struction, a semi-transparent screen is the best, the lantern being placed on one side of it and the spectators on the other. In this case it should be made of white muslin or calico suspended from a beam or frame, at a convenient distance from the wall, its transparency being increased by wetting it well with water; or, a transparent screen may be prepared by spreading white wax, dissolved with spirits of wine, or oil of turpentine, over the muslin, this has the advantage of being always ready for use and can be rolled up without injury.

FIG 4. SLIDER WITH VOLCANIC ERUPTION.

To prepare the lantern for exhibition, the lamp must be furnished with a cotton wick (which should never be used twice) and trimmed in the usual manner. In order to supply the lamp with oil, the reservoir must be removed from the cistern, and a small quantity of oil poured into the latter, so as to cover the hole at the bottom and well saturate the cotton wick. The reservoir should then be filled with the *best sperm oil*, and replaced in the cistern. If 2 oz. of powdered camphor be put into a pint of oil it will add greatly to the brilliancy of the light obtained.

Before using the lantern the lenses should be taken out and wiped, so as to remove any dust or moisture that might be on them; the lamp glass must be also cleansed previous to placing it on the lamp, and the reflector brightly, but very carefully polished.

The lamp having been lighted and a clear light obtained free from smoke, the lantern may be placed at a distance of from eight to ten feet from the screen, according to the size of the lenses; should it not throw a clear and well defined disc of light on the screen, move the lamp a little backward or forward until this is satisfactorily effected, a slide may then be put into the groove and focussed by moving in or out the brass tube until the picture is perfectly clear and distinct.

In addition to the slides given above another very beautiful kind of illustration suitable for the magic lantern is the chromatrope (see fig. 5.) The varieties of this kind of slide are endless, showing every combination of waved and curved coloured lines.

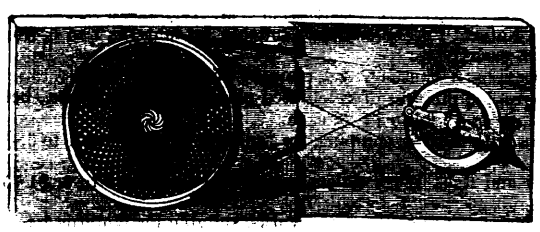

FIG. 5. CHROMATROPE SLIDER, WITH RACKWORK.

Dissolving views are exhibited by means of two lanterns. A sliding cover is placed in front of the nozzle of each of the lanterns, and these are moved simultaneously in such a manner, that when the nozzle of one lantern is completely opened, that of the other is completely closed, so that, accordingly as the former is gradually closed, the latter is gradually opened.

It is necessary to made the discs from both lanterns perfectly coincide on the screen—should the edge of one disc show beyond the edge of the other, move the lantern sideways—it being necessary to place one of them at an angle which will vary according to the distance from the screen.

To illustrate the optical effects produced by two lanterns in this way, let us suppose one picture represents a church and bridal party in summer, another picture of the same size with the church and a funeral in winter. If the cover of the nozzle of the lantern containing the summer scene be gradually closed and the other gradually opened, the effect will be that the summer picture will gradually assume the appearance of approaching winter, this change going on until the picture on the screen represents a winter scene, and the procession will undergo similar change. Many beautiful effects may be shown in this manner, such as buildings illuminated, ships in storm and calm, watermills, falling snow, lightning, rainbows, and other atmospheric phenomena.

The Oxycalcum light is often employed with these lanterns and *is a great improvement* on the oil lamp. It is produced by a jet of oxygen passing through the flame of a spirit lamp, and impunging upon a cylinder of lime; it is of intense brilliancy, scarcely inferior to the oxy-hydrogen light, at *one-half the expense, and may be used without the slightest danger.*

V. Short Critical Notices of Books.

—— History of Canada. In 3 Vols. Montreal: John Lovell.—To the active and enterprising zeal of Mr. Lovell, the well-known printer and publisher of Montreal, we are indebted for a handsome edition in three volumes of this "History of Canada, from the time of its discovery till the union year, (1840–1.)" It is translated from the last six volume edition of M. Garneau's Histoire du Canada, by Mr. Andrew Bell, and is accompanied with illustrative notes by its English editor. In his preface, the editor says that, "the reproduction in English of M. Garneau's history is a moderately *free*, rather than a strictly *literal*, translation of that work;" but, "as regards the text, the tenor of the author's narrative has been scrupulously observed, although in a number of places some of his sentences have been abridged." As to the scope of the work itself, the author in his preface says, that "Although the present work is, in name, a history of Canada only, it includes the annals of all the French Colonies on the continent of America." This makes M. Garneau's history the more valuable; for to estimate fully the whole scheme of French Colonization on this continent, it is necessary for us to take an extended survey as presented in this work, of the whole ground occupied by the French in America, and to study attentively, from a French-Canadian point of view, their efforts to promote the early settlement of Canada, and to establish those political, social and religious institutions which remain among us in a great degree to this day. We need scarcely say that the paper is good, the type clear, and the printing (like all which issues from Mr. Lovell's press,) excellent. For his enterprise in contributing this valuable addition to our scanty list of Canadian works, Mr. Lovell deserves liberal encouragement on the part of the public, and a speedy demand for this history.

——Lewes' Physiology of Common Life. 2 vols. New-York: D. Appleton & Co. Mr. Lewes is already known to our readers by his other works on kindred science. (See page 157 of the *Journal* for October.) In this work he has succeeded admirably in popularising a branch of science which has until the last few years been considered as strictly professional, and not adapted to the generality of readers. He takes up the subjects of physiological life (such as hunger, thirst, &c.) in a simple and natural order, and illustrates them in an entertaining and agreeable manner. The illustrations are numerous and well executed, and the typography is good.

—— Popular Preachers of the Ancient Church.—London: James Hogg and Sons. This book consists of an interesting series of biographical sketches of "the Popular Preachers of the Ancient Church: their Lives, their Manners, and their Work. By the Rev. William Wilson, M.A." The sketches include those of Cyprian, Ambrose, Augustine, Basil, Gregory and Chrysostom; and are designed, says the Author, to exhibit them "in aspects more congenial to the sympathies of modern evangelical Christians than those which are brought prominently forward by the servile admirers of the Fathers." In addition to a popular sketch of the lives of these famous divines, the author has added brief examples of their style of preaching, and several illustrations. The book is attractive in its style and appearance.

—— Andersen's Sand-Hills of Jutland.—Boston: Ticknor & Fields. This work contains eighteen of Hans Christian Andersen's Danish stories, written in his most attractive and entertaining style. The type, paper and printing are admirable.

VI. Educational Intelligence.

—— Annual Convocation of Trinity College.—The Annual Convocation of Trinity College was held on Thursday, in the Hall appropriated for that purpose. There was a large attendance of friends of the institution, including many ladies:—The Chancellor, Sir J. B. Robinson presided. The following degrees were conferred:—B A.:—Joel Lanton Bradbury, Rev. Richard Homan Harris, John Douglas, Rev. Francis Tremayne, Rev. James Smyth, B D. *ad eundem*: —Rev. John Carry, [Bishop's College, Lennoxville.] M.A.:—Rev. John Strutt Lauder, Robert Morris, Charles Ingersoll Benson. The following students matriculated:—Bogert, First Foundation Scholar; Montmorency, Second do.; Givins Cameron, Scholar; Richardson, Third Foundation Scholar; Maddem, Fourth do.; Auston, Briggs, Dixon, Farmer, Lindsay, Loring, Spragge. John McLeary was admitted to a Church Society's Scholarship. The Rev. J. Gunne, Mr. S. Jones, and Mr. Wells passed the