

## NEW INVENTIONS.

## Improvement in Gas Meters.

John Laidlaw, of this city, has taken measures to secure a valuable improvement in gas meters. The improvement relates to the "Wet Meter." The principle of the "Wet Meter," to measure the quantity of gas consumed in any house or establishment, consists of a drum submerged in water, which is revolved by the gas passing through it and this drum moves a train of gears, which indicate the number of revolutions for cubic feet of gas, on signalling dials. Unless the water in the meter is maintained at a uniform level, it will not work accurately; this improvement effects this object. In the common meter the water often overflows and lodges in the gas inlet tube to the drum. This evil is remedied. There are screws or caps used in the common meter, which require to be removed to allow the escape of water from the inlet pipe, and the surplus water from the meter, these are dispensed with, and as the water accumulates its escape is provided for. Accidents are sometimes caused when these screws are left out by carelessness, such accidents will be prevented by the improved meter. A self closing valve is also employed as a substitute for the cap which closes the pipe through which the water is introduced, this cap is a source of great trouble if left off by accident. These improvements are very important.

## Club Feet—A Benevolent Invention.

Dr. Zimri Hussey, of Chillicothe, O., has taken measures to secure a patent for an improvement in adjusting club feet. The club foot adjuster consists of two side pieces of wood or metal of sufficient length to extend from the knees to the bottom of the feet; these are intended to lie directly along the outside of the legs, and are connected together behind in such a manner as to be adjustable at any required distance apart, and to be always parallel or nearly so with each other. To each of the side pieces two or more metallic bands are attached by loops; these bands encircle the limbs below the knees and above the ankle joints, keeping the limbs in the same relative positions. A foot-piece or shoe is attached to each side piece for the foot, its attachment being such as to allow of every movement which may be necessary for the foot and for securing it in any position to which it may be brought. The management and arrangement of the foot pieces, for the cure of club feet, are peculiar. This is a meritorious invention.

## Improvement in Buttons.

Elias Howe, Jr., first inventor of the Lock Stitch Sewing Machine, has made a very excellent improvement in buttons for gentlemen's garments. The improvement consists in surrounding the shank of a button with a small elastic ring of india rubber, which prevents the shanks from being worn, and the thread from being chafed. It also serves to preserve the button-holes of a coat or vest, as the shank of the button is thus made smooth, and therefore it does not catch and draw out the silk of the button hole. Measures have been taken to secure a patent.

## Improvements in Roofing.

Aaron Price, of Dana, Worcester County, Mass., has taken measures to secure an improvement in the jointing of boards or planks for the purpose of forming roofs. The nature of this improvement consists in a peculiar manner of locking the boards or planks together, for roofing, and it is also applicable to the forming of floors, &c. Each board has two grooves in it, one on each side, at a convenient distance from the edges, and the projection on one board fits into the groove of the other, thus forming catches which are firm and snug, and which will enable roofs to be made with boards instead of shingles, or lining.

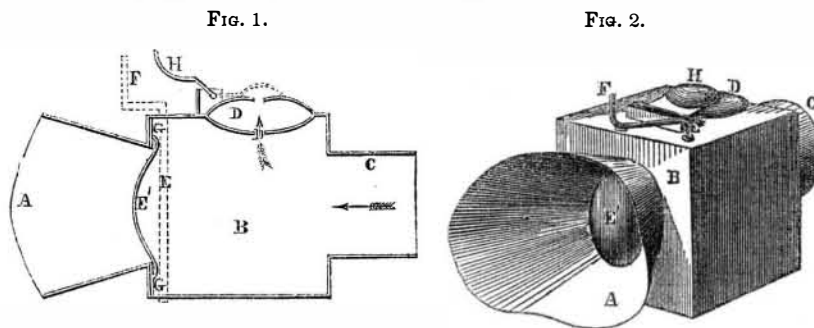
## Improvements for Cutting Staves.

Daniel Drawbaugh, of White Hill, Cumberland Co., Pa., has invented an improvement in machinery for cutting staves. He gives the back of the rough block of wood to be cut into staves, an oblique motion, by means of inclined guides attached to a concave, said

guides fitting in recesses in the inner edge of the movable bed on which the block is placed. The bed, as it is moved upwards, forces the block against a concave knife, which cuts the staves, giving them the requisite concavo shape. Behind the concave knife there is a

roller which holds the stave against the knife as it is being cut, thus preventing it from splitting and riving into a bad and incorrectly formed rough stave. The improvement is a good one. Measures have been taken to secure a patent.

## IMPROVEMENT IN SPEAKING TUBES.

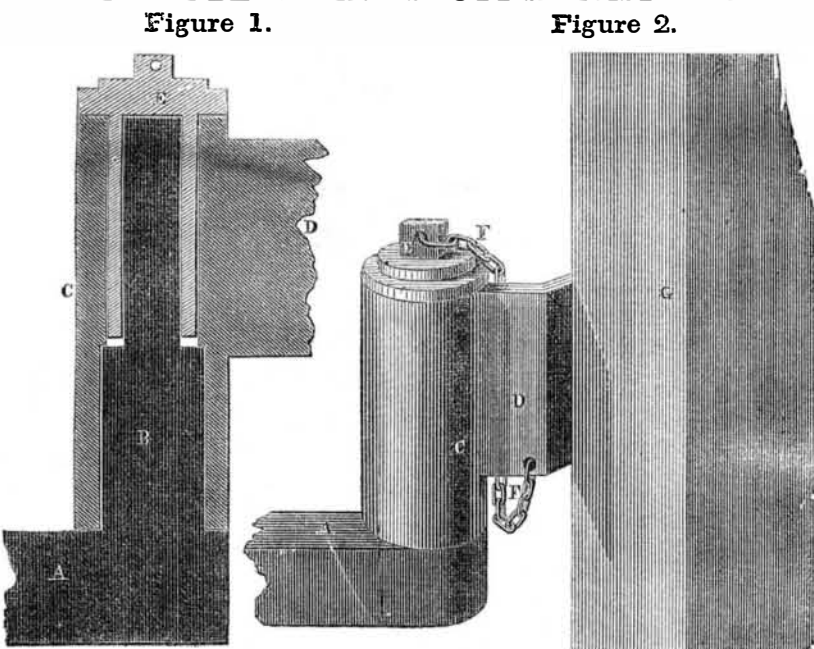


The accompanying engravings are views of improvements in Speaking Tubes, invented by Thomas J. Woolcock and William Ostrander, of this city, and patented on the 4th instant (May, 1852). This improvement in speaking tubes consists of the introduction within each mouth of the tube of an alarm valve, which performs two offices, viz., one to close the mouth when not in use, so that currents of air are prevented from passing through, and the other is to afford a signal by a sharp whistle, to direct the attention of those who may be distant from the tube when signalled too.

Fig. 1 is a longitudinal section taken through the middle. Figure 2 is a perspective view. The same letters of reference indicate like parts on both figures. The tubes are made and conducted from place to place in the usual way, and terminate at each end in a small mouth-piece, A, similar to that of a speaking trumpet. Behind the mouth-piece there is a small chamber, B, which is fitted to receive the alarm or whistle valve, D. C is the tube, which may extend down or up to any room in the usual way. The whistle valve consists of a hollow disc, formed so as to produce a shrill sound by means of the embouchure or small hole, D, through which the arrow is represented as passing. E is the valve which closes the orifice, E', of the mouth-piece; it is secured on a small spindle working in bearings, G

G, of the chamber, B. F is a handle to throw open the valve, which fits close to the orifice. Above the whistle opening, D, there is a very small flap valve, H, which covers the outside embouchure. When a person blows up through the tube, C, from below, the light valve or cap, FH, is thrown up as represented in fig. 1, and stays in that position till it is put down. The great benefit of this is as follows:—supposing a number of these signals were arranged in a shop, where a number of men were employed, all leading from different rooms, no one could tell which signal was operated by the sound, but this little cap H, shows to the eye what has been revealed to the ear by the whistle; the improvement is, therefore, both a signal and alarm. When a person has to speak through the mouth, A, the handle, F, opens valve, E, to allow of this being done, otherwise the valves are always closed.—When the speaking tube is not used, both ends are closed by the valves, so that neither dust, effluvia, currents of air, nor anything that can annoy, will pass through. The claim of the patent is for the combination of an alarm valve with the speaking tube. We have had one of them in use in our office for nearly a year and can speak highly of its usefulness. No speaking tube can be complete without this alarm and signal. It is neat, small, and cheap. They are made by the inventors and patentees at No. 57 Ann street, this city.

## PATENT BLIND AND SHUTTER FASTENER.



The accompanying engravings are views of a most valuable improvement in Blind and Shutter Fasteners, which was patented on the 11th May, instant, by Samuel Barker, of this city.

Figure 1 is a vertical section of the pintel, socket, and cap of a blind hinge of the improved construction, taken through the centre. Figure 2 is a perspective view of the combined hinge and fastener attached to a window shutter, which is represented as swung back against the wall. The same letters of reference indicate like parts on both figures.

The object of this invention consists in securing or fastening shutters, or blinds of windows, in any position desired, either quite open—the blind resting against the wall of the

building—or only half way open, or only a part open.

The hinge fastener is constructed as follows:—The upper portion of the pintel or the hinge is made of a square or octagon shape, as may be desired, and the upper part of the socket is made to correspond, a space being left between the upper portion of the pintel and socket. A cap corresponding in form to the upper part of the socket and pintel fits over the pintel inside the socket, and fills the space between the two, and thus makes the socket fast to the pintel, preventing the blind, which is attached to the socket, from swinging or turning on its hinges. A is the shank, of which the pintel, B, forms the vertical part. The upper portion of the pintel is square

and the lower part is round, like the pintel in an ordinary hinge (see fig. 1). C is the socket; its inside corresponding in shape to the pintel on which it fits. D is the shank of the hinge, which is secured to the blind or shutters, G, in the usual manner. The lower part of the socket, C, fits snugly on the corresponding part of the pintel, but its upper part is of a hollow square form. The shank, A, is driven into the casement of the window, or secured to it in any way desired. The principle of this fastener is embraced in making the upper half of the pintel of a blind hinge of a square or octagon shape, and the internal portion of the upper part of the socket of a corresponding form, and using a capped hollow bolt, E, of the same form, as an adjuster or fastener to slide over the pintel and inside of the socket, thus filling the space between the pintel and socket, to prevent the latter from turning on its axis.

This hollow cap bolt has a small chain, F, attached to it, which is made fast to the shank of the hinge, to prevent its being lost; besides, it is a convenient handle by which to withdraw the hollow bolt, E, from the socket, thus relieving the shutter from its fastening.

By those who have had experience in inserting hooks in the walls of granite or other stone buildings for blind fasteners, this invention will be particularly appreciated, for they know the difficulties of drilling seventy-five or one hundred holes in the sides of a single granite building, besides the trouble of adjusting the hooks after the holes have been made, which is a very laborious operation.

Another advantage which this blind and shutter fastener possesses, is its accessibility to operate from the inside of a dwelling. When it is raining, or in stormy weather, the common shutter and blind fasteners are very troublesome and inconvenient to operate, especially when it is raining violently; this fastener obviates these difficulties, for instead of having to open the window inside and extend the arm around to the hook, which has to be done with the common fastener, the person who wishes to close the shutter or blind with the new fastener, merely opens a small part of the window, withdraws the cap bolt and closes the shutter, without being exposed to the rain or storm.

We think this blind fastener the best invention of the kind we have ever seen, and we hope the inventor will be rewarded for his ingenuity, and remunerated for the expense it has cost him to secure his invention by Letters Patent. For further particulars see advertisement in another column.

## The American Great Exhibition.

We have received very many communications on this subject. We can but do what we have already done—warn emphatically as to the duty of caution. The exhibition is in no way national; it is simply a bazaar—a private speculation for private gain. A legislative enactment creates it; but such enactment is neither more nor less than a legislative permission. The works exhibited are to be "in bond" without payment of duty, until sold; but this is a privilege which any merchant might enjoy. It is clear that the authorities in America anticipate some danger; for they are nervously anxious to have it clearly understood that Government is in no way responsible for the issue. It is not yet even certain that the Exhibition will take place, for the money is not yet collected.

[We copy the above from the London Art Journal for May, and we think the writer has a proper conception of the object and end of the American World's Fair. An exhibition not countenanced by Government cannot but be a failure.]

In the process of gold-beating the metal is reduced to laminae or leaves of a degree of tenacity which would appear fabulous, if we had not the stubborn evidence of common experience in the arts as its verification. A pile of leaf gold to the eighth of an inch would contain 282,000 distinct leaves of metal! The thickness, therefore, of each leaf is in this case the 282,000th part of an inch. Nevertheless, such a leaf conceals the object which it is used to gild; it moreover protects such objects from the action of external agents as effectually as though it were plated an inch thick.