

New Autographic Printing Method.

The following method, by Mr. Crocker, of Tasmania, is described in the *Southland Times*:

The basis of operations is common window glass—a most unlikely but perfectly reliable material to withstand the rumble and roll of modern printing machines. A solid ink, composed of beeswax, resin, and lampblack, is made in proportions about which there is no secret. The drawing medium is a common steel pen, with this important adjunct, that it is constantly subjected to the action of a very tiny jet of gas, or an electric spark, which keeps the pen hot. It is inserted in the stick of ink, and its heat at once dissolves a “dip.” The artist now proceeds to sketch on the glass, the fluid ink running as freely as necessary, but the instant it leaves the pen it again becomes solid, and adheres to the glass without blurring or running. As a consequence, shading of any intensity may be executed without risk of forming one big blot. The plate is now ready for an “engraver” whose hand is more potent and swift than that of any of his predecessors. This is hydrofluoric acid, a chemical well known as being about the only “eater” of glass known in practical chemistry. A small portion of this is poured over the face of the glass, and in a very short space of time eats its way downward. The ink, however, defies the acid, and the glass below the sketch therefore remains intact. All that now remains to be done is to mount the slip of glass on a metal block of the same height as printer’s type, where it is secured with a little shellac, and the engraving is ready for the printing press.

Use the Chloride, not Chlorate.

It is well known that chlorate of potassium is a very good remedy to gargle the throat, but comparatively few physicians are aware of the fact that it is not this remedy which is so successful in mercurial stomatitis, but chloride of potassium.

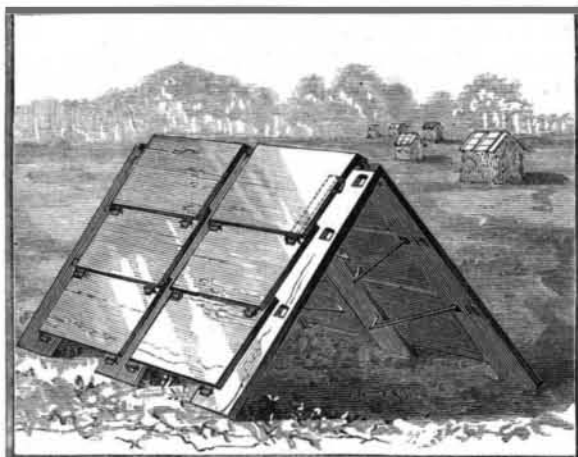
Professor Wertheim draws the attention of physicians especially to this fact (*Wiener Med. Blätter*, 15, 1882). He reminds them that the formula of the first is $KClO_3$, but that of the second KCl . He says that the chlorate should never be used, as in concentrated solution it may even prove very harmful; while the chloride is very innocent; a specific in sore throat, and especially in mercurial sore mouth, and very analogous to common salt, which is simply a chloride of sodium, instead of potassium. In America the chlorate is commonly used; no wonder, therefore, says the *Med. and Surg. Reporter*, that it is not found here as efficient as in France and Germany, where they use the chloride.

PORTABLE ROOF FOR HAY AND GRAIN RICKS.

The engraving shows an improved portable roof for hay and grain ricks, which can be built up or removed very easily and quickly, and can be folded compactly for storage. The invention consists of a roof formed of two roof sides, held together by novel fastenings.

The rafters are provided at each longitudinal edge with a series of apertures, which receive the upper hooked ends of straps attached to the ends of the inner surfaces of the roof boards, the hooks projecting inward from the upper edges of the boards. The lower ends of the straps or bands project from the lower edges of the boards, which are overlapped, as shown in the engraving, the hooks being passed into the apertures in the rafters, and the lower ends of the straps being passed through staples on the outer surfaces of the boards.

The hooked rods are forced into the hay or other material through the apertures in the rafters, in such a manner that the hooks or barbs catch on the hay or other material, and



McEVROY'S PORTABLE ROOF FOR HAY AND GRAIN RICKS.

the heads rest against the outer surfaces of the roof sections. If desired, this roof can also be supported by posts with suitable framework, by which means a cheap and efficient shelter may be obtained for implements, machinery, or live stock.

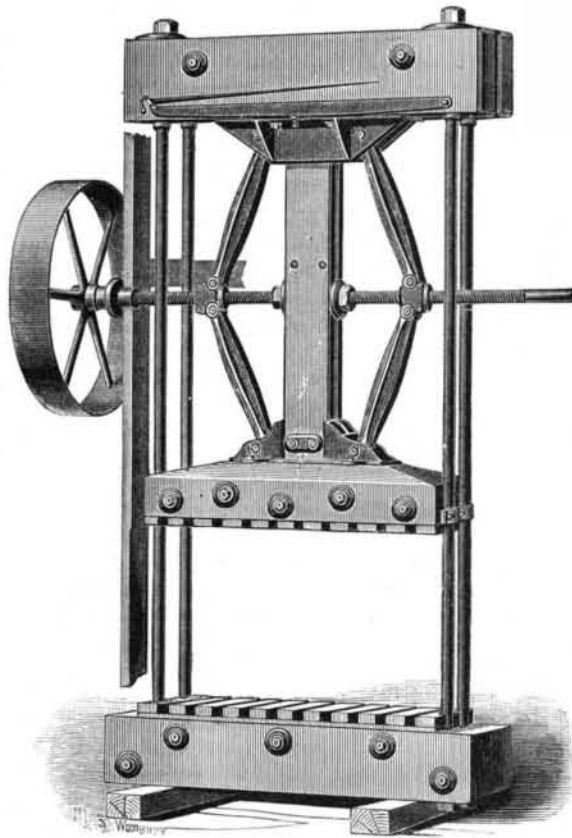
The upper board of one side is to be extended over the ridge to protect the same. The entire sides of the roof can be stored away, or the boards can be detached from the rafters, and the detached boards and rafters can then be stored. As no nails, bolts, or screws are required to secure the boards on the rafters, the boards can be attached or removed very easily and rapidly.

This invention has been patented by Mr. Wm. McEvoy, of Equality, Ill.

BALING PRESS.

Many devices have been used for obtaining pressure, the most prominent among which are the lever, the common screw, and the hydraulic, none of which develop a progressive power, but, on the contrary, are only enabled to give the same power and movement of platen at the end as at the beginning of the work. In pressing most substances but little power is required in the early part of the operation, but as the pressure is applied the resistance increases, requiring a corresponding increase of power, until at last the resistance becomes so great that no amount of power can wholly overcome it.

With the press herewith illustrated the power increases at every turn of the screw, the platen decreasing in motion in



BOOMER & BOSCHERT'S BALING PRESS.

the same ratio, so that the increase of resistance and development of power are so nearly equal that the work is easily accomplished from beginning to end.

This press seems well adapted to the purpose of baling goods. It is operated by a belt from the pulley on the end of the screw to a countershaft, on which are pulleys for crossed and open belts, which revolve the screw in either direction, as desired. We are informed that the manufacturers furnish presses of this description for any size of bale, and that they also make them wholly of iron.

Further information can be obtained by addressing the manufacturers, Boomer & Boschert Press Company, Syracuse, N. Y., or 62 Vesey Street, New York city.

Bottled Beer.

The following directions for bottling and keeping beer will be of interest to consumers as well as bottlers:

1. In cold weather beer can be drawn from the keg and bottled as soon as it is received, but in warm weather it foams so that it is necessary to keep it several days in a cool cellar, if it has got warm in transport, before tapping.

2. The bottles must be very thoroughly washed each time before filling with warm water and soda, then rinsed repeatedly with cold water until all the soda is washed out, to prevent the beer tasting of soda.

3. Great care must also be devoted to the corks. Those that have been bored or broken must never be used under any circumstances. Whether new or old corks are used they must be soaked in warm soda solution and repeatedly washed with cold water until perfectly cold. It is better, however, not to use corks in beer bottles that have already been used once.

4. In filling the bottles a wooden spigot is used with a piece of rubber tubing attached that reaches to the bottom of the bottle, so as to prevent foaming as far as possible. The bottle is immediately corked, so that the carbonic acid may not escape, and the cork driven down with a small wooden hammer. Great attention must be given to the cleanliness of the rubber tubing and spigot, rinsing them with soda solution before each time of using. [And afterward, too?]

5. The bottled beer should be kept in a cool, dark place, and setting upright is preferable to letting them lie on the side. Every beer has some sediment. When the bottles stand up this sediment becomes attached to the bottom of the bottle, so that if the beer is poured out carefully all except the last glass will be clear and free from turbidity.

6. When drunk beer should always have a temperature of 48° or 50° Fahr. The flavor and effervescence are best at that temperature. If much warmer than 52° any beer will taste flat. Drinks that are too cold injure the stomach. A little practice soon enables a person to judge correctly of the temperature by feeling.

7. In warm weather beer should be used within about eight or ten days after filling. During cold seasons it keeps rather longer—up to two weeks even without injury.—*Gewerbeblatt für Hessen.*

Rules for Laying Drain Pipes.

The New York Board of Health require that earthenware drain pipes connecting dwellings with street sewers shall be hard and salt glazed, sound, and cylindrical; at least five-eighths of an inch thick if five inches in diameter, and three quarters of an inch thick if six inches in diameter. Pipe must be connected with hydraulic cement of the best quality. No “tempered” cement can be used. The pipes must be laid with such good alignment that the inspector can see through the entire line from the house to the sewer, and every section must be bedded in cement so as to have a firm bearing, not only at the hub, but along its entire length. The inside of the drain must be freed from all cement which may have oozed through at the joints, and from all other obstructions. Before the drain is covered notice must be sent to the Health Department, by the owner or plumber, that the inspector may visit and examine the work, and the Board of Health will not approve or permit a drain which has not been examined by one of its inspectors and found to be properly constructed.

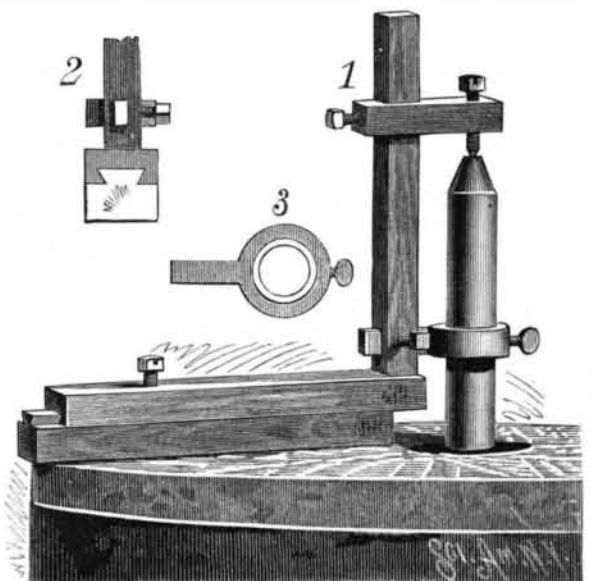
The Use of Lime in Coal Mining.

A series of experiments took place on the 28th of August, says the *St. James Gazette*, in the workings of the Wharnccliffe Silkestone Collieries, near Sheffield, the object being to test the new method of winning coal by the use of compressed lime instead of blasting powder. The experiments took place in the Parkgate Seam. A hole about three inches in diameter and four feet deep was drilled through the solid coal and cleaned out; a perforated iron tube was then inserted, and the lime cartridge, three inches long, put in. When the lime had been rammed home and the hole made up, a force pump was used to inject water into the bottom of the tube. Simultaneously with the injection of the water the rending process began, and in thirty minutes about ten tons of coal came down almost in an unbroken mass. Of the whole of the fall, not more than six per cent of the coal was small, a much smaller percentage than under the old system. It is predicted by some of the oldest miners that compressed lime will eventually supersede the use of blasting powder and thus revolutionize the system of winning coal.

NEW MILLSTONE PAINT STAFF.

This invention is a working or test guide for paint staffs used in dressing millstones. It is designed to facilitate the work of obtaining a perfect running face. The guide is applied to the spindle, so that the weight of the guide and staff is carried upon the spindle, and not upon the face of the stone. By means of this arrangement all inequalities or variations in the surface of the runner can be readily detected.

In using this guide it is hung on the spindle by passing the eye-piece over the spindle and adjusting the slide so that the screw shall bear upon the upper end of the spindle at the center. By turning this screw the guide is slowly raised or lowered, as required, and the weight of the guide and the staff is wholly supported by the screw. The staff may be moved freely around upon the spindle, and by low-



DAVIS' MILLSTONE PAINT STAFF.

ering the guide the staff will touch lightly upon the high places of the stone as it passes around. Then, by removing the marked projections with a pick, and repeating the operation until the staff marks the face evenly, the burr will be brought to a perfect face.

With this guide the work of facing a runner is made simple and easy, and there is no liability of making one side higher than the other.

In order to adapt the guide for use with spindles of different sizes, the eye-piece is provided with a collar, held in place by a set screw. These collars are of different diameters for fitting spindles of different sizes.

This invention has recently been patented by Mr. T. E. Davis, of Range, Ohio.