THE FAIR OF THE AMERICAN INSTITUTE.

As compared with its predecessors of the past three years, the present Fair is undeniably far in advance, not only in the number, variety, and intrinsic beauty and merit of the articles exhibited, but in the unwonted vigor which has characterized its management. With some trifling exceptions, the display is now complete, and that this can be said in the presence of the fact that an unusually large amount of heavy and bulky goods have been entered is no small credit to the gentlemen whose exertions have brought about so excellent a result in so short a period of time.

It is the verdict of almost every visitor that the general appearance of the hall has been greatly improved. The various articles have been grouped with an eye to artistic effect as well as to convenience, a task all the more easy owing to the entry of so many objects of elegant and tasteful design. As we before intimated, the display of red, white, and blue drygoods on the roof mars the general effect; but this aside, there is plenty upon the floor to gratify the most fastidious taste. Few art lovers can pass the cases of the Gorham Manufacturing and the Meriden Britannia Companies without a long look at the exquisite designs in silver and gold therein exhibited. There are some miniature models of yachts, and one tea set in gold and frosted silver which will well repay more than a passing glance, for the work upon them is admirable. As another very beautiful specimen of somewhat similar labor may be mentioned a copper lectern in the form of an eagle, to be found in the exhibit of Messrs. J. and R. Lamb, church furniture manufacturers and decorators. The modeling of the bird is very fine, and the way in which it is mounted to serve its purpose is quite artistic. In fact, it seems to us that the fine art department of the present Fair is scattered throughout every division, and exists everywhere but in the special quarter set aside under that name. The photographic display is little more than a repetition of that of last year, and there are some pictures present which have done similar duty for several years. Kürtz has some excellent photographs, as usual; Prang, one chromo among others which is especially good, and worth mounting a long staircase to look at: it is a child holding a bunch of flowers. And there are some fair specimens of photo printing, and work by the sand blast process, which has been described so often.

THE HORTICULTURAL DISPLAY

is exceptionally good. There are a number of admirable specimens of fine fruit, so large and luscious that one is forced to regret that their fate is to decay on their plates, and not to gratify somebody's palate. Several prominent florists in this city have sent some exquisite baskets of cut flowers, one of which, made of oat straw in the form of a bird house, stuffed humming birds perched here and there answering for the living inmates, is remarkably beautiful —and doubtless costly in proportion. The exhibition of growing plants is worth examination, as many rare and beautiful varieties are included. There is one specimen in which the very large leaf is half green and half pure white, and others look as if some one had shaken a brush full of white paint about their verdure. We do not remember to have seen any scientific explanation of this peculiar appearance, and it might be a subject for study as to why the chloropbyll or coloring matter of the leaves should thus be absent or inoperative in certain spots. From the main hall we proceed to note the novelties in the Machinery Department. A curious machine is that for

MAKING CORRUGATED ELBOWS

in stove pipes. The sheet of iron, bent in tubular form, is slipped over a mandrel of suitable size. In the extremity of the latter are two clamps, each made in two pieces, hinged opposite to each other. The inner clamp, when brought over the pipe and its halves forced together by a lever on one of them, makes a slight, narrow swelling around the surface of the pipe. The other and outer clamp has a square inner edge, which forms a crease or plait on top of the iron and outside the elevation formed by the first mentioned clamp. Both clamps are securely fastened, and a powerful lever in the rear is worked, which bends the outer edge of the pipe upward. The clamps are then loosened, and the return motion of the lever operates mechanism to carry the pipe a certain distance forward. The operation is then repeated until the pipe is bent to the proper angle. The machine is made by the Corrugated Elbow Company, of this city. It is operated entirely by hand, doing its work with great rapidity and accuracy.

A MACHINE FOR CUTTING OUT CLOTHES,

the invention of Mr. Albin Warth, is a remarkably ingenious apparatus, which bids fair to prove a great blessing to the tailoring trade. There are two forms of the machine, one of which is movable and is carried against the cloth, while the other is stationary and has feed wheels drawing the fabric to it. In the movable device, a long rod is fastened along the edge of the table, serving as a way for a traveling carriage. A belt passes over two pulleys at one end of the rod, and its bight over a single horizontal pulley at the other, and to this power is applied. On the carriage is a pulley, against which the two parts of the belts, passing it on each side, are forced by means of binder wheels, the degree of pressure applied to the latter regulating the amount of power transmitted from the belt to the pulley. Just above the latter, and on the same shaft, is a smaller belt pulley, and above this again is pivoted a long arm, which extends out over the cutting table. Another belt for the smaller pulley passes along the arm, thence to other pulleys, which it rotates, so communicating motion to an eccentric, which gives a knife in a suitable support a fast vertical reciprocating motion. Below the knife is a flat metal disk, with beveled edges, which is passed under the cloth. The part which holds the knife has a handle, by which the operator can guide it, the arm being pivoted on the carriage, and the latter having a free motion along its way, affording a kind of universal movement over the plane of the table. There is a presser foot that holds the cloth, and devices for instantly shifting the driving belt in the movable part to a loose pulley, and so stopping the operation. The machine cuts through half an inch of solid cloth with the utmost ease. No pinning of the material is necessary, and the inventor informs us that, in many of the largest clothing manufacturing houses in the city, forty men are readily enabled to do the work of one hundred. In the smaller or stationary machine, there is mechanism under the table to give the knife working through the same a reciprocating motion, and also to operate feed wheels, which draw the cloth against the edge. This cuts through 1¼ inches of solid cloth, and we are told that with it four men can easily fold, sketch, and cut 800 pairs of pants, or 500 coats, in a working day. There are very many ingenious and interesting details about these machines, which will well repay examination.

Considerable interest is being excited by the performances of the new lubricant,

METALINE,

a substance which we described and illustrated some months since, and which has proved successful as a substitute for oil in a variety of machinery. The material is a peculiar alloy which is inserted in cavities made in the interior of the journal boxes, and its effect is to form a thin film over the opposing metal surfaces, and to prevent either heating or cutting. At the Fair is exhibited a counter shaft, speeded to 750 revolutions, in which the bearings are cut down to the diameter of the shaft, one inch. This communicates motion to a short emery grinder spindle, speeded to 3,500 revolutions, and the latter to a cotton spindle, which runs at 14,000 revolutions. There is not the slightest cutting visible under these very high speeds, and the amount of heat developed is barely discernible by the touch. The Fall River mill, which was burned through friction generated by an unoiled mule head, would doubtless be standing to day had such a substance as this metaline been employed.

Next week we hope to have room for a longer report of the Fair.

MEDICAL NOTES.

Kousso for Tape Worm.

A correspondent of the *Druggists' Circular*, F. R. P., of Augusta, Me., narrates a case where he effected the removal of a tapeworm after the patient had taken male fern, turpentine, and a number of other remedies, prescribed by different physicians, without avail. First, a dose of castor oil was given at night; it operated early in the morning. Then one ounce of pulverized kousso was put in half a pint of warm water and allowed to stand a short time. The patient drank what he could of it in twenty or thirty minutes. He retained about one half the quantity used, his stomach rejecting more. In three or four hours he took another dose of castor oil, meanwhile having an operation from the kousso, but no tapeworm put in an appearance. But in an hour and a half the last dose of oil operated, and with it came twenty feet of the tapeworm in one unbroken piece, the head remaining, the end coming first being half an inch wide, and the last portion about one sixteenth of an inch wide, evidently being very near the head. Some two weeks after, the same treatment was repeated, only the kousso was given in capsules instead of water. This time eight inches more of the troublesome tenant were dislodged, one end running down to the size of a knitting needle, and the joints almost square. Several physicians say the head must have passed. The patient feels much relieved in mind and body, and has already begun to grow fat. The prescriber finds the books vague, and desires some one to give him a plain description of the head of the *tænia solium*.

Styrax in Itch.

At the Stuttgard hospital, they treat *scabies* with the following ointment: Styrax, one ounce, olive oil and common spirits, each one drachm; mix. If an old case, the patient is first washed thoroughly with soft soap, nine to twelve times in three days, and then anointed with the above, one to three times a day. In recent cases the soft soap is not required. In 1,659 cases thus treated, every one was cured, although no precautions were taken to destroy the insects on clothing, and not one relapse occurred.

Surgical Treatment of the Eye.

Mr. C. S. Jeaffreson, surgeon of the Eye Infirmary, Newcastle-on-Tyne, makes very important remarks on the treatment of the eye when injured or diseased. He says: "There is one rule in ophthalmic surgery which will help us to deal with a large class of these cases, and it is this: An eye which has been damaged by accident or disease, and which is no longer useful for visual purposes, is a dangerous organ and should be removed. I do not wish to assert that this rule should always be rigidly carried out as regards eyes which have been destroyed by idiopathic disease, although I think, in those cases, a rigid conformity to it would rarely carry us astray. In traumatic cases, I firmly believe that it can never be safely departed from, and should be carried out as soon as we have convinced ourselves that the visual power is gone, or will be so low as to be practically useless. Scarcely a day passes in my public or private practice without my seeing a case of sympathetic ophthalmia, which might have been averted had this rule been thoroughly understood by the bulk of practitioners; and every year a large number of persons are consigned to a life of darkness and misery from a want of appreciating the importance of it. Patients have a great horror of enucleation, and require usually a great deal of pressing to submit to it; and for this reason the surgeon must be firm and unflinching, and must indicate the necessity for action in the most forcible language. What should guide our treatment in doubtful cases? In my judgment, the following circumstances: 1. If there are the slightest signs of sympathetic ophthalmia in its fellow, the injured eye should be immediately excised. 2. If vision is absolutely lost beyond hope of recovery, the eye should be sacrificed. 3. If the wound is in the ciliary region, and there is no prospect of really useful vision, the eye should be excised. 4. If the wound is not in a dangerous region, and the impaired vision seems to be in a great measure due to effused blood, I should not advise immediate operative interference. When once we have made up our minds that enucleation is necessary, is it advisable to wait till acute inflammatory symptoms have in a measure subsided? For my part, I think not. I have frequently performed enucleation during the most inflamed stages, and I never have seen any bad results follow. I believe that by following this rule, we may frequently curtail a great deal of pain and anxiety, which would have been incurred by waiting.

When foreign bodies are lodged in the anterior chamber, lens, or iris, they are generally clearly visible, and may usually be removed without much difficulty while the structures are still transparent. When they are lodged in the lens, no time should be lost, for sometimes it happens that a body which remained *in situ* while the lens was firm disappears behind the iris when the lenticular matter becomes diffluent; and if extraction be attempted at this period, especial care must be employed, as the lenticular matter not unfrequently flows out, leaving the foreign body hidden by or entangled in the folds of the iris. Occasionally a foreign body which has been lodged in the eye will escape spontaneously.

SIR JOHN RENNIE, the distinguished civil engineer, died on the 3d of September, in England, at the ripe age of eighty years. He constructed the new London Bridge, completed Plymouth Breakwater, designed and built Sheerness Dockyard, Ramsgate Harbor, parts of the Cardiff Docks, and other important works.

DECISIONS OF THE COURTS.

United States Circuit Court---Southern District of New York.

PATENT FRUIT JAR.—THE CONSOLIDATED FRUIT JAR COMPANY *vs.* JAMES T. WRIGHT.

WOODRUFF, *Circuit Judge:*

The bill is filed herein to restrain the alleged infringement of a patent granted May 10, 1870, to John L. Mason for "an improvement in fruit jars," and, by assignment, now held by the complainant. The application of Mason for the patent was made on the 15th of January, 1868.

In the specification the invention is said to relate to a new and improved construction of jars and other vessels designed for the preservation of fruit and other substances which are seriously affected by exposure to air, whereby india rubber packing rings or gaskets can be employed in making tight joints without exposing the rubber to the contents of the jars, and whereby flat horizontal shoulders, formed outside of the jars, are adapted to afford bases, upon which to receive said rubber packing rings, upon the exterior of the jars above the continuous glass screw; and whereby flanged caps or covers can be used, the flanges of which are adapted to fit over annular ribs or flanges surrounding the mouths of the jars; and whereby flexible flanged screw rings, made of thin metal, are adapted to confine the caps or covers down firmly in place over the mouths of the jars and upon the said rubber packing rings, placed upon the said shoulders formed outside of the jars.

After a more minute description and reference to the drawings annexed to his specification, the patentee states that he claims:

The combination, first, of the shoulder *b*, to receive a gasket outside and a little below the top of the jar; second, of the cover B with the rim *d* extending down outside of the top to press upon the gasket; and third, of the screw ring or screw cap C, with its screw threads operating upon those of the jar below the gasket shoulder, all substantially as above set forth and described.

It is to be noticed that the patentee does not claim either of the elements or parts of this combination; nor does the patent purport to secure to him the exclusive right to use either, nor does it secure to him the special form of either, but only the combination of the three.

The patent, therefore, in no wise hindered the use by any one of a cover having a rim or flange extending down outside of the top of the jar to press upon a gasket, nor of a shoulder upon the outside of the jar, a little below the top, to receive such gasket, nor of both of these combined, provided the purpose was not produced by a screw ring whose threads operated upon threads in the glass jar below the gasket, and so of any other jar not combining the three parts. The patent is strictly a combination patent, in which the parts are not claimed to be new.

Held as follows:

A patent for a fruit jar claimed in combination an outside shoulder below the top for holding the gasket, a cap with a rim pressing on the gasket, and a screw ring engaging with threads below the shoulder for holding the cover down; and it disclaimed a gasket which was pressed down upon a similar shoulder by means of a clamp as well as a similar screw ring for holding a gasket on the top of the jar. Doubted whether there was the exercise of anything more than sound judgment in substituting the screw ring for the clamp in one case, or the gasket on the shoulder for the one on the top in the other.

Where a patentee disclaims so many elements of his invention as to leave no room for the exercise of invention in forming the combination which he claims, it is of no avail for him to show that he was really the first inventor of all or any of the parts thereof.

A patent is void if more than two years before the application for it was filed the patentee had sold the patented articles for the double purpose of realizing the proceeds and of seeing if they would sell, and others had had them in actual use.

An invention held to have been abandoned to the public when the author, after having reduced it to perfection and actual practice, took no farther measures with it for nine years and suffered the molds to be lost, and meanwhile others, independently of him, reduced it to practice and introduced it extensively into market.

It is not necessary that the latter should obtain a patent; it is enough if they have reduced the invention to practice, and it has gone into use.

The first inventor does not lose his right in such a case in consequence of the mere lapse of time, but because the circumstances indicate an intention of abandonment, and because the rights of others have intervened.

Bill dismissed with costs.

[*A. J. Todd* and *J. H. B. Latrobe*, for complainants. *W. C. Witter* and *George Gifford* for defendants.]

Inventions Patented in England by American

[Compiled from the Commissioners of Patents' Journal.]

From August 27 to September 9, 1874, inclusive.

BOILER FURNACE.—W. L. Powleson, San Francisco, Cal.

BOOT MAKING MACHINE.—E. P. Richardson, Lawrence, Mass.

BRAKE.—J. Y. Smith, Pittsburgh, Pa.

BREECH-LOADING FIRE ARMS.—B. B. Hotchkiss, Paris, France.

CAULKING TOOL.—J. W. Connery *et al.*, Philadelphia, Pa.

CUTTING BUTTER, ETC.—S. Richards, Philadelphia, Pa.

EQUALIZING PRESSURE.—W. Miller, Boston, Mass.

FILLING BOTTLES, ETC.—P. McC. Sherwood, New York city.

LEATHER CRIMPING MACHINE.—G. Platts *et al.*, Newark, N. J.

MAKING PAPER PULP.—H. B. Meech, New York city.

PAPER CUTTING MACHINE.—V. E. Mauger, New York city.

PIANOFORTE.—M. W. Hanchett, Syracuse, N. Y.

PILE FABRIC LOOM.—J. Cochrane, Jr., Malden, Mass.

RAILWAY CAR, ETC.—Revd. J. C. Nobles, Elmira, N. Y.

ROTARY ENGINE.—R. D. Milne, Los Angeles, Cal.

SOLDERING APPARATUS.—J. Sears, Chicago, Ill.

STEAM PACKING.—P. W. Richards, Boston, Mass., *et al.*

STOPPING BOTTLES, ETC.—N. Thompson (of Brooklyn, N. Y.), London E.

SUSPENDING CHANDELIERS.—Bradley *et al.*, New York city.

TRAVELING BERTHS, ETC.—T. P. Ford, Greenpoint, N. Y.

TRIMMING BOOT SOLES.—H. E. Townsend, Boston, Mass.

UMBRELLA RUNNER.—J. J. Higgins, M.D., New York city.