



or emery powder being used with it. The roughly formed pieces are then smoothed with a piece of whetstone and water. The polishing is effected by friction with whiting and water, and finally with a little olive oil laid on and well rubbed with a piece of flannel until the polish is complete. In this process the amber becomes hot and highly electrical; as soon as this happens, it must be laid aside to recover itself before the polishing is continued, otherwise the article will be apt to fly into pieces.

(3658) H. D. G. writes: Suppose I have twenty sulphate of copper cells of battery connected in series to charge ten secondary cells, such as are described in SCIENTIFIC AMERICAN, vol. 62, No. 10; the secondary cells being charged. How many six-candle power lamps could be lighted, wired in parallel, by switching, independent of each other, both the gravity and storage battery into the lamp circuit? A. To charge 10 cells of storage battery simultaneously will require 40 cells of gravity battery. The gravity battery cannot be used in connection with the storage battery for operating lamps. Its resistance is too great and it yields only a comparatively small current. Ten cells of storage battery should operate from fifteen to twenty six candle power lamps.

(3659) T. R. writes: I want to build a cistern for drinking water. Can you tell me what will keep the water from tasting of the cement the first year? A. If you use genuine Portland cement, you will not be troubled with the limy taste except for a short time after the cistern is built.

(3660) W. E. B. asks how fire eaters perform their feats. A. The old method was to place a bit of lamp wick soaked in solution of potassium nitrate and dried in a ball of oakum. The wick was lighted before placing in the oakum. This was taken into the mouth. If blown through, it produced the fire eater's appearance. When the mouth was closed, the appearance of fire ceased, but the wick remained ignited. On again blowing air out through the mouth, the fire eating again was produced. The present system is to take a wad of cotton dipped into benzine in the mouth. On blowing out through the mouth, the mixture of benzene vapor and air can be ignited, producing a flame six inches long. A tube or funnel can be used to blow through, but if properly done it is not necessary.

Replies to Enquiries.

The following replies relate to enquiries recently published in SCIENTIFIC AMERICAN, and to the number therein given:

Referring to query No. 3541, a very simple and effectual method of cleaning the bones of small animals is to put them near an ant hill, and in a day or two the ants will have removed every trace of flesh and will even polish the bones. Care must be taken that they do not remove small parts. I once obtained the bones in the head of a rattlesnake in perfect order by these means.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

November 3, 1891.

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing inventions such as Adding machine, H. H. Rumble (462,384), Air compressor and pump, rotary, H. Richmann (462,453), and many others.

Table listing inventions such as Calendar, E. L. Pease (462,450), Camera, See Photographic camera (462,306), Car filling machine, I. W. Langford (462,491), and many others.

Table listing inventions such as Harvester, corn, N. C. Bader (462,230), Hat blocking and brush pressing machine, W. H. Pittilla (462,585), Heater, J. A. McBride (462,267), and many others.

Table listing inventions such as Scraping implement, E. J. Metzger (462,445), Screwdriver, H. L. Gillette (462,252), Sewing machine, W. Hillman (462,553), and many others.

DESIGNS.

Table listing designs such as Atomizers, cap and nozzle for, A. M. Shurtleff (21,149), Chambray glass, H. T. Wilhelm (21,149), and many others.

TRADE MARKS.

Table listing trade marks such as Alterative compounds, J. W. Rankin (20,316), Anesthetic, M. W. Cobb (20,310), and many others.