### Improved Portable Clothes Bar.

The accompanying engraving represents an exceedingly compact and convenient contrivance for supporting clothes to be dried after washing.

A semicircular bracket, *a*, is secured against the wall. This bracket has stirrups cast upon its lower edge of a proper form to receive the larger ends of the bars, *b b*, and *c c*. These bars are pivoted to the stirrups in such manner that they may be turned up against the wall in the position represented by the bars, *b b*, or turned down into the horizontal position, shown by the levers, *c c*.

The ends of the bars extend inward beyond the pivots so that when they are turned down into a horizontal position they will require no support at their outer ends. When turned up they incline inward from the perpendicular, and therefore do not require to be secured against the wall at their upper ends.

This apparatus will be found particularly convenient for drying clothes in the house. It will be seen that any required number of the bars may be brought into use, and those which will be most out of the way, while the others remain turned up against the wall.

The patent for this invention was granted, through the Scientific American Patent Agency Feb. 18, 1862, and further information in relation to it may be obtained by addressing the inventor, Hosea Willard, at Vergennes, Vermont.

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India Rubber Patent Extension.—Chas. Goodyear, Jr., executor of Charles Goodyear, deceased, has applied for the extension of a patent granted to said Charles Goodyear, April 25, 1848, for an improvement in making hollow articles of india rubber. The case is to be heard at the Patent Office Monday the 14th of April next. The testimony closes on the 31st of this month.

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### Adulterated Tin Foil.

As tin foil is employed for so many purposes in connection with substances of personal and domestic consumption, reliable information respecting its nature and composition is of very general importance. Such information has lately been communicated to the *Pharmaceutical Journal* by Dr. J. H. Baldock, who states that his attention was directed to an examination of the subject by discovering a large quantity of lead in some tin foil which he had occasion to use. He collected a number of specimens of tin foil, sold under the name of "commercial foil," "tea foil" and "pure tin foil." He found, by chemical analysis, that common foil contained 86.93 per cent of lead, embossed foil 76.57 per cent, tea foil 88.66 per cent, and that which was sold for the pure article 34.62 per cent. Tin foil, is, therefore, a misnomer. Dr. Baldock states that this alloy is more easily acted upon than either lead or tin singly, by tobacco, snuff, tea, &c. Tin foil is usually made by inclosing an ingot of lead between two ingots of tin, and rolling them out into foil, thus having the tin on the outside and the lead in the interior. Those who manufacture it assert that it answers just as well as pure tin foil, as the lead is not exposed on the surface.

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Experiments have been made at Hartford, Conn., with a steel vest fastened to a tree. An Enfield rifle made a large dent in it; a Colt's rifle, it is said, penetrated through it at a distance of fifty yards.

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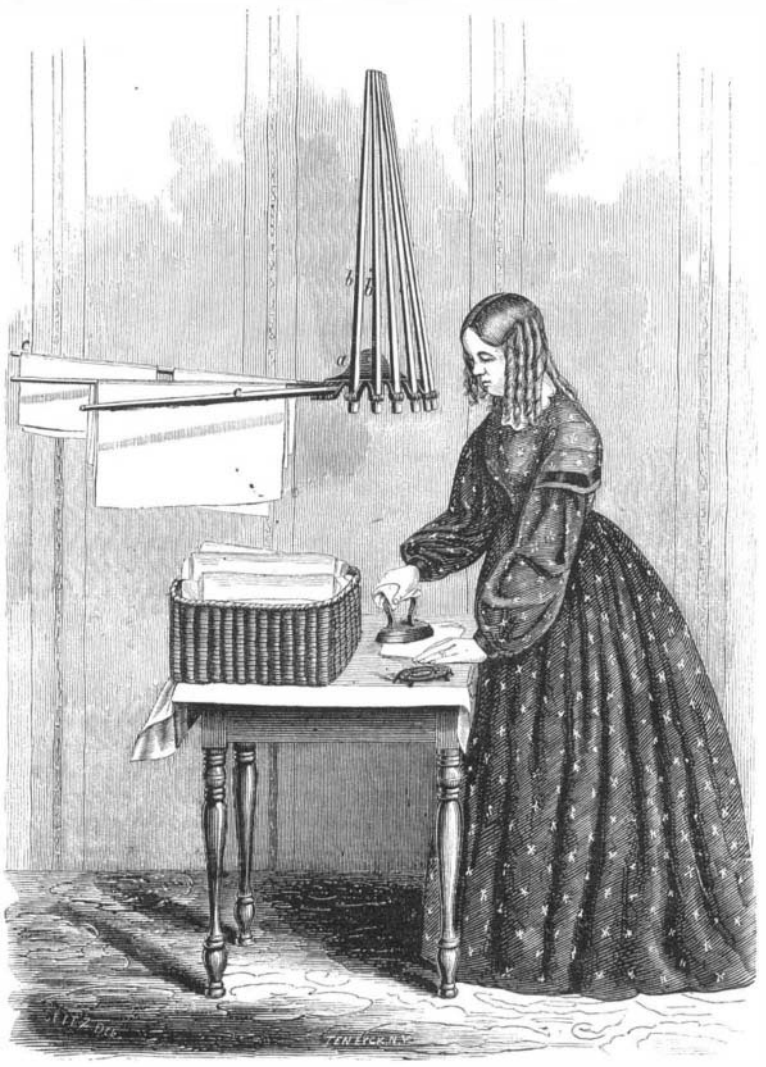
Business is beginning to revive in Louisville, Ky. The proprietor of one foundry advertises for one hundred finishers.

### Newman's Patent Excelsior Lamp Burner.

The object of the improvement here illustrated is to permit a lamp to be lighted or replenished with oil, or to have the wick trimmed, without the inconvenience of unscrewing and taking off the chimney; thus not only saving time and trouble, but also diminishing the danger of breaking the chimney.



WILLARD'S PORTABLE CLOTHES BAR.

The crown piece, *a*, is formed of one piece of metal with the deflector, *b*, and is attached to the burner


frame, *e*, by a hinge so constructed that the chimney may be turned down into a nearly horizontal position and there held by the hinge. A spring catch, *d*, is secured to the crown piece on the side opposite to the hinge, and is so formed that it will catch under the bead on the edge of the burner frame when the chimney is in a vertical position and hold the parts in place. A thumb piece is provided for compressing this spring when it is desired to tip the chimney over.

A tube, *e*, passes through the burner frame and communicates with the interior of the lamp for filling the lamp with oil. This tube is closed at its upper end by a plug or cap which may be removed, and it is placed on the side of the wick tube opposite to the hinge so as to be accessible to the spout of the lamp feeder.

The manifest advantages of this burner are, first, convenience of lighting, day or night; second, convenience of filling the lamp; third, convenience of inserting and trimming the wick.

The patent for this invention was granted August 13, 1861, and further information in relation to it may be obtained by addressing the inventor, Carlton Newman, care of E. Wormser & Co., glass manufacturers, Pittsburgh, Pa.

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### Iron and Suspension Bridges

The London *Engineer* says:—In bridge construction we have the result of the Blackfriars competition to show how generally engineers have come to prefer iron, not only for railway purposes, but for those also of a vast metropolitan traffic. It has been customary to hear it said that, "for a work like London bridge granite is the only proper material." Yet there is no reason why a preference of this kind should not apply as well to Blackfriars, and even to Westminster bridges, as to that occupying the site of the oldest bridge on the Thames. If London bridge were now to be rebuilt we do not doubt that iron would be selected as the material for its construction. Greater strength with less weight can be attained with iron than with stone, and, therefore, with more security in the foundations. So, too, with equal strength, a very much lower rise may be adopted with iron, and the new Blackfriars arch will probably be the flattest in the world of any span above 150 feet.

In respect of railway bridges it is useful to note the expedition, economy and security with which two of the great Indian rivers, the Taptee and Nerbudda, have been spanned by light iron trusses, supported on hollow iron columns, founded on screw piles. The adoption of such structures for crossing alluvial rivers furnishes an illustration of the progress making in engineering.

Suspension bridges with trussed roadways are at last gaining ground. We have no doubt that the number of believers in this system of bridge construction is very much greater now than it was a year, or, certainly, two years ago. The continued favorable reports as to the Niagara bridge, together with the demonstrations of Professor Rankine, Mr. Peter Barlow, and others advocating the trussed suspension bridge, cannot have failed to induce confidence in many quarters where the principle was formerly scouted.

The principle of the inverted arch, too, has received some attention, and we do not doubt that its properties will be still further investigated.

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A number of gentlemen are about purchasing Ball Mountain, Vt., with a view of trying to domesticate the moose. The entire base of the mountain is to be inclosed by a high fence. The object is to make the moose serviceable in driving singly or by pairs.