
„ 2 Middle ditto	„	1	0
„ 3 Large ditto	„	1	6
„ 4 Extra Large ditto	„	2	0

HORN PALETTE KNIVES.

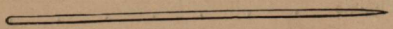
Small Horn Palette Knives	each	1	0
Large ditto	„	1	6

IVORY PENCIL AND BRUSH RESTS.



No. 1 Small Ivory Rests	each	0	3
„ 2 Middle ditto	„	0	6
„ 3 Large ditto	„	0	9
„ 4 Extra Large ditto	„	1	0
„ 5 Large Extra Handsome ditto	„	1	6
„ 6 Extra Large ditto	„	2	0

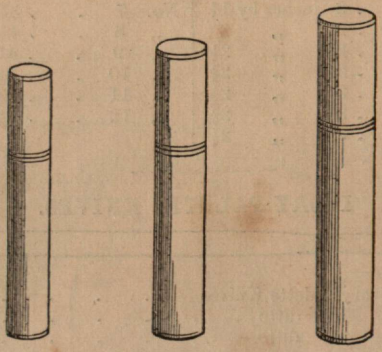
IVORY TRACERS.



Small Ivory Tracers	each	0	6
Large ditto	„	1	0

LEATHER WORK, &c.

ROUND PENCIL CASES.



1 2 3

		s.	d.
No. 1	each	0	9
No. 2	„	1	0
No. 3	„	1	3

FLAT LEATHER PENCIL CASES.

WITHOUT DIVISIONS.

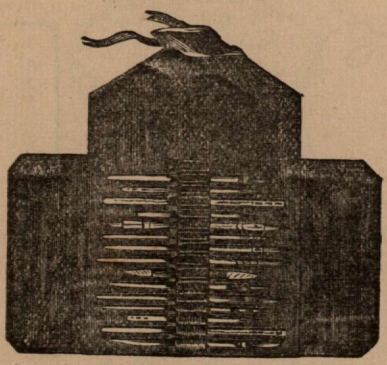
		s.	d.
To contain 3 Pencils	each	0	6
„ 4 „	„	1	0
„ 7 „	„	1	6

WITH LETTERED DIVISIONS.

		s.	d.
To contain 7 Pencils	each	2	0
„ 8 „	„	2	6
„ 9 „	„	3	0

FOLDING MOROCCO POUCH CASES

FOR HOLDING BRUSHES OR PENCILS.



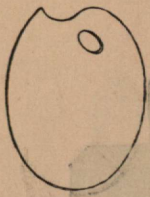
	s.	d.
Small size Morocco Pouch Cases to contain 9 brushes or pencils . . . . . each	4	6
Large size Ditto to contain 15 ditto . . . . . „	5	6
The Small size Ditto with pocket to contain 10, 12, or 14 Cake Moist Colour Box . . . . . each	8	6
The Large size Ditto with pocket to contain 16, 18, or 20 Cake Moist Colour Box . . . . . each	10	6
Gastineau's Brush Cases of stiff Leather to contain 7 Brushes . . . . . each	4	0
Ditto to contain 10 ditto . . . . . „	5	0

J. D. HARDING'S PATENT STUMPS.

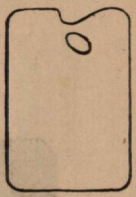
BEST LEATHER AND PAPER STUMPS OF ALL SIZES.

EARTHENWARE.

PALETTES.



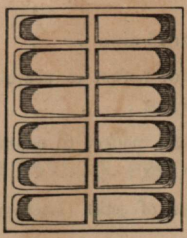
OVAL.



OBLONG.

	s.	d.		s.	d.
6 inch . .	each		6 inch . .	each	
7 „ . .	„		7 „ . .	„	
8 „ . .	„		8 „ . .	„	
9 „ . .	„		9 „ . .	„	
10 „ . .	„		10 „ . .	„	

DIVIDED SLANTS.

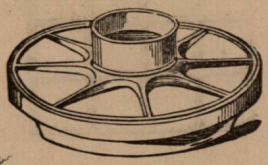


	s.	d.		s.	d.
3 Divisions .	each		6 Divisions .	each	
4 „ .	„		8 „ .	„	
5 „ .	„		12 „ .	„	

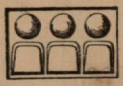
CENTRE SLANT.

ROUND SLANT AND BASIN.

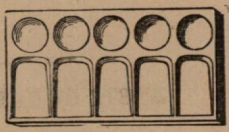
FOR ARCHITECTS' OFFICES, &c.



SLANT WELL SLABS.



Box Well Slab.



5 Well Slab.

	s.	d.		s.
Box Well Slabs . each			Well Slabs . . each	

INDIAN INK AND COLOUR SLABS.

	s.
No. 1 Ink Slab . . . . . each	
No. 4 ditto . . . . . „	
No. 11 ditto . . . . . „	
No. 11½ ditto . . . . . „	

PLAIN FLAT TILES.

	s.
6 inch Square . . . . . each	
8 „ „ . . . . . „	
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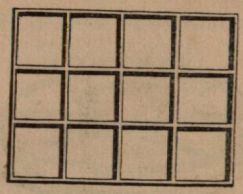

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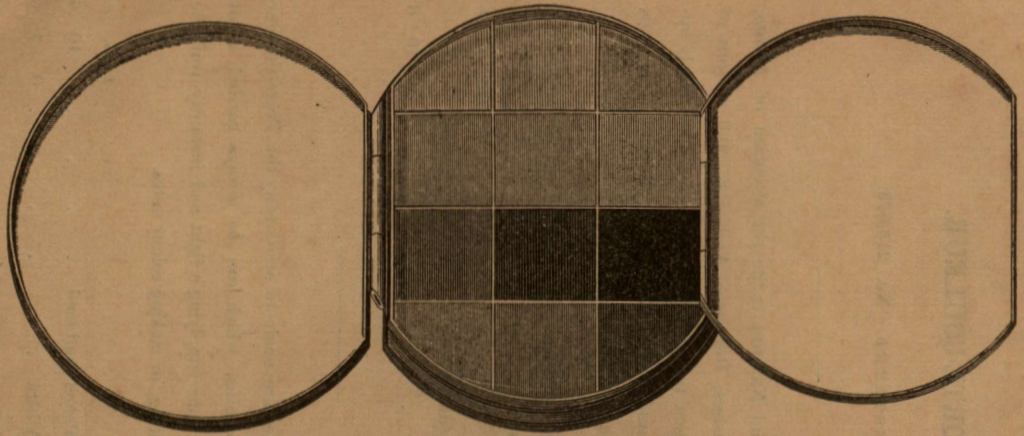

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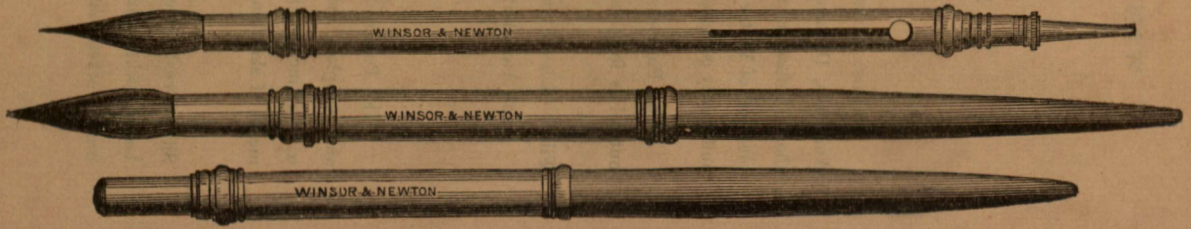

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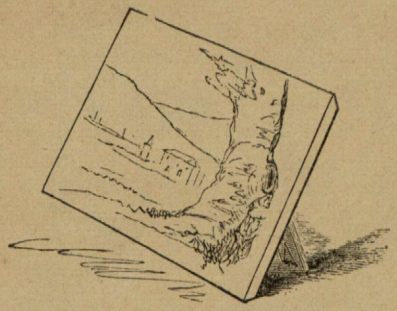

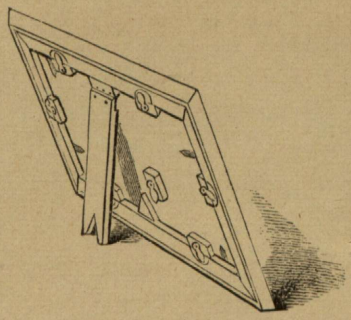

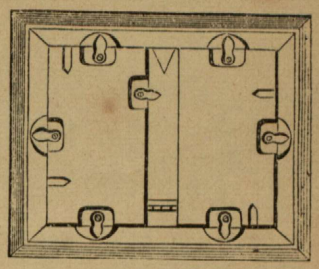

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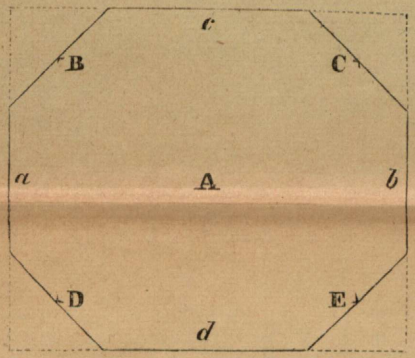

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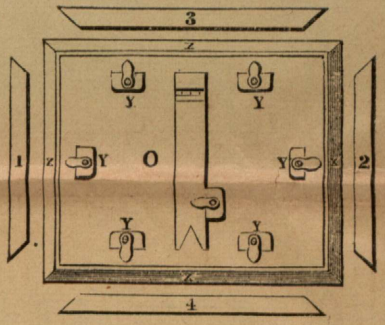

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