and the enterprise made great headway, more particularly on account of the protective measures against fire proposed soon after the burning of the old Ring Theatre at Vienna. The movement gradually developed throughout Austria and Ger­many and spread beyond the frontiers of these countries. Con­currently, independent movements originated elsewhere, and from 1885 to 1895 a transitional period may be said to have existed for the stage, both in Europe and in the United States, but by the close of the 19th century the necessity for reform was recognized in every country. During the transitional time various unsatisfactory experiments were made, some of the boldest experiments proving costly failures, yet serving, because of such features as were valuable, as a basis for further developments. Great Britain and France were almost the last countries touched by this movement, although in England throughout the ’nineties there was considerable improvement in actual scenic art and stage-mounting, as far as this could be brought about without the aid of improved stage mechanism.

Among those primarily responsible for this new epoch in scenic art in Great Britain were Sir Henry Irving and Mr Beerbohm Tree, both actor-managers, Mr Hubert von Herkomer, R.A., Sir L. Alma-Tadema, R.A., and Mr Edwin O. Sachs, architect. Although almost last in the application of stage reform in its best sense, England really completed the experi­mental period with the modernization of the Royal Opera House, Covent Garden, where, by the opening of the season of 1902, the directorate were provided with the latest improve­ments of mechanical skill for the almost complete re-equipment of stage scenery. This work of remodelling was carried out by the Grand Opera Syndicate, with Mr Edwin O. Sachs as tech­nical adviser and architect. Modern mechanism has also been applied at the Apollo Theatre, London, where, however, the stage equipment was bodily imported from the Continent and does not include any mechanically or electrically driven parts, manual labour alone being used. The stage mechanism which was employed in the equipment of the Royal Opera House, Covent Garden, embodies the Sachs system of dividing the stage­floor into a few large sections and working them with the aid of electrical power, the Brandt system of counter-weighting for the suspension of all scenery from above, the application of light in four colours by electricity, and the designing of all scenery to accord as much as possible with nature, the whole mounting being built up on the basis of a flat stage as distinct from the sloping stage of old.

The classification of stages generally, both home and foreign, whether for the production of opera or plays, should be made as follows: wood stages, wood and iron stages, and iron stages, with subdivisions according to the power chiefly employed in working the appliances. These subsections are: manual labour, hydraulics and electricity. Owing to the almost entire absence of steam for motor power in connexion with stage machinery, a separate subdivision for appliances where steam is employed is not required. With the wood stage and the wood and iron stage manual labour alone is utilized. But in the iron stage manual labour, hydraulic power and electric power are either used individually, or a combination of any two or three of these classes is applied. The first series of stages built in accordance with the principles of Stage Reform was erected on what was termed the “ asphaleia" system, in which direct hydraulic power was utilized throughout. The stage­floor is divided into innumerable small sections supported on rams (some working telescopically), whilst everything suspended from above is also worked mechanically by hydraulic power. Notable examples are the Budapest Opera House and the Municipal Theatre at Halle.

The next type is that of the stage of the Court Theatre, Vienna, which, although based to a considerable extent on the “ asphaleia ” system, showed somewhat larger sections. These are suspended by cables and worked indirectly by small hydraulic rams placed at the side, whilst the whole of the top work is manipulated by manual labour with the partial assist­ance of counter-weights. The next type is the Brandt type, where the number of divisions of the stage is further reduced to a few medium-sized sections, worked by means of a com­bination of a central hydraulic ram and suspended cables duly counter-weighted. The top work in this case is entirely counter­weighted, and requires the least possible manual labour for manipulation. An example will be found at the Wiesbaden Court Theatre. We next have the Sachs system, where electric power is substituted for hydraulic power, the number of stage divisions limited to several large sections, suspended on cables partly counter-weighted and partly worked by electric motors, while the whole of the top work is balanced on a system similar to that of the Brandt, with intermediate electric motors for the manipulation of particularly heavy loads. It is this last system that has been adopted at the Covent Garden Opera House, with the modification that the top work is entirely operated on the latest development of the Brandt system of manual labour and counter-weights. Another example of the Sachs system, as far as individual stage sections are concerned, will be found in a portion of the Theatre Royal, Drury Lane.

Regarding the question of expense and practicability, the hydraulic system has generally been found to be expensive and impracticable. The system of the Court Theatre, Vienna, though practicable, is costly both in capital and annual outlay. The Brandt method of equipping the upper stage mechanism has been found particularly suitable for medium-sized theatres, and not expensive. The Sachs system has been found practic­able, of moderate initial cost and. minimum annual outlay. The advantages of electricity over hydraulic power have been most marked both in capital and in annual expense. There is of course a far greater initial outlay required to-day than with the wooden stage of old, hut the saving in staff and wear and tear of the scenery, and the absence of expensive temporary makeshifts, repairs and reinstatements, compensate for this by a material reduction of annual charges. It is known as a fact that upon an overhaul of the Covent Garden equipment being ordered after five years’ running, the contractors could not find anything to do in the way of repairs or reinstatements. The stage carpenter has long reigned supreme in England and France, although in England there are already one or two notable exceptions of men who are advancing to the position of engineers rather than carpenters. In Germany and Austria the stage carpenter is already being replaced in most theatres by men of engineering or technical training, as the more complex arrange­ments of a modern stage demand intelligent and careful control. It is merely a question of time for the engineer to obtain general control in these matters.

Regarding the actual designing and painting of the scenery, the English scene-painter may now be considered in advance of his Continental and American colleagues, although the productions of some notable ateliers at Vienna and Munich run the English scene-painter’s work very closely. In 1890 Vienna was in advance of England in scene­painting, but the English scene-painters have since then rapidly come to the front, and it is to be anticipated that it will never again be necessary to import scenery from Austria, as has been the case, both at the Theatre Royal, Drury Lane, and at the Royal Opera House, Covent Garden. As a matter of fact, scenery from Covent Garden and Drury Lane is already exported to the United States. The position of the scene-painter is particularly difficult, inasmuch as whilst artistic temperament and thorough knowledge of art are essential for the practice of his vocation, it is equally essential that he should be thoroughly practical and to a considerable extent a mechanic. He lacks recognition among artists and there is unfortunately a tendency to depreciate his work.

During the period of interregnum in stage reform there ap­peared a number of faddist inventions which, while creating public interest, cannot be considered of lasting practical utility. Thus in the United States an at­tempt was made to have a large platform constructed like a lift, bodily rising and falling, with three different tiers or stages on which scenery could be mounted at different levels