

Society of Mechanical Engineers.

The American Society of Mechanical Engineers met in Hartford, Ct., May 4. Though but a year old, the society has acquired an honorable standing and a large membership. About fifty new members were received at the first session. Professor R. H. Thurston occupied the chair. Papers were read by the president and by A. R. Wolff, of this city, on "Ratios of Expansion at Maximum Efficiency." At the second session Mr. Alex. L. Holly called attention to the dependence of this country upon foreign manufacturers for large steel forgings, owing to our lack of heavy steam hammers. Mr. Holly anticipated the supplanting of forgings in a great measure by steel castings, which are already made of high tensile strength.

Professor Thurston remarked upon the empirical character of the practice of depending upon familiar rules and formulas in the construction of steam engines. While standard tables, so called, like those of Regnault or Rankine, on pressures of steam due to temperature, might be accurate and very nearly exact, they were not absolutely so under all conditions, and he urged that engineers should depend upon observations derived from the actual conditions of the special case in hand.

Chas. E. Emery, Esq., in a brief paper pointed out the value of non-conductors as a means of preventing radiation in steam pipes, and from a series of experiments presented the following substances in the order of their mention as valuable: Hair felt, mineral, wool, sawdust, charcoal dust, wood, loam, slack lime, asbestos, ashes, brick dust, sand, air, and space.

Cold Air for Domestic Use.

The *Chronique Industrielle* gives an abstract of a paper by a French engineer, M. Mougey, of Bray-sur-Seine, wherein the author shows the benefits to be derived from a system proposed by him for distributing cold air through a line of pipes to private consumers. Some such system has been suggested before, but the one under consideration differs from it in the fact that the projector proposes to compress the air to a greater degree (5 or 6 atmospheres), and to cool it before sending it through the pipes to the various points of distribution. At these points the opening of a cock, by allowing the air to escape and expand, will distribute throughout cellars, living apartments, or wherever else it may be needed, a pure cold air capable of preventing fermentation or putrefaction of organic matters, and of rendering the atmosphere of stores, manufactures, or dwelling houses refreshing during the most sultry days of summer. The air thus compressed may also be used, like steam, as a motive power. As for the proposed mode of distribution, that is essentially the same as now employed for supplying steam heat to consumers in Lockport, N. Y.

NEW CAN AND BOTTLE OPENER.

The engraving shows an improved opener for cans and bottles, recently patented by Mr. I. N. Arment, of Dayton, Washington Ter. On the top of the main bar forming the handle of the several parts, is fixed a brush for cleaning off the top of the can or bottle. On one side, and near the center of the handle, there is a groove in which is pivoted a corkscrew which is held in either of its positions by a spring in the bottom of the groove. In one end of the handle is pivoted a short, stub knife blade, to be used for cleaning off wax, cutting wires, etc., and at the opposite end there is a sharp curved spur which is designed to be thrust into the center of the top of a can. This end of the handle is slotted and contains a follower which carries a pointed double-edged knife and a small roller. The knife is to be forced into the top of the can, and the roller presses the side of the can at the top, to guide the knife.

A spiral spring is attached to the end of the handle and to the follower, and tends to draw the latter toward the end of the handle. This device insures a contact of the roller with the side of the can.

Novel Can and Bottle Opener.

This tool, unlike many combination tools, is convenient and useful in all of its parts.

Conflicting Trade Marks.

The following decision indicates the way trade marks are sustained in England: A firm of brewers shipping to the colonies had put on their trade label the words "Bulldog Bottling." Another firm, also exporting to the colonies, had adopted, perhaps from want of originality, the words

"Terrier Bottling." The users of the word "Bulldog" applied for an injunction against the use of the word "Terrier," and the Master of the Rolls, being of opinion that the labels could not be mistaken, declined to grant it. The Lords Justices, however, finding that the "Bulldog" beer had acquired the name of "Dog's head," reversed the decision of the Master of the Rolls, on the ground that the nature of the "Terrier" label would lead to its being described by the same name.

NEW MOLE TRAP.

We give an engraving of a simple and effective mole trap lately patented by Mr. Henry W. Hales, of Ridgewood,

**HALES' MOLE TRAP.**

N. J. As will be seen from the engraving it may be set over the mole run without disturbing the ground in any way, or offering any obstruction to the free passage of the animal. The trap is so constructed that it may set very near to plants and flowers without injuring them, and it may be set close to a wall or fence without interfering with its working.

The trap consists of a vertical frame terminating in two pointed stakes at the bottom, which are wide enough apart to admit of pushing them into the ground on opposite sides of the run without disturbing the earth or changing the form of the run.

A follower fitted to slide in the vertical frame carries six long, pointed pins, three on each side of the frame. This follower is pushed downward by a strong spiral spring, and is retained in an elevated position by a lever extending through a mortise in the side of the frame and downward where it is engaged by a trigger. The trigger is furnished with a wide flat foot which rests upon the ridge of the mole run which is slightly depressed.

Now, when the animal attempts to go through the slightly contracted portion of the run the trigger is raised and the trap is sprung.

For convenience in setting and placing the trap, the square rod, extending upward from the follower through a square hole in the top of the frame, is rounded at a single point for a short distance, so that when the follower is raised until the round part of the rod is in the mortise in the frame and the rod turned as indicated in the detail view, the follower will be retained until the trigger and lever can be arranged, after which it may be again turned to bring it into position to operate. The trap is made entirely of metal, and is very simple and effective.

Statistics of Color Blindness.

The report of the committee appointed by the Ophthalmological Society of London, to collect statistics of cases of color blindness, presents many features of special interest. The secretary of the committee, Dr. Brailley, with the assistance of sixteen colleagues, has examined 18,088 persons of all classes, of whom 1,657 were females. It is at once curious and suggestive to find that while the average percentage of color defects among men is 4.76, and 3.5 for very pronounced defects, it falls in women to the low figure of 0.4. This, if true, remarks the London *Lancet*, would seem to suggest a new sphere of labor for women. If women are comparatively free from color blindness, they are so far specially indicated for many of the less laborious occupations in which good color perception is desirable or absolutely indispensable. It is satisfactory to find that these last statistics confirm, in the main, those collected by the late Dr. George Wilson, of Edinburgh, nearly thirty years ago. This is especially noticeable as regards the comparative frequency of color defects among members of the Society of Friends, particularly among the poorer section of them. Though the members of the Ophthalmological Society seem either not to have known the fact or to have forgotten it, Dr. Wilson found a considerable number of cases of color blindness among the members of the Society of Friends, and he was of opinion that this was not an accidental circumstance. He further believed that the largest proportion of cases of color blindness would, on extended examination, be found among the less accomplished male Friends in the larger cities.

A Japanese Bronze Worker.

The most skillful living bronze worker in Japan, and one of the most skillful of workers in metal that Japan has ever possessed, is said by the *Japan Mail* to be a Kiyoto artisan named Zoroku. His specialty is inlaying with silver and gold, an art which he carries to such perfection that his pieces are scarcely distinguishable from the *chef's-d'oeuvre* of the Min period. What one sees on going into his atelier is a very old man—some 65 or 70—peering through a pair of huge horn spectacles at a tiny incense-burner or still tinier flower vase, from whose frets and diapers he is paring away, with marvelous patience, an almost imperceptible roughness or excrescence. Beside him, winter and summer alike, stands a brazier with a slow charcoal fire, over which an iron netting supports one or two bronze vessels similar to that he holds in his hand. Plainly these bronzes are being subjected to a slow process of baking, and if you watch for a moment, marveling at the purpose of a proceeding which seems only calculated to mar the fair surface of the metal, you shall presently see the old man dip a feather into a vessel filled with greenish liquor, and touch the heated bronze here and there with the most delicate and dexterous care. This liquid is acetate of copper, and this patient process, which you see repeated perhaps twenty or thirty times during a visit of twice as many minutes, will be continued in the same untiring fashion for half a year to come, after which a month's rubbing and polishing will turn out a bronze rich in green and russet tints that might, and indeed must, you would fancy, have been produced by centuries of slowly toiling time.

IMPROVED FRUIT JAR.

The engraving shows a fruit jar whose cover is retained by a wire bail carrying a roller, the wire being bent so as to retain the roller in its central position, and to form bows extending away from the pivots to increase the leverage in moving the bail. The cover has an arch across it, the surface of which is two arcs of circles of shorter radius than the bail, so that the movement of the bail across the arch causes the roller to press the arch and cover and bring the cover down tightly upon the packing of the bottle or fruit jar, and the roller remains in the slight depression formed in the surface of the arch.

This invention has been patented by Mr. Richard B. Reilay, of Wilkesbarre, Pa.

A New Cattle Car.

A "parlor" cattle car, with twenty head of cattle, arrived in this city the other day from Cincinnati, the cattle having come through without unloading. The cattle were fed and watered by a mechanical contrivance operated from the end of the car. With an ordinary car the cattle would have had to be unloaded for feeding three times, with considerable injury and delay. The superiority of the new car was shown not only in its increased capacity and the superior comfort of the animals, but also in the saving in weight by diminished loss, which is usually about ten per cent. With the "parlor" car the loss was under three per cent.

Reilay's Fruit Jar.