

**The London Fisheries Exhibition.**

Congress having appropriated \$50,000 for the collection, transportation, and display of objects representing the fishing interests of the United States at the International Fisheries Exhibition at London, next year, Commissioner Baird has issued a circular describing the character of the exhibits desired and the proper way of forwarding them.

Two classes of articles will be carried to London for exhibition, viz.: First, those which make up the "collective exhibit of the United States," and second, those which are entered for competition.

In the collective exhibit will be shown, in a systematic and synoptical manner, illustrations of our marine and fresh-water animals of economic value, together with the apparatus and methods of their capture and utilization, and the commercial, scientific, social, historical, and legislative aspect of the fisheries. It will include the most striking features of similar exhibits made by the Fish Commission in the Philadelphia Exhibition of 1876, and the International Fishery Exhibition at Berlin, in 1880, together with many additional ones never previously attempted. The major part of this display will be borrowed from the collections of the National Museum in Washington, but it will be necessary to secure a considerable number of new objects.

It is considered especially desirable that the department of competitive exhibits shall contain a very complete representation of the various food preparations of fish—canned, dried, pickled, smoked, etc.—there being a constantly increasing demand in England for goods of this description, shipments to that country amounting, in 1881, to more than \$2,000,000, in addition to the very large exports to other parts of Europe and to the European colonies in the East. Manufacturers of boats and boat-fittings, angling apparatus and costumes, and other similar articles, are also urged to contribute. Medals in gold, silver, bronze, and diplomas of honor will be awarded by a jury of experts. Professor Baird is prepared to act, both in this country and in London, as the representative of individual exhibitors, and to attend to correspondence relating to applications for space, etc.

Goods to be exhibited, if delivered in Washington, Philadelphia, or New-York, will be carried to London and installed at the expense of the Government; special arrangements may be made for the return of articles at the close of the exhibition. Prospectuses, blank application forms, blank "lists of exhibits proposed to be shown," and any information desired will be furnished on application to the Commission at Washington. Applications for space for competitive displays should be made before the 1st of September, 1882. The exhibition—which is under the patronage of the Queen of England and the Presidency of the Prince of Wales—will be opened on the 1st of May, 1883, in buildings now being erected in the Horticultural Gardens at South Kensington, and will continue for a period of six months.

**NOVEL DOOR SECURER.**

We give an engraving of a very compact and convenient device for securing doors. It is designed principally for the use of travelers, and is very readily carried, and quickly



**PORTABLE DOOR SECURER.**

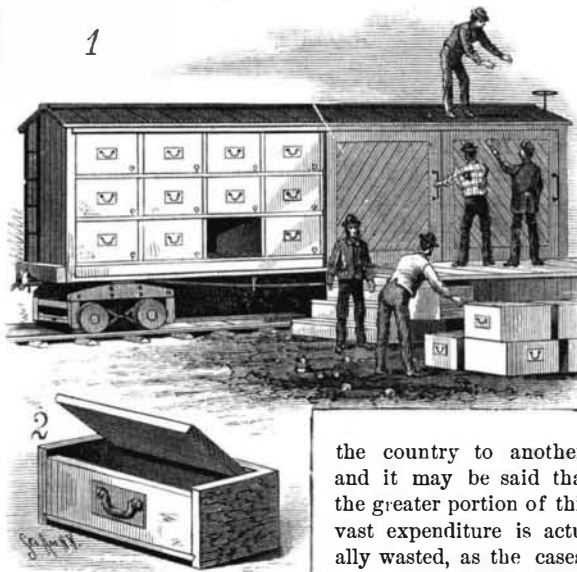
and easily applied to the door, and when so applied renders the door perfectly secure. The fastener is nicely finished and nicked, and weighs complete only one and one-half ounces. It is provided with a morocco case, in which it is placed when not in use. A metal strip is provided at one end, with a flat hook, and a screw threaded rod is pivoted to its opposite end. A U-shaped piece, whose shanks are of unequal length, is apertured to receive the threaded rod, and the ends of the shanks of the U-shaped piece project toward the hooked end of the strip. This piece is secured in any desired position on the rod by a milled nut screwed on the outer end. The ends of the U-shaped piece have a flat, smooth surface to rest against the surface of the door and frame. The shorter shank is adapted to rest against a moulding or casing, and is provided with a swinging leg of such length that when it is swung outward its end will be flush with the end of the long shank. When in use, the hook of the metal strip is placed against the jam of the door, and the U-shaped piece is turned in such a manner

as to permit the closing of the door, and by closing the door the hook is forced into the wood of the jam. The U-shaped piece is then turned so that the long shank will rest against the surface of the door. The device does not mar the door, and keeps it perfectly locked, and is applicable to doors of any thickness, having any style of casing.

This invention has been patented by Mr. Charles A. Crongeyer, of Detroit, Mich. Further information may be obtained by addressing Messrs. Crongeyer & Busch, Lock Box 643, Detroit, Mich.

**IMPROVED FREIGHT CAR.**

Hundreds of thousands of dollars are annually expended for packing cases in which to ship goods from one part of



**McMANUS'S FREIGHT CAR.**

worse than useless, and are consequently destroyed. This, together with the fact of the injury to certain classes of goods, in the ordinary methods of handling and shipping, and the trouble and expense of packing and unpacking goods in the ordinary way, has led to the invention shown in our engraving.

The cut shows a freight-car divided horizontally by two platforms or partitions, forming three longitudinal compartments, which are subdivided by vertical partitions forming small chambers for receiving a series of packing cases of uniform size and shape. The sides of the car consist of sliding doors, which may be moved so as to expose either half of the car, or, in fact, any portion of it.

The packing boxes are of sufficient thickness to properly protect the merchandise packed in them, and are of such size as to be conveniently handled. They are provided with handles on opposite sides, and have hinged covers by which all the trouble of nailing and removing nailed covers is avoided.

The cases can be furnished to merchants, who can fill them with goods and deliver them at the freight stations. The receiver of the goods can unlock the cases and remove the goods, and the cases, at a slight expense and without injury, may be returned to the shipping point. All of the cars are to be provided with compartments of uniform size, and any case will fit any car.

As the compartments extend entirely through the car, the load may be readily taken from either side of the car; the arrangement also permits of double length boxes for special classes of merchandise. Of course a car may be fitted with the compartments and cases in one half, only leaving the other half as a plain box-car.

Fig. 1 shows the car as it appears while being loaded or unloaded, and Fig. 2 shows the packing case in detail.

This invention has been patented by Mr. Edwin McManus, of Randolph, N. Y.

**Theory and Practice.**

Theory and practice, says the *Chemiker Zeitung*, will involuntarily strike the ear of some of our readers like shrill discord.

"All theory, dear friend, is hoary," perhaps one will say, while the theorist, wrapping his toga proudly about him, will draw aside from the practician with a sympathetic smile and express his ideas. The contradiction herein expressed has become so customary that one rarely meets with any other conception than this which is decidedly false. For this reason we may be permitted to state in a few words what is the real relation between theory and practice.

We do not see in it any contradiction, any "master and servants," or "head and hand;" nay, we look on them as two perfectly equal factors, through the harmonious co-operation of which the acquisitions of science are first made to serve mankind. If we admire the learned who live only for science, pondering on the highest problems for their own sake alone, unconcerned as to whether their thoughts can find any practical use, we do not honor less the man who is quick to see which thoughts of that savant promises a rich return if carried into practice, and then with an iron energy carries it out, and impresses upon it its best form.

And where is there any discovery which owes its origin to the mind of a theorist, that has not found its first complete application in the efforts of a diligent practician?

We have seen a whole series of discoveries, which seemed originally to have merely a scientific value, but they soon celebrated unexpected practical triumphs; we have seen how flourishing industries have been built on small and unseemly experiments made only for scientific purposes in the laboratory of the investigator, not only without regard to their practical utility, but very frequently without any suspicion of it. About two decades ago Bunsen and Kirchhoff astonished the world by their discovery of spectrum analysis, but at that time no one imagined that it would so soon find an eminently practical and genial use in the manufacture of Bessemer steel.

The insignificant observation that the legs of a frog hanging on a copper wire would jerk whenever they touched the iron, was the foundation of the electric telegraph, and there is scarcely another domain in which practical men have attained such brilliant results as in electricity.

Marggraf's ever memorable isolation of the "sweet salt" in the beet was the corner stone of one of the most flourishing industries of Germany, which to-day supports very many chemists and technical men who are continually striving to advance the higher development of this branch of industry.

What a wide step from Zinin's conversion of nitro compounds into amides to the present state of the coal tar color industry!

We could give an enormous number of examples of how small theoretical beginnings have risen to important practical results. But these few may suffice to show how everything of importance which has been accomplished in our profession owes its results to the circumstance that theory and practice have mutually supplied each other's deficiencies.

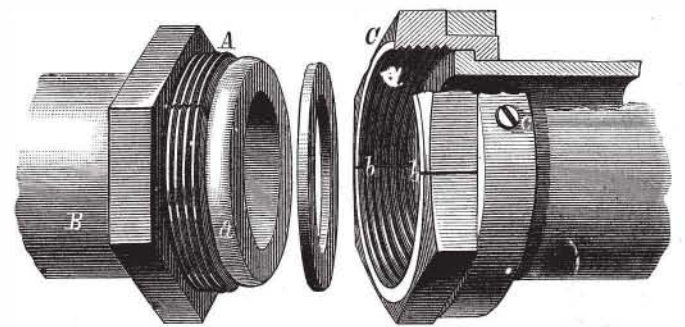
**FREY'S PLUMBER'S COUPLING.**

The great difficulty with plumbers' couplings used in connection with bowls and tubular connections of porcelain, glass, or other brittle material, is that they are difficult to apply, and can be applied and removed only with the risk of breaking the bowl or connection.

A ring or sleeve, A, having an external thread and divided into two or more longitudinal sections, is put on or around the branch, B, of the bowl. This ring is made somewhat larger in diameter than the collar of the bowl, and to receive a nut which holds the sleeve together and in place. The screw collar, C, of the coupling fits over the collar of the bowl, and screws on the split sleeve, A, bringing the flanged end of the pipe against the rubber packing ring by which the joint is made tight.

The split sleeve is prevented from turning when the joint is made by means of a tool fitted to the slits between the halves of the sleeve, or by means of a rubber band slipped over the collar, a, of the bowl.

In some cases it may be desirable to place the collar, C, on the branch, B. This collar is then split as shown at b, and



**NEW PLUMBER'S COUPLING.**

the two halves are held together by a ring, c, which slips over the smaller diameter of the collar, and is secured in place by two screws. In cases where two flanged pipes, or connections of porcelain glass, or even iron or other material, require unity with a strong tight joint, and when it is impossible or inconvenient to apply the ordinary coupling, both the sleeve, A, and collar, C may be divided as described. In this case also the two parts may be readily separated by taking the ring c, from the divided collar, C.

It will be seen that this device admits of applying a positive and reliable coupling where cement joints have heretofore been used, and it will prevent the breakage of many expensive pieces of work in plumbing.

Further information in regard to this useful invention may be obtained by addressing the inventor, Mr. J. J. B. Frey, 1283 Broadway, New York city.

**The Telephone at Alexandria.**

It appears that just before the bombardment of Alexandria arrangements had been completed for the introduction of the telephone in that city. The work had been done by Mr. H. H. Eldred, formerly station agent at Passaic City, N. J., who was at Malta during the bombardment, and conducted the experiments by which the firing was heard through 1,000 miles of ocean cable. The experiments were suddenly terminated by the explosion of a shell from one of the 81 ton guns in the cellar of the Alexandria central office.