IMPROVED SAW GUMMER.

This is a convenient and simple little implement, which may be readily attached to circular or other saws, and operated without necessitating the removal of the same from the arbors or attachments. It is readily adjusted, self-feeding, easily operated, and, according to the inventor, causes a large saving of labor and files, while materially economizing the power required to run the saw.

Fig. 1 is a perspective, and Fig. 2, a plan view. A is a curved slotted piece of metal, in which the saw to be gummed is rigidly confined by the set screws, B. The position of the blade is controlled by the adjustable gages, C. D is a mandrel, supported by the curved frame, E, which is pivoted to the piece, A, at F. Through one side of this frame the mandrel works with a screw thread, and consequently it has a longitudinal motion while it is being revolved by means of the cranks, G, on its ends. Near its middle is formed the cutting cylinder, into dovetail shaped grooves in which are fitted the cutters, I, which, from the movement of the mandrel, are compelled to give a drawing stroke. By this means the cutters are prevented from heating, and hence losing their temper. Confined between the cranks, G, is a bail, J, which moves back and forth with the longitudinal movement of the mandrel, and upon which is a wedge, K, which operates between the two rollers, L, one being on the bed piece, A, and the other on the frame, E. The effect is to force the cutting cylinder under the tooth of the saw as the mandrel moves along. The screw nut, through which the latter works, is made in two parts, one being a clamp, M, hinged to the frame, E, fastened by the set screw, and constructed as clearly shown in Fig. 1. Through the dovetailed and tapering form of the grooves in the cutting cylinder, the cutters, while operating, are forced into their sockets, and hence are not liable to become loosened. They can, however, be easily removed when worn out, or can be ground when dull without taking them from the cylinder, by simply unshipping the mandrel for the purpose. In operation, the device renders the usually tedious process of gumming the saw easy, expeditious, and perfect.

Patented through the Scientific American Patent Agency, by Mr. David Boyd, whom address for further particulars, at Ghent, Ky.

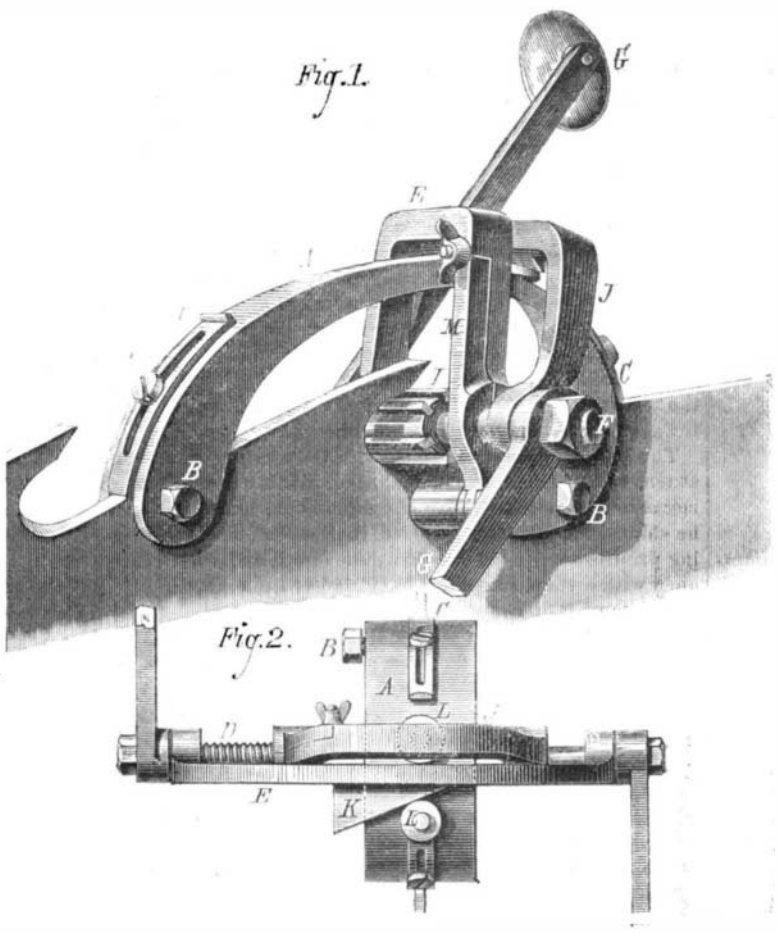
Australian Stupidity.

Nothing, however preposterous, if propounded as a specific for disease, is too absurd for people to believe in. A member of the Victoria Legislative Assembly recently seriously asked the Colonial Government to appropriate $25,000 to buy a diphtheria remedy from a man named Greathead. The latter remarkable person asserted that diphtheria is caused by "insects which breed in millions in a few days under a film which they make, which swells up in the throat and completely stops respiration," and he prescribes some drops of sulphuric acid in water. And this is the remedy for which the appropriation of $25,000 is asked.

IMPROVED ELECTRIC AND VAPOR CHAIR.

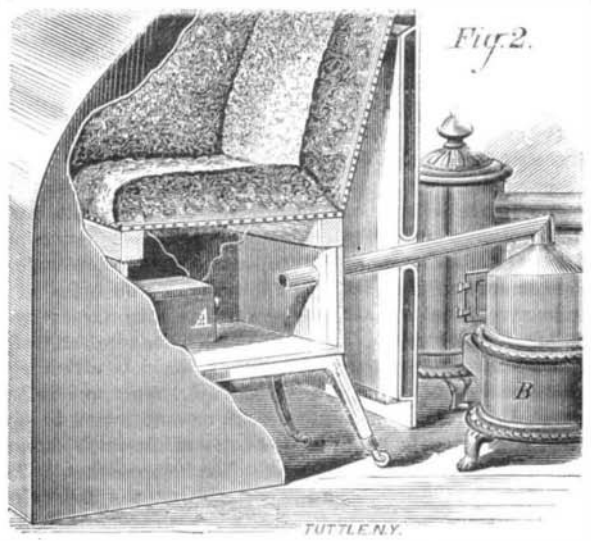
The invention herewith illustrated consists in a chair lined with metal and padded with sponge, so as to contain medicated liquids for curative purposes. In connection with the metal portions, a portable electric battery is arranged; and by suitable apparatus, as shown by our engraving, vapor is conducted to the body for opening the pores of the skin, etc. The patient, it is claimed, can receive through the saturated sponges the full charge through the system in the lightest or heaviest force, the device being alike capable of adjustment for either strong or weak subjects.

Fig. 1 shows the invention as adapted for the use of electricity alone. The base is made hollow, and its top of metal is perforated. The inside of the arms and back are lined with plates in order that one conductor of the battery, A, which is placed inside the base chamber, may be applied thereto, while the other is held by the patient, or else applied to some part of the chair, in order to be directed through the desired portion of the body. The feet are placed in a trough or rest, which is also lined with metal, and, with the remainder of the chair, as above noted, is covered with sponge. By a ratchet mechanism, the hight of the rest is readily adjusted.



THE LITTLE GIANT SAW GUMMER.

In Fig. 2 the adaptation of the chair to the administering



of vapors in connection with electricity is shown. The battery is located as before described, and the vapor is conducted, into the base by a tube from the generator, B. It then rises through the perforations in the seat, becomes charged with the chemicals with which the sponges are saturated, and thus acts upon the body. To confine the vapor, a case, shown broken away, may be employed, which incloses the chair and patient. There is an opening in its upper part to allow the head to protrude, and a flexible cape may be applied around the neck of the person to more fully close the opening. The chair is employed in cases of rheumatism, paralysis, impurities of the blood, colds, skin diseases, or for other medical operations whenever available.

Patented by Mary A. Hayward, September 26, 1871. For further particulars, address C. B. Townsend, sole agent, 242 Cumberland street, Brooklyn, N. Y.

Preventing Damage from Boiler Explosions.

A correspondent, Mr. George Mann, proposes to prevent the broken fragments of a boiler, from being hurled through space, and doing more injury even than the ruptured or exploded boiler will do by the emission of steam at the time. He suggests surrounding the boiler with a short link iron chain, winding it around the boiler continuously from one end to the other. The chain is to be drawn just so as not to hang loose, and to touch the boiler all round. There will be sufficient slack, so that the chain will not be strained over tight when the boiler is fully expanded to its utmost limit by heat. It is not intended to add strength to the boiler; but when the explosion comes, the chain is to hold the boiler *in statu quo*, allowing free escape to the steam only, while the broken fragments are prevented from flying round like so many cannon balls. The only damage which can occur would be the scalding of persons near by the steam. Mr. Mann claims this invention as his own, and hopes no one will try to steal his thunder.

New Improvement in Photo-Lithography.

M. Paul announces in *Les Mondes* a new process for transferring the photographic image to the stone. The ordinary process, we may remark, consists in producing a positive image on gelatinized paper, treated with bichromate of potash. After exposure, the whole is covered with lithographic ink, and washing with hot water follows in order to remove the non-modified gelatin. The image remains with its covering of ink, and by simple means is transferred to the stone.

The outlines thus obtained, however, M. Paul considers, fail in clearness because the hot water produces a swelling of the undissolved gelatin and softens the lithographic ink; and he states that, in the transfer, which requires pressure, the parts thus affected produce blurs. To avoid this, M. Paul substitutes albumen for gelatin, so that the washing can be done in cold water. The unaltered albumen after insolation is removed with a fine sponge. Very clean and sharp images, it is said, are thus produced.

The statement above made, to the effect that the bichromatized gelatin process is incapable of yielding fine lines, is incorrect. The Osborn process, used for several years in this city by the American Photo-Lithographic Company, yields prints of such perfection that only a practiced eye can detect any differences from the original in the finest lines.

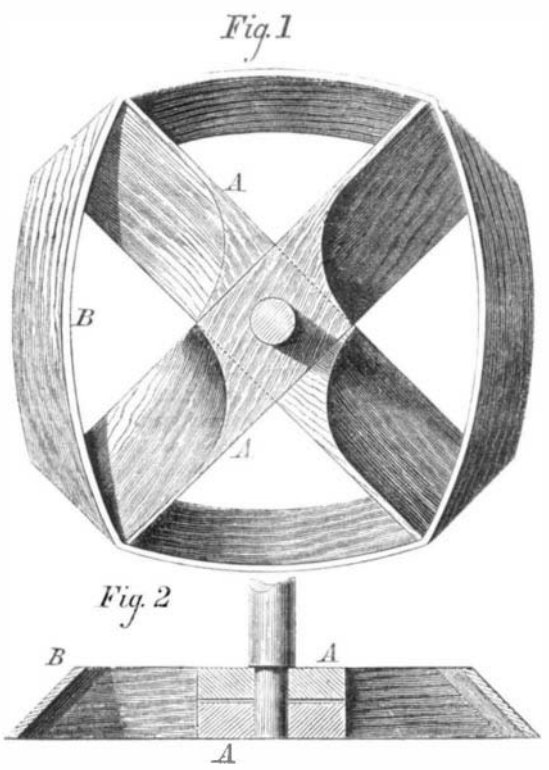
New Galvanometer.

Dr. Friedrich Müller describes, in *Poggendorff's Annalen*, a new form of galvanometer with improved reading and deadening arrangements. The needle is immersed in glycerin diluted with one eighth of water, and above it there is a horizontal tube of glass in rigid connection with it, to which the suspending thread is attached. Platinum wires bent vertically upwards from the ends of the tube are in a plane with the suspending thread. And the zero point of a scale, seen beyond, is in a line with these three parts when the needle is in its normal state of rest.

THE VICTOR CHURN DASHER.

The object of the improved dasher herewith illustrated is to increase the efficiency of the old fashioned up and down churn. It is a simple and inexpensive device, but the inventor claims that it saves nearly one half the labor through the thorough agitation which it gives to the cream.

To the lower end of the dasher handle are attached the centers of two crossbars, A, which are arranged at right angles with and halved to each other, as shown in the sectional view, Fig. 2. The two arms of each bar are beveled in opposite directions, so that, as will be seen from Fig. 1, adjacent edges may both incline upward and toward each other, or both downward and from each other. B is a band attached to the outer ends of the blades, and so formed that the part which is opposite the faces of the arms which incline upward may slope inward and upward, and the part opposite the downwardly tending faces may incline downward and inward. By this construction, it is claimed, as the dasher is worked, four strong currents will be formed, two following outward towards the wall of the churn, and two following



inward toward its center. The effect of this is to cause a very strong commotion in the milk, bringing the butter in a short time. One or more of these dashers may be attached to the handle, as may be desired, or as may be rendered necessary by the size of the churn.

Patented through the Scientific American Patent Agency, by Mr. David Boyd, of Vevay, Ind., December 30, 1873. For further particulars address David Boyd, Ghent, Ky.

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