

## New Inventions.

## Improvement in Grist Mills.

Mr. M. Millard, of Lake Mills, Jefferson, Co., Wisconsin, has invented and taken measures to secure a patent for improvements in grist and other like mills, which consist in an improved method of hanging and forming the driving attachment of the mill stone, by causing the stone to be balanced on a pin or roller which sustains the stone by a cross-bar, carrying the stone at its central opening, whereby it is made to sit in a transverse groove cut in the upper end of the lower shaft, the said groove being bisected at right angles by a similar one for the reception of the cross-bar referred to. An upper shaft has projections which fit into the groove carrying the balance pin, which serve, by a screw at the top, to depress the stone and gauge it to its proper grinding distance with respect to the lower stone. The lower shaft is capable of receiving a slightly vertical motion—being supported by a spring at the bottom—the whole effect of which is to render the stone adjustable to the utmost nicety. The mode of hanging the stone is also claimed to be an improvement in respect to obviating some friction in the present modes of hanging.

## Russell's Improvement in Chimney Caps.

Mr. Charles W. Russell of Washington City, D. C., has invented and taken measures to secure a patent for a very valuable improvement in Caps for Chimneys, the object of which is to protect the chimney or flue—irrespective of the position in which it may be placed with regard to surrounding objects—against any downward current of air, and to make any current or gust of air, entering the cap, produce a vacuum, thus tending to give the smoke an upward motion, effectually preventing any back draught. The construction of this chimney cap is very different from any other that has come under our notice. Mr. Russell is the inventor and patentee of the "Centripetal Fire Place" for preventing chimneys from smoking, and which was patented on the 5th March, last year. The merits of this invention have been spoken of in the highest terms of praise, and his present improvements in chimney caps are no less worthy of commendation.

## Improvement in Sugar Apparatus.

Mr. Eugene Duchamp, of Macon, Bibb Co., Ga., has invented and taken measures to secure a patent for a very valuable improvement in the manufacture of sugar. The lost heat from the boiler of the steam engine on the plantation is carried along and made to assist directly in the boiling of the sugar syrup. Heated air is also forced into the syrup or boiling liquid, while, at the same time, a current of heated air is made to produce a draught above the syrup boilers for the purpose of carrying off the vapor and inducing it to escape. The apparatus is constructed and arranged to economise fuel and labor, and as a substitute for the expensive vacuum pan.

## Pernet's Machine for Cutting Screw Blanks.

Mr. Hypolite Pernet, of New York city, has taken measures to secure a patent for an improvement in machinery for cutting screw blanks and other similar shaped bodies, which improvement consists in causing the wire or rod out of which the blank is to be made to revolve, and its one end made to pass through guide bushes attached to a slide, to which are attached two cutters, the one for turning the shank and head of the blank, and the other is operated by a lever for tapering the point, finishing the upper surface of the head and cutting the blank to its proper length, gauges being set to regulate the length.

## Improved Fastening for Bedsteads.

Mr. Levi E. Barnes, of Berlin, Hartford Co., Conn., has applied for a patent for a new fastening for bedsteads, for the purpose of firmly securing the rails to the posts in a superior manner. The rails are attached to the posts by means of a circular metal disc, having two flanges, each bevelled at one end and attached to the posts. These fit into metal collets on the rails, which collets are bevelled in a

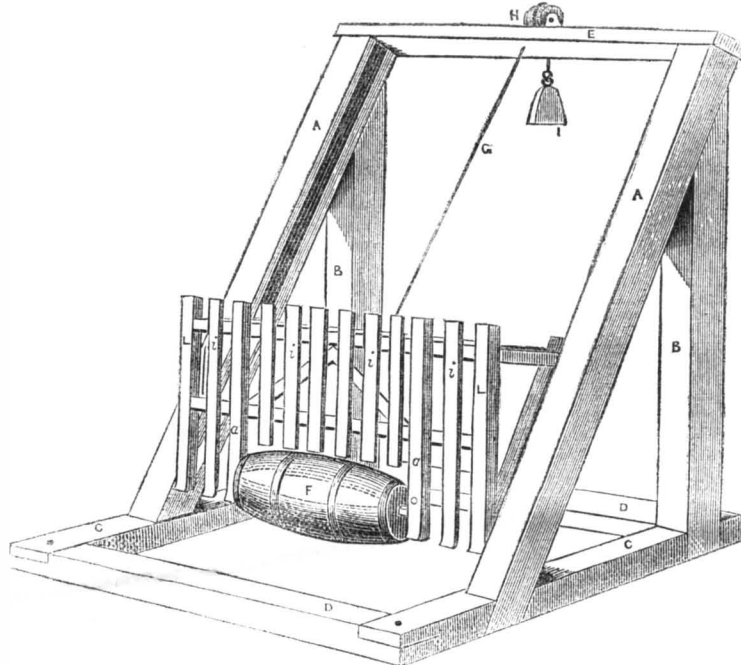
contrary direction, and they have flanges, so that the posts and rails lock together in the most simple and snug manner by just one turn of each rail. A thumb catch binds the fastening together so that they cannot get apart without being, as it were, unlocked. This is a very superior fastening to the wooden screw, and will, no doubt, supersede it.

## New Ballast for Ships.

It often happens that a vessel has to sail from one port to another without cargo, and in that case the vessel has to be ballasted with

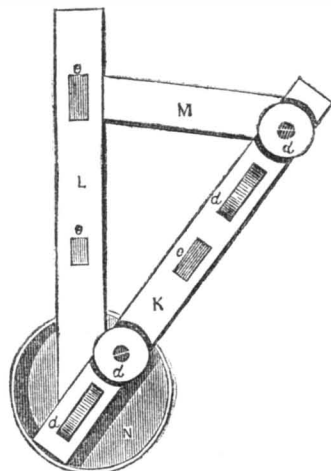
something or other, whether it be old iron or gravel. A method has been introduced into one of the New Castle vessels, at the suggestion of a Dr. White, which appears to be an excellent plan. The system is a tier of water-proof bags along each side of the keel, inside, and one or two forward and aft. These are filled with water, which can be easily pumped out again. There can be very little loss of time either in receiving or discharging such ballast, and there is no expense in getting as much of it as is required, for every vessel carries it below her bottom.

## PATENT FLOOD-GATE FOR FENCES.—Figure 1.



The accompanying engravings represent improvements in Flood Gates for fences, invented by Mr. S. D. Hopkins, of Brooksville, Va., and for which a patent was granted on the 20th day of November, 1849. Figure 1 is a perspective view of the inclined flood gate, and figure 2 is an end view of the frame work inside of the inclined posts, A, twelve inches square with a groove cut on the inside of each, two inches deep and three wide. These posts and their braces, B, are lapped and pinned to mud sills, C, which are lapped and pinned across mud sills, D. The posts are confined at the top by a cross-beam, E. Through the ends and whole length of the barrel, F, there passes a shaft of wood two inches square; an iron gudgeon three-quarters of an inch thick, is driven into each end of the shaft, which goes into holes of the same size made in the

FIG. 2.



barrel supporters (a). The paling, i, is nailed to cross rails mortised in the end pieces of the frame work, as indicated by c, figure 2. To the centre of the frame work a rope or chain, G, is fastened, passing through the beam, E, over a pulley, H; to the end of this rope a weight, I, is attached. K, figure 2, represents the sliders which work in the grooves of the posts, and are made to work without friction by means of rollers, d, two of which, in each slider, are made to work freely against either side of the grooves in the posts, and two against the bottom of the groove so as to prevent the sliders from touching anywhere in the groove. These sliders are kept to their places by cross rails mortised into them, as in-

Figure 2. The end pieces, L, of the frame work are mortised into the slider at the lower end and supported at the top by a brace, M. N, fig. 2, represents the end of the barrel.

The above described flood-gate is placed in a stream or creek where a fence is intended to cross, the mud sills being buried in the ground at the bottom of the creek. The whole of the frame work to which the barrel is attached is put in motion by the rising and falling of the stream. Trees with projecting roots and limbs, together with drifting matter, pass through without obstruction or injury to the works, the barrel always remaining and revolving on the top of the water.

CLAIM.—I claim the combination of all the parts with the frame work above described, so combined and applied as to produce the self-working flood-gate described.

More information about rights, &c., may be obtained by letter addressed to Mr. Hopkins.

## Cloth Dressing Machine.

The Scientific American, of this week, has an engraving of Dickey's patent Clothes Drying Frame, for which it says a patent was granted to Mr. J. C. Dickey, of Washington city, in June, 1851. We think the American would do well to inform Mr. Dickey, that he is behind the times. "His" new patent Clothes Dryer was invented by an ingenious mechanic in this county, and hundreds of them have been in use, hereabouts, for the last three years.

[The above is from the "Spy," Worcester, Mass. We think we understand the point better than our cotemporary, and if he will refer to Mr. Dickey's claim, on page 310, Vol. 6, he will notice that the claim is not for a "Clothes Dryer," as an original invention but for an improved method of raising the arms for collecting the articles to be dried. We have seen several of those invented by the "ingenious mechanic" referred to, and beg to assure the "Spy" that Mr. Dickey has claimed nothing belonging to him.

## New Fire Alarm.

Mr. Lyman Perrigo, of Groton, Tompkins Co., N. Y., has taken measures to secure a patent for a self-acting fire alarm, consisting of an inflammable cord suitably hung throughout a building, and connected with an alarm—such as a gong or bell—situated on the outside or inside, in such a manner that,

by a fire taking place within the building, the cord will be consumed and the catch of the alarm set free, whereby it will commencing and give loud and early warning of the danger.

## The Centrifugal Force Philosophers and the New Motive Power.

On page 341 while commenting on this *reductio ad absurdum*, we made use of this expression, "those who have honestly believed there was something in this alleged discovery, have been led into error," &c. We now withdraw this expression, *honestly believed*. In last Monday's Tribune, Philosopher Andrews publishes an article, in which he takes occasion to assail the Editor of the Scientific American. Personally we would not mind the man at all, as his writings display his ignorance and egotism; but, at the same time they are full of craft and no candor. We accepted the premises of this man, on page 363 of the Scientific American, and completely exposed his profound ignorance. His article in the Tribune contains insinuations: he complains that we scissored his article; we did, but not a single idea bearing truly on the question under discussion, was left out—not one. We cut out some appeals to our *candor and generosity*, but having no generosity for "Kidd Bubbles," we pitched his appeals to the dogs. The centrifugal-force schemers feel that the public have confidence in what we have said; our clear and candid expose stands in the way of their purposes. We have a duty to perform to the public in exposing such speculations, and we care not for individuals. In twelve months from this date the public will thank us for what we have done. For a complete expose of the *falsity* of this alleged discovery we refer our readers to pages 309, 341, 363, this volume of our paper.

We have been informed that an association is formed in this city to carry out this scheme of *tremendous force*, and a tremendous forcible scheme it is. It is proposed to issue certificates of shares at \$40 each, for 20,000 horse-powers; each horse power to be sold for \$40, \$10 of which is to go to the patentees (that are to be) leaving \$30 on the horse-power in the hands of the holders of the certificates, as profits. These certificates are issued to the said purchasers on the payment of 30 cents on the horse-power, or one per cent on the profits. If the 20,000 shares are sold for 30 cents advance, it will amount to \$6,000. We warn the public against embarking in any scheme to *gain power* by what is termed centrifugal force. We have received unmitigated abuse for performing our duty, but we can stand more of it; we abide the result, conscious that those who are selfishly engaged against us, will yet receive their just rewards. In the mean time let us present the names of those concerned in this affair: Sawyer & Gwinne, inventors; Stephen Pearl Andrews, retained counsellor; H. L. Stewart—anything. There may be a few more, such as Mr. Starbuck, agent, &c. A caucus is held every day at No. 300 Broadway. The only invention we see about this new motive power—this tremendous force—is a new way to make gold out of brass; no working machine is yet built, nor dare they build one and put it alongside of a steam engine to test its value.

## A New Railway Brake.

The National Intelligencer states that Don Marcial Arias Carbajal, a young Spaniard, has deposited at the Patent Office the plan of a mechanism which he has invented, and to which the name of Brakes *a la Marcialina*, or the application of steam to the Brakes, and which enables the engineer to close them when necessary from his place. To the part of the mechanism fixed to the locomotive and moved by its steam, he has given the name of Marcialina. It is calculated to regulate its action in whatever position the cars may find themselves. It appears that he conceived this idea upon the Pennsylvania Railroad, where he has been running engines.

[This is only a new improvement we suppose. A brake operated by steam is not new. Robert Stephenson, C. E., invented one about four years ago. It was patented in England, since which time we have not heard a word about it.