CURTIS'S CARRIAGE WHEEL.

Every one who has used a wagon has experienced the inconvenience of wheels shrinking away from their tires. It is practically impossible to make a wheel so that it will not shrink enough to loosen the tires, in dry weather; then the only alternative is to have them reset. This is sometimes done by inexperienced workmen, who err in setting them too tight, for if they are set properly for the dry wheel, they are too tight when the wheel swells, as it does when wet, as in the spring and fall. The result is that the wheel becomes cramped or dished, and loses its strength by being warped out of its natural position. It also runs hard because its center of gravity is outside of its bearing. Now, the only way to obviate this difficulty seems to be to secure the tire to the wheel without welding, so that it may be adjusted to the size of the wheel, whether dry or wet, and preserve the strength of the wheel in all its parts.

Fig. 1

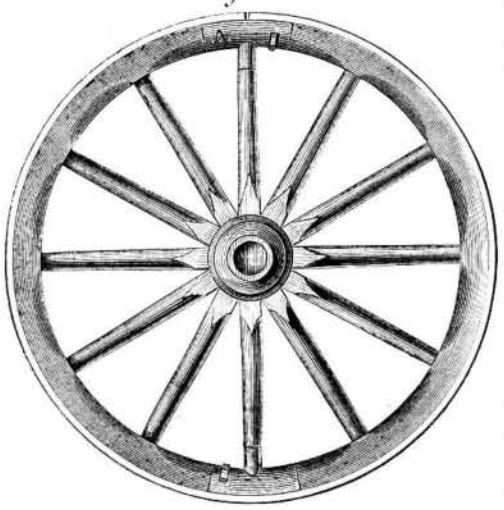
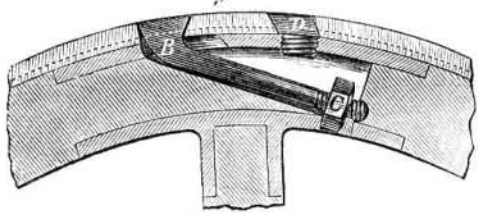


Fig. 2



This object has been effectually accomplished by the device represented in the accompanying engraving. Fig. 1 represents a carriage wheel having two socket pieces, A, of cast or malleable iron, forming part of the rim at opposite sides of the wheel, into which is tennoned both ends of the felly and a spoke, thus forming a superior fastening for bent rims as well as the device for securing the tire. Fig. 2 represents one of the socket pieces cut through the center so as to show its working parts. B is a hook-headed bolt passing through the socket piece at an acute angle with the tire, and on which there is a nut at C, with a slot in the socket casting to allow it to turn. D is a wrought-iron stud screwed into the casting and stationary there; the socket piece in the opposite side of the rim is the same with the exception of the stud, D.

In putting on the tire it is first hooked on to the stud, then passed round the wheel and hooked on to the bolt in the opposite socket piece; thus half of the tire is tightened. It is then passed round and the end hooked on to the bolt. These two bolts secure and fasten the tire so that it may be adjusted to the size of the wheel, whether wet or dry.

Persons desiring an interest in this patent should address the inventor and patentee, Andrew J. Curtis, West Winterport, Maine, by whom it was patented Jan. 2, 1866.

PROGRESS OF SCIENTIFIC EDUCATION.

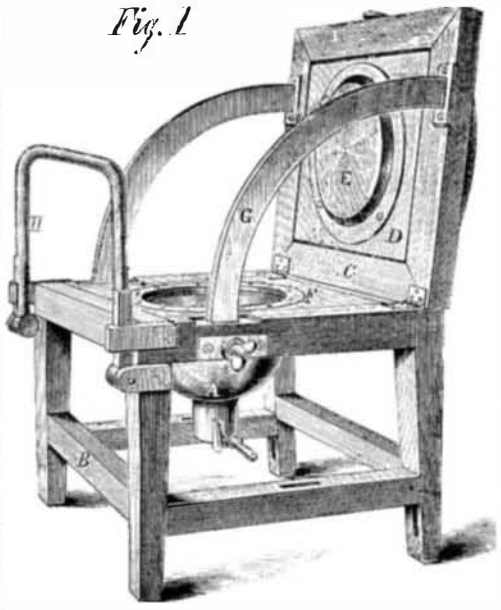
We are indebted to the author, S. Edward Warren, C. E., Professor of Descriptive Geometry, etc., in the Rensselear Polytechnic Institute, for a neat pamphlet describing the polytechnic schools and scientific department of colleges in the United States, that are devoted to the teaching of science. The number of these is twenty-three, and the statement of the dates at which they were severally formed exhibited very forcibly the rapid change that is taking place in the public estimation of the comparative importance of classical and scientific learning. The first was founded in 1824, the next in 1845, and all but four have been founded since 1850.

The pamphlet is published by John Wiley & Son, 535 Broadway.

RAINEY'S NURSERY CHAIR.

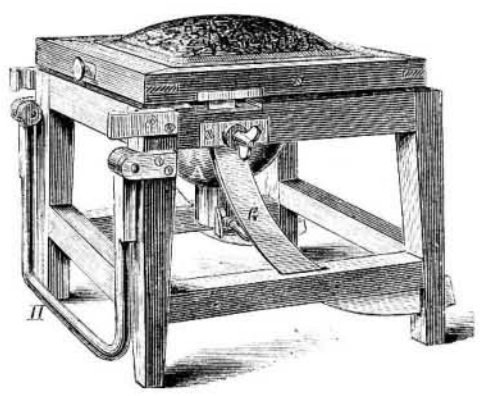
These engravings illustrate a new nursery chair for the use of children. It is so designed as to be capable of folding up in a small compass and packed in a box, and thus easily carried when traveling, either in cars or on steamboats. The principal parts

Fig. 1



consist of a metallic chamber, A, fixed in a frame, B. This frame is provided with a hinged lid, C, which has a movable center, D, one side of which is padded, as shown in Fig. 2, and the other furnished with a a cover, E, fitting the chamber, A. In order to make the points of contact perfectly air-tight, an elastic ring of rubber is let into the top, as at F.

Fig. 2



The center of the lid is capable of turning on pivots so as to bring the padded portion inside, in order that the occupant of the seat may have a comfortable support and not be brought in contact with the cover, E. At each side of the lid there are arms, G, which are curved to conform to the motion of the lid on its hinges. These, in connection with the fender or guard, H, in front, insure the child against injury from falling, so that it may be safely left to itself. The guard, H, is easily turned up or down as in Fig. 2, to remove or place the child in, and a faucet is fixed in the bottom of the chamber, A, for an obvious purpose. Various styles of this piece of furniture can be made so that its office is entirely hidden. It was patented by the Scientific American Patent Agency, on Nov. 28th, 1865. For further information address S. Rainey care of Aiken & Rainey, 60 Carondelet street, New Orleans, La.

A PAYING INVESTMENT.

Probably there are few newspapers in the world that receive a more careful scrutiny from readers than the Scientific American. It is a sort of standard reference upon all matters relating to the mechanical and manufacturing interests of the day, and its value as an advertising medium for those branches of industry is remarkable.

We are forcibly reminded of this fact by the appearance, in another column, of the engraving of "Hotchkiss's Atmospheric Hammer," the makers of which, Messrs. Merrill & Son, inform us that they have received orders amounting to *twenty-five thousand dollars* traceable directly to advertising, for the past few months, in the Scientific American; while other orders, received indirectly through our paper, amount to fifteen thousand dollars more—making forty thousand dollars in all.

We believe that manufacturers of improved machinery of every sort, will find it greatly to their advantage to keep constant advertisements in the Scientific American. From all parts of the country—north, south, east, and west—we receive inquiries for the best machinery. We cannot do otherwise than refer applicants to our advertising columns.

THE CHOLERA.

The arrival of the steamship *England* at Halifax, Nova Scotia, with a large number of cholera cases on board, has re-awakened the fears of the community, and the disease is the topic of the hour.

Medical writers say that mental disquietude, such as fear or apprehension incites, renders persons more liable to be attacked, and it is therefore to be regretted that the daily papers see fit to give sensational headings, and publish articles which cause unnecessary alarm. If the disease is infectious its ravages will not be stayed by exciting a panic in regard to it, and many unreflecting persons will aid in its extension by alarming reports that have not the least foundation. A calm, equable, mental condition, absolute cleanliness, both in person and apparel worn next the skin, wholesome food at regular intervals, and absence of anything like fear, are laid down by physicians as the best preventives of cholera.

Since the above was written it has transpired that the disease was not the cholera, but we believe our suggestions are not untimely.

SPECIAL NOTICES.

William O. Grover and William E. Baker, Boston, Mass., have petitioned for the extension of a patent granted to them on the 22d day of June, 1852, for an improvement in sewing machines.

Parties wishing to oppose the above extension must appear and show cause on the 4th day of June next, at 12 o'clock, M., when the petition will be heard.

Allen B. Wilson, of Waterbury, Conn., has petitioned for the extension of a patent granted to him on the 15th day of June, 1852, for an improvement in sewing machines.

Parties wishing to oppose the above extension must appear and show cause on the 28th day of May next, at 12 o'clock, M., when the petition will be heard.

Asahel G. Batchelder, of Lowell, Mass., and Geo. O. Way, of Claremont, Minn, administrators of the estate of Lafayette F. Thompson, deceased, have petitioned for the extension of a patent granted to the said Batchelder and Thompson on the 6th day of July, 1852, for an improvement in railroad car brakes.

Parties wishing to oppose the above extension must appear and show cause on the 6th day of July next, at 12 o'clock, M., when the petition will be heard.

Treatment of Cholera.—Dr. Hall, in an elaborate article in his *Journal of Health*, on cholera and its treatment, takes the ground that calomel is the only proper remedy, and that to employ any other is to trifle with human life. Dr. Scott, in a long article on the same subject, published in the *University Journal of Health*, says: "It cannot be denied that great fatality attends the treatment of cholera by calomel." Who shall decide when doctors disagree?