

**EASEL FOR POTTERY DECORATION.**

The annexed engraving represents a very convenient apparatus for holding ceramic ware while being decorated. The base contains two drawers for palettes, colors, and brushes. On the upper portion is a sliding piece, to which is hinged an arm rest, which is supported at any desired angle by the brace shown, entering a suitable notch. The rest is also held in place by a pin which passes through the sliding piece. At the end of the box is a turn table, which is free to rotate horizontally. On its face are a number of concentric circles which assist in centering the article to be decorated, and at the periphery are several pins placed at equal distances apart. These pins are engaged by the end of the arm rest when it is folded down, and are employed in regularly dividing the surface of the article ornamented. A ruler placed at the side of the box may be adjusted vertically or at any angle.

The vase to be decorated is placed on the turn table, as shown, and the arm rest is suitably adjusted. Irregular ornamentation is applied by the brush carried by the free hand only; but when it is desired to form a circumferential stripe, the handle of the brush rests in one of the notches in the end of the arm rest, and the table is rotated, while the brush remains stationary. In making vertical or diagonal stripes, the brush is guided by the ruler. The device may be closely folded together for packing.

It was patented through the Scientific American Patent Agency December 4, 1877, by Mr. W. H. Brownell, of Brooklyn, N. Y.

**Hydrocarbon Oils in Lava.**

In the basaltic zone which reaches from the foot of Mount Etna in a south-southeasterly direction, near the village of Palermo, there is, says *Nature*, a pre-historic doleritic lava containing olivine, which surrounds the clay deposits of a mud volcano, and which has been examined by Signor Orazio Silvestri. Under the microscope the lava shows an augitic principal mass with a quantity of olivine and many white transparent crystals of labradorite.

The lava contains numerous round or irregular cavities which are coated with arragonite and which are filled with mineral oil. This oil, of which there is about 1 per cent by weight in the whole mass, was taken from one of the cavities at 24° C. At about 17° C. it begins to solidify, and is of a yellowish green tint by transmitted light, while by reflected light it is opalescent and light green. Chemical analysis of the liquid proved it to contain: Liquid hydrocarbons (boiling point 79-28°), 17.97 per cent; hydrocarbons solidifying under 0° (b. p. 280-400°), 31.95 per cent; paraffine, melting point, 52-57°, 42.79 per cent; asphalt (leaving 12 per cent of ashes), 2.90 per cent; sulphur, 4.32 per cent; total, 99.93 per cent.

**THE RED WOLF.**

The animal shown in our illustration has been sometimes called the "maned wolf," but is more commonly known as the "red wolf," from its predominant color. The zoölogical name is *Canis jubatus*. It was first described by D'Azara, a South American traveler, who gave its native name as *aguaraguazu*, in the countries of the Rio de la Plata and Paraguay, where it is commonly found. It is, when full-grown, one of the larger beasts of the wolf kind, and its body is covered with long, stiff, shaggy hair, mostly of a reddish hue, but often with a white spot on the throat; the hair inside the ears and at the extremity of the tail is also whitish. The mane consists of stiff hairs, five or six inches long, which grow black at the tips; and this mane, which stands erect, extends from the occiput to behind the shoulder. The tail is rather bushy. The habits of this species of wolf are solitary; it frequents the low-lying plains and marshes of the Paraguay, and the sand banks in the La Plata, feeding here on land crabs, there on rats, guinea pigs, and small birds, or some kinds of vegetables. The specimen from which our engraving is taken is now in the collection of the London Zoölogical Society, and is said by the *Illustrated News* to be the first yet carried alive to England.

ARRANGEMENTS are being made for the holding of an international exhibition at Sydney, in 1879, under the auspices of the Agricultural Society of New South Wales. It is anticipated that many of the articles shown at the coming Paris Exhibition will be trans-shipped to Sydney.

**Weed-Destroying Machines Needed.**

There will probably soon be in this State a good opportunity for inventors of machines for uprooting or otherwise destroying weeds to introduce their devices with success. A bill has recently passed both houses of the Legislature which provides that every person owning or leasing cultivated or inclosed land abutting on any highway shall "cause all noxious weeds, briars, and brush growing upon said lands within the bounds of said highway, to be cut or destroyed between the 15th day of June and the 1st



**EASEL FOR POTTERY DECORATION.**

day of July, and between the 15th day of August and the 1st day of September," under certain penalties in case of neglect. The Governor's signature will render this measure a law.

There is nothing in its provisions to exempt railroads and canals from its operation, and as there are 5,525 miles of the first and 857 miles of the second, this is a material addition to the aggregate length of highway in the State. What this length is can hardly be estimated, inasmuch as it includes not merely roads, but streets everywhere, so that there is scarcely a land owner in the State outside of the cities who will not find that the law in some degree applies to him. Those who possess large tracts along the railroads will, however, probably find weed eradication an onerous affair, and machinery capable of rapid and effective operation a decided necessity. Mowing machines or grass cutters will not answer the purpose, as the idea is to destroy the weeds and not simply check their growth. Probably

**Repeating Old Stupidity.**

History constantly repeats itself. Follies similar to those being perpetrated at Washington over the money question have been exhibited in every age. When the Bank of England notes ran below par in gold, during and after the Napoleonic wars, the question arose, and was universally discussed in that country, whether the notes had fallen or specie had risen in value. More than two-thirds of Parliament decided that it was gold that had risen, and that the paper money had not depreciated. About as large a proportion of that body were averse to resuming coin payments. The ground was taken there, as here, that resumption was impossible. Even Cobbett, who was almost always right on the main question, was wrong on this. He demonstrated, after his fashion, that the interest on the public debt and the obligations of private debtors never could be paid except in paper money. England really seemed to be smothered under her gigantic debt. She had spent some five thousand million dollars for war purposes within a comparatively short period, and was over four thousand millions in debt. There was thus some reason for the delusion there; but a few brave, clear-sighted men saw through the darkness, and led the nation out triumphantly. The true principles of finance were extracted from the fiery crucible of her experience, and laid down in the famous Bullion Report, and to them the nation was finally converted, only after long years of hostility and conflict.

If Congress manifests exceeding ignorance on the financial question, it may be some consolation to reflect that the British Parliament exhibited just as much. If Congress believes that the United States can and should pay only in bogus money, England was once of the same opinion in regard to her debt. Let us hope the parallel may continue, and that Congress may, like Parliament, be soon educated out of its ignorance.—*New York Sun*.

**A Simple Electroscope.**

M. Rameaux lately brought before the Société des Sciences of Nancy a very simple and sensitive electroscope. It consists of a fine fiber of white silk, fixed at one end by means of a little wax to any support, and free to oscillate in any direction under its point of attachment.

A single thread would, of course, suffice for the ordinary purposes of electroscopy properly so called, but it is preferable to employ two near each other, taking care to space them so that they cannot foul each other during their swing, or influence each other reciprocally.

One of the threads is charged to strong repulsions by means of a glass rod charged with positive electricity; the other is charged in a similar manner with a stick of resin charged with negative electricity. Every body which attracts one of the threads so charged, and repels the other, is necessarily electrified. Its electricity is of the same sign as that of the thread which it repels.

The sensibility of these electroscopes is greater, within certain limits, as the threads are made finer, longer, and less conducting.

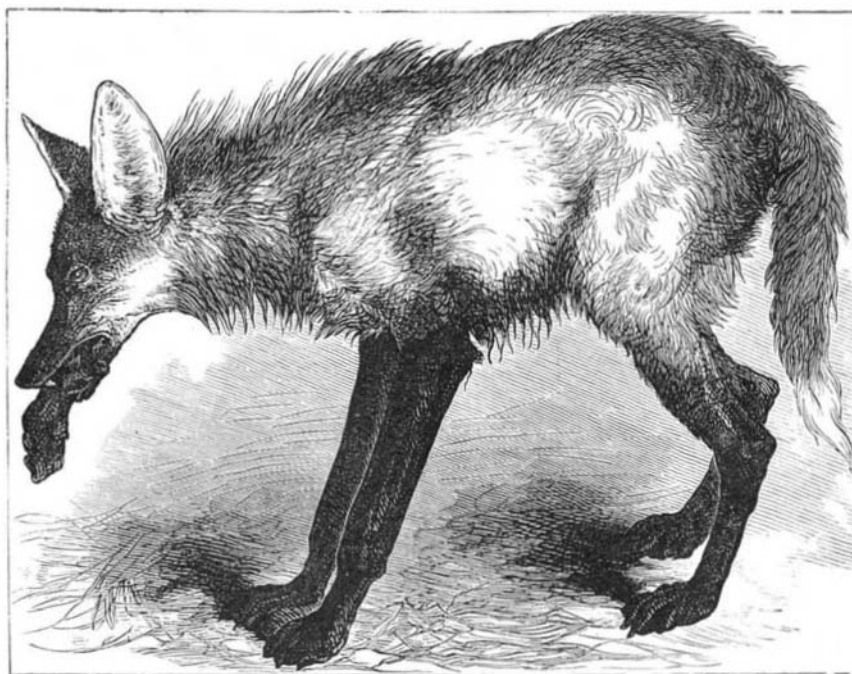
If the finest sewing silk of commerce be untwisted, each of the parts or strands obtained will make an excellent electroscopic pendulum, which, if about sixty centimeters long, is very handy, and suffices for almost all tests. White silk is preferable to colored.

The motions of these threads, if well charged, are very considerable, even when the bodies presented to them contain but slight charges of electricity. When the threads are not excessively fine, disturbances of the air do not destroy the observations so much as might be supposed. In the first place, these disturbances can be almost entirely removed; and, furthermore, the threads, even when agitated, obey so well any electric attractions and repulsions that it is absolutely impossible to mistake or detract from their evidence.

M. Rameaux has found this arrangement in all cases more sensitive and sure than a carefully constructed gold leaf electroscope which he used for comparison.

This system also recommends itself in several ways, for instance:

1. It is so simple that every one can construct and use it.
2. It costs nothing; no special support being necessary. The threads can be fixed to any projecting piece, as the edge of a table; the only condition being that they may hang freely.
3. It can be set up in a moment, and consequently is at



**THE RED WOLF.**

apparatus similar to the cotton stalk pullers in use in the South will be found requisite; or there is a chance for some enterprising individual to adapt a portable engine to the purpose—one that is capable of self locomotion—and run it alongside the railways, canals, and roads, making contracts with the land owners to clear the ground.

THE Sutro tunnel is gradually nearing the Comstock, and the blasts in the header can now be distinctly heard by the miners at work on the 2,000 foot level of the Savage and Hale & Norcross shafts.