# Scientific American.

## [JUNE 17, 1893.

Underwriters' New Electric Rules.

The new rules are the result, with slight modi-

fications, so says the Electrical World, of the delibera-

tions of underwriters' experts held in New York City

last August and December, whose meetings also result-

ed in the formation of the Underwriters' International

Electric Association-a body with a well-defined field

of usefulness before it. With some important excep-

tions, the rules are those formulated and adopted by

the National Electric Light Association, the departures

being in the direction of greater stringency. Among

the radical and commendable features are the prohibi-

tion, by implication, of wooden cleats and the require.

ment that all telegraph, telephone and similar con-

ductors shall be provided with some protective device

where they enter a building, to obviate danger from cross

#### ENGLISH GOLDSMITHS' WORK FOR THE CHICAGO EXHIBITION.

The Goldsmiths' and Silversmiths' Company of London have sent several beautiful examples of their art and manufactures to the great International Exhibition in the United States. The subjects of the illustrative designs being of high interest both to England and to America, we proceed to describe these works, and briefly to explain the representations in our engravings.

#### THE COLUMBIAN SHIELD.

Made entirely of solid silver, panels modeled and chased in high relief. Scenes of the discovery of

America by Columbus, the squadron in the port of Palos receiving a priestly blessing, Columbus in his vessel pointing out land to the mutinous crew. In center medallion the raising of the Spanish flag on the American shore: above, the reception of Columbus, on his return, by King Ferdinand and Queen Isabella of Spain; to right and left, seated female figures, one with a horse, the other with a bison, emblematic of Spain and America; below sits a figure holding the model of a ship, symbolical of Navigation.



THE COLUMBIAN SHIELD FOR THE CHICAGO EXHIBITION.

The border of the shield decorated with various Ame- the pedestal around the base of the clock. The four used outside of conduit tubing and fixtures is reduced rican plants and flowers, at the top a medallion portrait of Columbus, and the American eagle, with the ify Art, Science, Industry and Engineering. On the top flags of Spain and of the United States.

#### THE SHAKSPERIAN CASKET,

made of eighteen-carat gold on an iron body, with parts damascened; rich gold mouldings, two gold medallions, six framed enamel paintings; stands on four gold and damascened feet. The front contains, in the center, Shakspere's portrait, from the bust in Stratford Church, and two enamel pictures-namely, those of Titania caressing Bottom with the ass's head, while Puck and Oberon are approaching; and Prospero, with Ariel, at the entrance to the cave, watching Ferdinand and Miranda. On the back of the casket is a view, in gold repousse work, of Shakspere's birth-

of King Lear with his daughter Cordelia, the other is Romeo with Juliet in the moonlight balcony scene. The pictures at the ends of the casket show, respectively, Othello telling his warlike adventures to Desdemona and her father and a scene in the "Two Gentlemen of Verona." The lid is elaborately ornamented with charming details; on the summit is Shakspere's crest, the falcon holding a lance; the figures reclining below it are Poetry and Dramatic Art; the masks of Tragedy and Comedy occupy separate medallions. At the base of this casket is a surrounding series of twenty-four subjects from different plays by Shakspere, "The chased and richly gilt. The columns of the pedestal surmounted by heads of American animals. In the upper panels of the pedestal are the medallion portraits of Franklin, Presidents Washington, Jefferson, Jackson, Lincoln, Grant, Harrison, and Cleveland. The lower panels display the sports of running, leaping, swimming, trotting, yachting, base ball, and cycling, and a view of Brooklyn suspension bridge. Twelve figures

> of players in these and other athl^tic exercises, wrestling and boxing, riding. rowing, shooting, tennis, currents. The requirements that all safety fuses must cricket, and be stamped or otherwise marked with the number of foot ball, stand amperes they will carry will greatly abridge the use on the top of of fuse wire; while this is greatly to be desired for the



SHAKSPERIAN CASKET FOR THE CHICAGO

EXHIBITION.

larger sizes, it is very questionable if it should be made to apply to the smallest sizes, such as are used in ceiling rosettes and fixture cutouts. Another prohibition, fortunately of little practical moment, is against the use of multiple-series or series-multiple lighting, which, we presume, does not apply to the use of incandescent arcs, although they are not excepted. We note that the smallest gauge of wire that can be

CLOCK FOR THE CHICAGO EXHIBITION.

sides of the clock are guarded by figures which personis Fame. The clock is musical, playing chimes and the English and American national anthems. The twelve figures of players revolve around it with the chimes.-Illustrated London News.

### VIENNA AND CHINA IN JUXTAPOSITION.

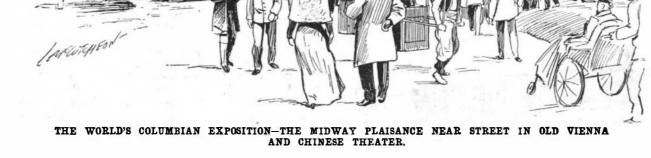
It is probable there was never brought together within the same space such a curious, wonderful comthe Midway Plaisance at the World's Columbian Exposition. All sorts of strange people, with strange beplace, with two enamel pictures, one of which is that Europe, Asia, Africa, Australia, the islands of the seas, generated to render their use dangerous in the cases re-

from 16 B. & S. to 14 B. & S., and that the use of staples is absolutely prohibited. The requirement of a double-pole switch for a single light on a gas fixture will prevent the use for this purpose of a number of special switches now on the market, and those in regard to electric gas lighting will prevent the use of many of the present forms of electric burners on the same fixture with electric lights. We do not find any reference in regard to the use of flexible cord pendants in places like textile works where there may be an accumulation of highly inflammable material on the bination of extraordinary scenes as are presented on lamp cord. It is a matter of no uncommon occurrence for flexible cords to be ignited, without blowing a fuse, and while they are required by the rules to be covered longings, from the uttermost parts of the earth-from by a non-inflammable layer, yet sufficient heat may be

> ferred to. The cause of the accident in question is obscure, but it nevertheless exists, and one underwriters' association, at least, required under the circumstances named that the pendants should be of solid No. 18 B. & S. wire. Taken as a whole, the rules are characterized by sound common sense and show a due appreciation of the interests of those to whom they are to be applied. Their gene-

ral adoption now rests with the various insurance companies and associations interested in electrical risks, and it is most sincerely hoped that these bodies will take speedy action toward their adoption, and thus remove a reproach to electri-





Tempest," "Macbeth," "Measure for Measure," and from the icy poles to the heated tropics, are there col- | cal inspection which has heretofore existed on acthe "Comedy of Errors" contributing the subjects lected. In future issues we expect to illustrate several in front. Every part of the manufacture, including of the most striking of these objects. At this time we the damascened patterns and arabesques of rich and various device, is British workmanship.

duced on one side, while a Chinese theater has been THE CLOCK FOR AMERICA. Octagonal pedestal, made of the finest American erected upon the opposite side. To the Chicago Record walnut wood decorated with brass ornaments elegantly | we are much indebted for our illustration.

count of the number and disparity of independent rules in existence. give a view of that portion of the Plaisance where

OF the human race, 500,000,000 are well clothed, that some of the quaint buildings of old Vienna are reprois, wear garments of some kind that will cover nakedness; 250,000,000 habitur. Ily go naked, and 700,000,000 only cover the middle parts of the body.