stripes from wall to wall, letting them cross each other at right angles. Where the room is large, it will be as well to paint in the centre piece harmonizing with the general design, having the bands crossing each other the same as the outer band. The centre piece may be square but set in the ceiling diagonally, or it may be diamond shaped. If the room is large, say 16 ft. x 30 ft., a good effect may be obtained by running an extra band design across each end of the room at about to ft. from the end walls and omitting the centre pieces. These extra bands should be treated the same as the ones on the ends of the room.

In treating the walls, excellent effects are obtained by making them a light sage green. Run a band of pale olive round the room about 30 in. wide, having narrow bands of terra-cotta color on upper and lower edges, with dividing lines of Venetian red. This band should be up from the base about 2 ft., which would make the upper edge of it about 4 ft. 5 in. from the top of the base; this will leave a strip of sage green between base and band, and between band and ceiling. Of course the width of the band and its height from base may be changed to suit conditions. The above proportions are suited to a room where the ceiling is to ft. high.

The woodwork should be painted in light cheerful colors-perhaps a medium green, with grooves and chambers picked in with black and touched up here and there with bright vermilion, would suit most tastes. At any rate these colors properly proportioned would have a very pleasing effect when taken in with the walls and ceiling. Of course the colors for walls and celing may be varied to any extent without varying the design. Buff for the walls, with pale blue band and dark brown stripes, give a good effect, while the ceiling may be done in cream, with robin egg blue band and Indian red edgings separated by dark blue lines, with the woodwork finished in maroon and a light shade of Indian red.

The library may be finished in the same design, though it may be in darker colors and subdued in tone. A clear grey-blue should be used on the ceiling, with a band of Pompeiian red, edged with medium green and striped with vermilion. Color the walls with a deep buff, with a chocolate band edged with dull Indian red, in similar design to sitting room. The woodwork may be ebonized and picked in with bronze and buff, but care must be taken not to overdo the picking in. If it is desired to separate ceilings and walls, it may be done by running an edged band just below and touching the ceiling.

All the painting, whether on woodwork or walls, should be in egg-shell finish made by a composition of two-thirds raw oil to one of turpentine, and the groundwork should be well prepared by being well and smoothly sandpapered. All holes or indentations in the woodwork should be well stopped with hard drying putty, and the hole should be fair and even on the face.

Other rooms in the house may be finished in like design, adopting colors to suit the taste. Where there is a hall, there may be some deviation from the design, and a frieze may be added, or stencil designs may be run all round just under the ceiling. A little more elaboration may be employed in the vestibule, both on the walls and on the ceiling.

In decorating such rooms as we have mentioned, regard should be had to the character of their furnishings, so that there may be an agreeable harmony all round. It is not necessary to have colors simply variations of one or two primary colors, but opposite colors when intelligently employed give very rich and pleasing effects; but the inexperienced decorator will have to experiment a little in order to discover which combinations produce the better results.

## SOME RULES FOR HOUSE DRAINAGE.

All drain, soil, waste and air pipes inside of a dwelling should be of iron.

The arrangement of soil and waste pipes must be as direct as possible, and long branch wastes under floors should never be permitted, if possible to avoid them.

Each stack should run up as straight as possible, avoiding all sorts of offsets, Y's or S connections.

None of the waste or vent pipes should be so covered in that they can not be got at without doing more or less harm to the building. It is wiser to keep these pipes in sight, even in the best rooms, than to place them in inaccessible places. By proper management a pipe may be made more or less agreeable to the eye by a little decoration with bronze, paint or enamel. There is no reason why a vertical pipe may not be fluted to imitate a column, with base and capital, if it is to take a prominent place in a room, or it may be cased in. Where pipes must be placed in recesses or chaces in walls, or in partitions, they should be covered with paneled doors, which may be screwed over the recess so that they may readily be taken down when required.

The soil, waste and air pipe systems should be thoroughly tight, not only water tight, but air tight as well. Hence the pipes must be of a thoroughly sound material, and all joints must be perfectly made.

The system must be amply ventilated and should have no "dead ends." Each soil pipe, therefore, must extend at least full size from the cellar to and through the roof; waste pipes must also be extended, but should be enlarged just below the roof to four inches in diameter, to prevent obstructions in the pipe during the winter through hoar frost.

Wherever practicable soil and waste pipes should run alongside a heated flue, as this will assist in creating an upward draft in the ventilating pipes.

These few rules are condensed from Paul Gerhard's little work on "House Drainage." National Builder.

## FLOORING IN ENGINE ROOM.

There is need for a material suitable for . the flooring of machinery spaces, says a writer in the Architects' and Builders' Review. At present the choice lies between very unsatisfactory points. Wood absorbs oil, concrete does the same, and also works up into fine dust very destructive to the running mechanism. Tesseræ in cement are but little better. Hard brick in cement is rough and commonlooking. Marble is too dear, and is also liable to crack when weights are moved upon it. I think that street asphalts, laid on a bed of concrete, would fulfil all purposes, but have not heard of its being so used. It seems to be non-absorbent, evenof oil, and is, to a certain extent, flexible, and can be laid into the smallest crevices.

## FLOOR TIMBERS.

Timbers that carry floors should, as a rule, be laid the narrowest way of the room, and all bearing timbers should be so arranged as to tie in the principal walls, or if the building forms a corner, having two or more external walls, they may be laid in opposite directions in the alternate stories.

All parts of timber built into brick, or stone walls should have clear spaces around them for circulation of air. Timbers passing over several points of support, such as joists over bearers, joists or bearers over partition walls, or similar cases, should be in as long lengths as possible, by which their strength is greatly increased as compared to what it would be if they were cut into short lengths, (Concluded on Page 4.)

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