

portions are made distinct after drying by a paler tint, evidently due to removal of some of the starch size. The reactions—somewhat less distinct—may be made to appear on paper that has been entirely moistened and dried, like a letter copied in a press. Even erased pencil marks may be brought out on a highly-sized surface.

Many nervous and mental conditions not easily explained are attributed by Prof. Desplats to auto-hypnotism. In one example, a young man was hypnotized by the sight of a pair of shining scissors or the revolving wheels of a bicycle, and performed singular actions; while another man became hypnotized on meeting the gaze of a certain friend, which became so unendurable to both that they separated to distant towns. Hypnotism in sport is very dangerous, as it leads to susceptibility that may bring serious results.

Seeking to determine the minimum energy capable of working the Atlantic cable, the operator at Valencia, in 1866, sent vigorous signals by means of a battery cell made from a lady's silver thimble. Not to be outdone, the American operator made a battery from an empty gun-cap and a tiny strip of zinc, and with this transmitted faint but intelligible signals from Heart's Content. The gun-cap battery, according to *The Electrical World*, is now in possession of Mr. H. H. Ward of New York.

An observer, having noted a large iron steamer, which, on a temporary gridiron between absolute dryness and partial flotation, was deflected eight inches, a correspondent of *Engineering* declares that the vessel must have been badly strained. In experiments on the Clyde, large steel steamers under varying loads have shown no deflection equal to one inch in their entire length.

Rosin melted with six or eight parts of lard is recommended by Prof. Olmstead as the best protection for iron or steel instruments.

Our theories of certain perplexing phenomena are likely to be considerably modified by the researches Prof. Goldstein is carrying on at the Royal Astronomical observatory at Berlin. A fact well known is that when a solid body is interposed in the path of the cathode rays in a vacuum tube, it becomes itself a secondary source of cathode rays, upon which the primary cathode appears to exercise a repulsive action; and this has suggested the theory that the sun is a primary cathode, sending out cathode rays to immense distances, and that the solid or gaseous nucleus of a comet is a secondary cathode, which sends out cathode rays always directed away from the sun. The secondary rays are the visible tail of the comet. In the remarkable experiments already made, Prof. Goldstein has reproduced in his vacuum tubes most of the phenomena of comet's tails, while he hopes to be able to explain such other mysteries as to the red flames and prominences seen around the eclipsed sun, with the magnetic storms, auroras, thunderstorms and other terrestrial phenomena supposed to be influenced by solar action.

Rubber tubing is used as a core for casting pipes for underground service in the novel method of a French engineer. The trench is dug and given a bottom of cement mortar, then the tubing—covered with canvass and inflated—is placed on this bottom, and the trench is filled up with cement mortar. When this has set, the rubber core is deflated and removed for use elsewhere. This plan for mould-

ing conduits is simple and economical, and six-inch pipes from hydraulic lime and sand are said to have been made at seven or eight cents a foot.

"Manjak," or "glance pitch," now being exported from Barbadoes in increasing quantity, is a kind of petroleum in bituminous form, and is found in veins, like coal seams. When powdered, it is capable of producing a great amount of heat. Its low melting point makes it difficult to use for fire, but this difficulty has been largely overcome—and a valuable fuel produced—by mixing it with infusorial earth, which is found in the same locality.

Pegamold, for rendering asbestos, paper, etc., impermeable and proof against acids and grease, is a liquid made by dissolving celluloid in alcohol. On applying, the alcohol is driven off by heat.

#### [COMMUNICATED.] THE POLITICAL CRISIS.

The opponents of non-partisan rule in municipal affairs have said all that possibly could be said against that movement, and they have no doubt as diligently sought for and said all that could be said in straight party defense. Much of the former was unfair and untrue, and much of the latter was assumption and in no way applicable to the situation. It has never been hinted by the reform movement that there were no good men in the ranks of party. One of the arguments has been that the success of either party (as such) was to ignore all other persons in the distribution of patronage and to make of office an unyielding vehicle for continuing the triumphant party in power.

It is easily seen that where parties are nearly equal, representation of the minority becomes an impossibility, which in local affairs is manifestly unjust. Under non-partisan control the very best of citizens can be culled as public servants, with great advantage to public interests and to the securing of the present great need and aim, viz: an economical administration of local matters as understood, not by politicians but by conservative business men. In opposition to this the question has been asked in a kind of defiant way by one party: "Have we not given you a clean and economical administration in Salt Lake county by members of our party?" To those who are familiar with the honorable commissioners the claim is void, for they have acted as men, as interested citizens who had individually something at stake, and also as the guardians of what others had at stake as well. They would have been just as valiant for economy if they had belonged to the opposite party, to any other or to none at all, and after all the county vote never was, neither can it be, as subject to transient voters and impetuous aids as have too often determined our city elections.

There are good men, similar men, on the political party tickets, but their subservience to party is predicated of them all, and issues like that of silver are injected into the platform and deemed essential when their ideas on that and many other questions are of no moment whatever in the contest, either here or abroad. What cares any but the rank partisan beyond our borders what political complexion our coming Mayor or city fathers may be of? Or if they do assume to give any fictitious value to public action here, every honest citizen would say: "Present and local salvation is what we are seeking now; whenever the exigencies arise, requiring an expression of public sentiment on the silver question, the people of Utah and Salt Lake City will vindicate their attitude on that as before and with no less uncertain sound."

Some little controversy has arisen in regard to political methods in "the mother country," and some very silly things have been said thereon. The facts are that the spirit and methods of the two countries are "as far asunder as the poles." Practically, it may be said that politics there do not enter either into local or even national affairs. English methods of our day at least never could have crystallized into general acceptance the American proverb, that "to the victors belong the spoils;" for when Rosebery or Gladstone on appeal to the country is superseded by Salisbury, no man is moved from any position of public service or emolument save the advisers or cabinet; which is really the governing power of that wise and conservative country. And the expenses of a general election are to-day probably less than is now being spent for the election of a senator from Illinois, where, according to the dispatches, "money is by 'Hanna' being lavished like water," and even the Chief Executive is said to be about to "stoop from his lofty station" to secure senatorial honors for a man who is claimed to be without any qualification save "ignorant effrontery" for so exalted a position. When the last ministerial crisis occurred in England it was only two weeks from the issue of the writ until the election was over and the complexion of the new Parliament determined, which also determined the question for the incoming premier, who assumed the reins of power and formed a cabinet in harmony with the expressed sentiments of the voting population, now approaching American universality. The modification there existing would save this State and city, to say nothing of the country at large, from much vicious political chicanery and from the positive though ignored rule of an element not infrequently bought or sold.

The Citizens' Reform party may not accomplish all that it desires now, but it is something to have realized the necessity for a change, and the more the taxpaying citizens study this question, the more numerous will its adherents become, for it is founded on common sense and the instinct of self-preservation. The principle involved will survive the slurs and innuendoes of office seekers and scheming politicians. It will spread throughout the State as the people become educated aright, and it will be men, not altogether measures—the latter will assuredly be good if the elected men are patriotic, true and good. The coming election will be a turning point in the history of this city. The Citizens' party will become a permanent one if it remains true to the promise of its creation. Men will be promoted to positions of honor, responsibility and trust because of character and because of their pride in local growth. The question of politics as to issues which can only be settled elsewhere, while ignored as of no moment in the government of a city or county, or perhaps even a state, will find ample exposition in the choice of senators and representatives who may go hence to vitalize in national statutes that which is altogether beyond the prerogative of even a so-called sovereign state.

The attitude of the "News" as shown by its utterances proves it to be the thoughtful, persistent friend of the whole people. It is the advocate of peace and union, the foe of extravagance and financial slavery. It voices the inner thought of many who for the moment may not clearly see that the shackles of party are the chains of bigotry, rapacity and slavery unworthy of free and thoughtful men.

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