"THE QUEEN OF FLOWER8."

## by atowe peklipg.

Although the name of Herrmann is synonymous with all that is marvelous and supernatural in this matter of fact age, and his great fame, so justly won, has placed him at the top of his profession in the eyes of the American public, yet there is another magician who, though less widely known, stands side by side with the great Herrmann, and even surpasses him in the cle ness of conception and execution of many of his tricksand illusions. We refer to Mr. Harry Kellar. One of Mr. Kellar's illusions, given at Daly's theater last spring, is what he is pleased to call "The Queen of Flowers." Fig. 1 represents the stage as the audience sees it, and the plan below will help to explain it to the reader. The background set against curtains is about ten feet long and eight feet high, and represents a mass of flowers and bushes indiscriminately thrown together, with blue sky above. There is a little flat roof which projects out about three feet from the top of the screen and is supported by four red poles. The bottom is a floor raised about a foot from the stage, and in front of each of the three divisions made by the poles between the stage proper and the floor of this improvised summer house is placed an electric light. The audience usually wonders what these lights are for in this strange place; but as audi ences always accept anything shown them by a prestidigitator, these lights do not disturb them very much except by dazzling them, as they are meant to do. So much for the setting. There being no doors or screens or curtains of any kind, the spectators have the satisfied feeling that there is no deception there, for they can see all there is to see. They can, that is true, only they don't realize how much they are seeing.
Mr. Kellar next brings a semicircular stand which he places in front of the middle panel at the height of the floor. At the roof is fixed a brass rod in the form of a semicircle, from which hangs a curtain inclosing the little stand. This, however, can not do much good, for, as Mr. Kellar says, those on the extreme right and left of the audience can still see quite behind the curtain through the summer house, and they believe him, not only because he told them so, but because they can see with their own eyes. What could be more convincing! In a moment the curtain is withdrawn and a beautiful lady surrounded by flower is seen standing on the little platform
Reference to the plan again will explain matters The two dotted lines extending from the two center poles straight back to the background represent double mirrors ; that is, each mirror consists of two mirrors back to back, running from the flool to the roof of the summer house. On account of the indefinite arrangement of the flowers painted on the back scene in monotonous design, the spectators do not notice the mirrors. These, of course, form a passageway through which anyone can walk from behind the scenes to the stand behind the curtain, while the audience is still keeping guard with its ever watchful eye.

## A Roumanian Pompeit Fund.

Prof. Gregoire Tocilesco, of the University of Bucharest and chief director of the National Museum, has recently visited western Europe on a mission for the Roumanian government to the principal scientific and archæological societies, says the London Times, At the retien, says Times. At the recent congress of the Royal Archa ological Institute at Can terbury, the protessor gave an account of his researches in the Dobrudsha and of theextensiveexcavations which he has carried out during several years. The most striking results of his labors include the identification of the ancient topography of Lower cient topography of Lower
Meesia; the discovery of Mesia; the discovery of
three great lines of fortithree great lines of forti-
fication running across the fication running across the province; the collection of
over 600 ancient inscripover 600 ancient inscrip-
tions, and the excavation of a considerable part of a buried city, Tropæum Trajani, now Adamklissi, which is situated about fifteen kilometers to the fifteen kilo south of Rassova. It was one of the most important|Thanks to the labors of Prof Tocilesco the great tumu- numbers being 335 and became the chief garrison of the frontier a few lus has ceased to be an enigma. its epoch and motive Britain comes third with 313 Austrian patents, and years ago all that garrison of the frontier. A few have been revealed, and the splendid monument of France fourth with 243 . Switzerland makes a very good
 of masonry; its name even was unknown. By some briefly described as a gigantic trophy erected by the priete Industrielle.
it was regarded as a Persian monument of the age of Darius; others supposed it to be the tomb of a Roman general or of a Gothic chief. These conjectures have now given place to certainty, Prof. Tocilesco having unraveled the history of the site and laid bare some of its most remarkable buildings. His plan indicates a city of $101 / 2$ hectares in area, surrounded by walls adapted to the variations of the surface, and with 36 towers or bastions, of which 12 have been already


ENTRANCE INTO THE CABINET.
uncovered. Three gates are visible, two larger ones east and west, and a postern on the south. The princi pal street is paved with slabs of stone and has centra channels, one for the water supply, the other for drain age. Right and left of the main street were ranged great buildings-here a basilica (in the classical sense), there a Byzantine basilica with a crypt under the altar and containing a fine mosaic. There are proofs tha the city had been reconstructed, as stones bearing inscriptions had been re-employed as building material Further evidence of this has been found in the inscription of a trophy which dates from the year 316, afd fur nishes information as to the history of toe region. The city was founded by Trajan, received municipal rights toward the close of the third century, and was probably destroyed by the Goths. The Emperor Constantine and his associate Licinianus fought the barbarians and reconstructed the city of Tropansiuin from its founda tions." The tropæum, of limestone, 2.65 meters in height, was the memorial of the victory, and served a the arms of the city. It will require several years o continuous excavation to lay open the entire city which seems likely to become a second Pompeii.

Emperor Trajan, after his victory over the Dacians in the year 108-9. It was dedicated to Mars Ultor, and it architect was the famous Apollodorus of Damascus
During the present year Prof. Tocilesco has discoverd and excavated another monument which is unique in the ancient world. It is a mausoleum erected by Trajan to commemorate the soldiers who fell in a bai the near the spot, in which the emperor himself took rt. The monument is quadrangular, on a platform of five or six steps, and bore plaques covered with inscriptions recording the names of the Roman citizens, the legionaries, and even the peregrine who fell in a battle near the spot. The inscriptions are full of interest and contain details of the domus or of the domicile of the Roman soldiers and of the countries to which the strangers be longed. M. Tocilesco gave a most interesting de scription of the principal inscriptions and of the light which they throw on the history of the buried city. He suggests that the great trophy was erected by Trajan at Adamklissi, although the war mainly took place north of the Danube, on account of the emperor's own presence at the opening battle near that spot, and within the three lines of defense. This battle is indicated in the Trajan column. The mausoleum appears to have been in the form of a pyros such as seen on the medals of Antoninus Pius and Julia Domna In concluding his discourse the professor said that these excavations, which are being continued without interruption, are of the utmost interes to Roumanians, as they bring to light long buried memorials of the birth of their nation and of the Romsan soldiers who sacrificed their lives in it behalf.

The intermational Thermal Unit
At the recent meeting of the British Association the electrical standards committee provisionally approved a set of propositions relating to thermal unit, and for the purpose of inviting in ternational discussion of the question, propose to send a copy of the propositions to representative bodies throughout the world. These bodies will be invited, says the Electrical World, to take what action they may deem most desirable, with the view to bring ing about international agreement on the matter. The propositions are as follows :
I. For many purposes heat is most conveniently measured in units of energy, and the theoretical C. G.S unit of heat is 1 erg . The name joule has been given by the electrical standards committee to $10^{7} \mathrm{ergs}$.
For many practical purposes heat will continue to be measured in terms of the heat required to raise measured mass of water through a definite range o emperature.
If the mass of water be 1 gramme and the range of temperature $1^{\circ} \mathrm{C}$. of the hydrogen thermometer from $9.5^{\circ} \mathrm{C}$. to $10.5^{\circ} \mathrm{C}$. of the scale of that thermometer then, according to the best of the existing determina ions, the amount of heat required is 4.2 joules.
It will, therefore, be convenient to fix upon this num ber of joules as a secondary unit of heat. This secondary thermal unit may be called a "calory."
Accordingly for the present a second proposition is
II. The amount of heat requisite to raise the tens perature of 1 gramme of water $1^{\circ} \mathrm{C}$. of the scale of the hydrogen thermometer at a mean temperature which may be taken as 10 C. of that thermometer $4 \cdot 2$ joules.
If further research should show that the statemen in 11 is not exact, the def nition could be adjusted by a small alteration in the mean temperature a which the rise of $1^{\circ}$ take place. The definition in 1 and the number (4.2) o joules in a calory would remain unaltered.
an Patents.
In 1895 the number of Austrian patents taken out, says a correspondent was 5,215 . Of the pa tentees, only 2,031 resided in the Austro-Hungaria monarchy. Among the foreigners, citizens of th United States are secon Unit to Germans, the © 1896 SCIENTIFIC AMERICAN, INC.

