which they intercepted, and which each refracts into *parallel* beams to the direction faces as it revolves. Therefore, instead of the rays passing in all directions on the the lat azimuth, a portion of them are collected and concentrated in one direction for tich, of c bright flash; and the angle between this bright beam and that emanating from tavoided, fixed portion of the apparatus is that which forms the eclipses. The upper and loweconomis zones, of course, are those which maintain a constant light; so that the eclipses rs, usuall this, as well as in most other leuticular lights, is not total within short distances. e focal le

Sometimes the flash is coloured *red*, as in the light on Chausey, Vièrge Islare flame a Point d'Alpréch, &c.; and in a few cases green, as in some of the new Turke lenses lights, &c.

In another method of producing this effect, constructed by M. Letourneau, This me necessity for using two lenses is avoided; and, consequently, the loss of light out 1788



evitable in the absorption of a pevenson tion in its passage through grinding glass. The adjoining diagram "There an explain it. In the central portserve not of the apparatus B is one of orks of M polyzonal lenses, similar to thstruction figured on page 21; on either s of this is a portion of a fixed li apparatus, shown by the horizon belts Λ A. For a fixed light As far as course, these horizontal belts ill there carried all round; and the listrument appears as a vertical stripe of wer led breadth of the flame from the to rangeme the bottom of the belt. In the stem hav lyzonal lens the light appearson of the cover its whole surface, and is ag each l visible when in front. The wimust be apparatus is made to revolve en sugge machinery, and the appearance There is as above described : first, the famprised light from the portions on cibrizontal side ; then a short celipse due tone upper ; light being diverted by the gowards is lens; then the full blaze of the rviceable for 8 or 10 seconds; then anothan Steve eclipse, and so on. rmed the

This diagram will also exp The ord another portion of the apparaturition of which a section is given on phich pass 23. The upper and lower port*herical* m C C, in this are the totally refings is ading glass zones, which have a it back almost entirely replaced to there is figured on page 21, and their intal, and tion is explained before. It is to same part of the apparatus, as heighthouse mentioned, which is constantly nee on easible within 10 or 12 unles inght as five

weather, and is useful in fixing the position of the light in the intervals of le, on a flashes.

It is considered by many, including the great Alan Stevenson, that the fixed Fresnel's flashing light is not altogether a desirable variety, its appearance being too with its be like the revolving light; in fact, in our official lists, they were always set dowmple mean revolving lights till within the last few years.

In coast lights, when usually the light is not required all round the horizon, the

24