

It is usually called a republic, but in point of fact it is, and has been for several hundred years, governed jointly by France and by the Spanish Bishop of Urgel. The present Bishop of that see, it seems, is impatient of the restrictions put upon his temporal power by the delegate of France who shares the governing power with him, and has written a pastoral letter which is described as having an almost warlike sound. The revenue of the State is said to be about three hundred dollars, and is equally divided between France and the worthy Bishop. It is not likely that the great republic of France is seriously concerned about the commotion in its little sister republic, and it is not quite clear of what usurpation of power the Bishop of Urgel complains. The whole story has a curious resemblance to the plot of a comic opera.



Professor von Helmholtz

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Those not especially interested in the progress of science will little realize what the world has lost in the death of Professor Hermann von Helmholtz, briefly noted last week. Few men in the history of science have rendered her such signal services. His eminence and his contributions to the sum of human knowledge are about equally great in the three large fields of

physiology, physics, and mathematics. His parentage was in no wise distinguished, and his university education consumed all the available means of his parents. Helmholtz's first important discovery, made now nearly half a century ago, consisted in measuring the exact rate of motion of a nerve-impulse, by a method simple, conclusive, and so described that it could be easily done in any laboratory—and this barely three years after DuBois Reymond, after experimenting for many years upon nerves, had declared that the time of nerve-action was forever immeasurable. This originated what some have called a science by itself—that of the chronology of the simplest psychic processes. His invention of the ophthalmoscope, a little later, practically created the entire medical specialty of ophthalmology, which Graefe and many others have since developed. Gifted with an ear of unusual delicacy, he devoted himself to the study of physiological acoustics, and not only analyzed a simple note, but recomposed it out of its overtones, showing that it was in the number and relative loudness of these that all differences of *timbre*, or the difference in quality of the same note when played on different instruments, consist. He also showed that we hear by means of sympathetic vibrations of a system of tiny rods in the ear, which vibrate, sympathetically, each to its own note. The history of music was now first completely studied and written up in a scientific manner; beats, scales, and chords were experimentally explained. This great work on the sensations of tone is still supreme in its field.

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Endowed with power of vision no less remarkable than that of his hearing, Helmholtz next subjected all the problems connected with color, light, form, and binocular vision to minute experimental investigation, collecting and freely criticising all the literature upon each topic. This work was so vast in itself, and stimulated so large a body of other work, that it was said a few years ago that a new edition of the book would be impossible; but, with the aid of

Dr. Koenig, it was nearly two-thirds done and printed when Helmholtz died. Problems connected with the possibility of representing a space of four or n dimensions, and, later, many problems growing out of the conservation of energy, absorbed his later years. When that remarkable institution, the new *Reichsanstalt*, designed to co-ordinate and direct original research in the field of physics and related departments, was opened at Berlin, three years ago, with a building costing a million dollars, with thirty investigators and no teaching, Professor von Helmholtz, naturally, became its head. He was a poor lecturer and teacher, but in the work of investigation with a few advanced and chosen students he probably has had no superior and very few equals. He was, of course, a prodigious worker, spoke English well—his first wife being an Englishwoman—and was never more genial than at the semi-monthly musicales given at his residence in the physical laboratory at Dorotheenstrasse, which all his students will always remember with pleasure. The writer heard what is perhaps one of the greatest compliments ever paid to Helmholtz, uttered by one of his colleagues, in the University of Berlin, years ago; it was that no man, perhaps, ever lived of whom it is so nearly true that his every earnest and serious thought was a valuable enlargement of the boundaries of human knowledge.

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The native professors of the colleges at Aintab and Marash, in Asiatic Turkey, have been arrested by the Turkish Government on suspicion of participation in a seditious movement against that Government; perhaps we should rather say on suspicion of sympathizing with it. It is reported that there has also been a threat to search the college buildings, and to hold the professors under arrest without trial, the effect of which would be to close the schools; and this is probably the real design in the whole matter. Our Minister at Constantinople, Judge Terrell, is exerting himself to prevent any such result, and the Secretary of the Legation has gone to Aintab to make a personal investigation. It is very probable that the professors personally desire, as most sensible folk do, to see the Turkish Government overthrown, but there are remarkably well-balanced men both in the college at Aintab and in the Girls' College and the Theological Seminary at Marash, and it is not probable that they have taken any part in the political complications, still less that they have been preaching or teaching revolution in any form. The arrest is probably an attempt on the part of the Turkish officials to close the schools, for the Turkish Government is unalterably opposed to anything like genuine education in the Turkish Empire.

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The country is to be congratulated on the defeat of Mr. Breckinridge by the Democratic primaries in Kentucky. His nomination for Congress would have been a disgrace to the Democratic party of his district, and would have left a stain on the name of the State of Kentucky. It is true that great statesmen in the past have sometimes been men of great social immorality; but the standards of to-day ought to be higher than the standards of the past. It is doubtless true that there are men of social immorality in Congress even now, but they have not been nominated and elected as a vindication after suffering public disgrace. Moreover, Mr. Breckinridge's greatest offense was not his social immorality, but his posing at the same time as a conservator of public morals and sound religion. Charity might perhaps have attributed this double character to that strange incongruity which is not uncommon in man, and which makes him a perpetual riddle even to himself; but it

is difficult even for the broadest charity to excuse, much less to justify, his subsequent course in demanding of his constituents public honor by way of vindication, and in alternately presenting himself as a repentant sinner and as a political saint whose social vices were not to be taken into account in determining his fitness for the exercise of legislative duties. No possible political benefits which he could have conferred upon the country could counteract the evil effect of the election of such a man under such circumstances to such a position in the National councils.

A staff correspondent sums up on another page the results of the New York Constitutional Convention. The contrast between this body and that which adopted the present Constitution, and the contrast between the work of the two bodies, are very significant. It is, however, to be said that the present time called for more cautious and conservative action. We need in this State, what it appears to us this body has, on the whole, very well given us, a selection and incorporation in the Constitution, from an immense variety of radical and not always wise suggestions, of that which is wisest and best. In the general distrust of legislative bodies there has been considerable danger that this Convention would usurp the functions of the Legislature and enact laws rather than establish the principles according to which laws should be enacted. On the whole, the Convention has guarded itself fairly well against this peril. The other peril, that of partisanship, has shown itself most clearly in the endeavor to deal with the problem of municipal government and in the reapportionment amendment. Both subjects present very serious difficulties. It certainly is not safe to carry out the principle of "home rule" so radically as to set the people of New York and Brooklyn off in independent communities by themselves; and it may well be doubted whether our experience respecting municipal government is yet sufficient to enable even a wiser body than the present Constitutional Convention to draw permanently the line of demarcation between municipal and State authority. This question is not yet settled by the Convention, but from published indications we suspect that it will act upon the motto, "When you don't know what to do, do nothing." We hope that the Republicans will consent to submit the reapportionment amendment as a separate proposition, and we reserve any final expression of opinion upon that subject, but it is our impression that the principle of majority government ought not to be carried to such an extent as to give to the two cities of New York and Brooklyn one-half the political power over the whole State in the Legislature. The "one man one vote" principle is not the only and final political principle by which all others are to be tested and determined.

The amendment against sectarian control is perhaps as important and far-reaching as any which the Convention has adopted, and it is so important that we give it here in full:

"Sec. 4. Neither the State nor any subdivision thereof shall use its property or credit or any public money, or authorize or permit either to be used, directly or indirectly, in aid or maintenance, other than for examination or inspection, of any school or institution of learning wholly or in part under the control or direction of any religious denomination, or in which any denominational tenet or doctrine is taught."

As our readers know, this subject excited warm debate and developed radical differences of opinion. It appears to us that the final action taken was wise, and that the clause could not be better phrased. To exclude all religious teach-

ings from the schools would be inconsistent with the desires of a great proportion, probably an overwhelming majority, of the parents, and would require, either in the Constitution itself or by the courts afterward, a definition of that vaguest of all terms, "religion." But it is not difficult to determine what is a religious denomination, and not seriously difficult to determine what is a denominational tenet or doctrine; and all of religious truth which is necessary to the development of such a character as promises to make a good citizen is held in common by all denominations, Protestant and Roman Catholic.

The Lexow Committee has again adjourned to give its members the opportunity of attending the State political conventions. Short as their last week's session was, it produced evidence that may be called startling even when compared with the body of proof of corruption in the New York Police Department already before the Committee. The new ground explored was the relations between "headquarters" and the criminal classes. Heretofore the blackmailing and bribery have been traced only to captains and "ward-men," and it has been said that if "headquarters" had more power such things could not occur. But now it has been shown that detectives from "headquarters" have systematically aided pawnbrokers and thieves in fleecing the owners of stolen articles which have been pawned, and that the postal cards sent out from "headquarters" about stolen and pawned goods have systematically informed the owners that they must pay pawnbrokers' charges, all without warrant of law or justice. Much worse even than this is the evidence connecting a "headquarters" detective, Hanley, with the so-called green-goods men—pretended dealers in counterfeit money who swindle avaricious and dishonest persons who believe that they see a chance of safely obtaining and circulating counterfeit money. It was testified to that Detective Hanley systematically "protected" these swindlers, and that they regarded their payments to him as for "protection from headquarters." This evidence was in part corroborated by correspondence which has fallen into Mr. Goff's hands. Here, then, is something which Superintendent Byrnes might look into without leaving his own office. The Police Commissioners have resolved to hold no more trials until the Lexow Committee has finished its investigation. We earnestly hope that after the investigation is over some of the guilty officers may be put on trial before a jury. It is true that there was a failure to convict Captain Devery by a jury, but the McKane case shows that we need not by any means despair of jury trials. And the sending of one guilty captain or inspector to Sing Sing would have a vastly greater effect on the purity of the department than the mere dismissal from the force of twenty.

The monometallist papers continue to make much of the Director of the Mint's report that the production of gold last year was "the greatest in the world's history." One paper in this city devotes nearly five columns to magnifying the importance of this fact. It shows that since the recent African discoveries the advance in the production of gold has been rapid. What it does not show, however, is that the richness of the African ore has steadily declined as the work of mining has been pushed forward. The yield per ton was just one-half as great in 1891 as in 1888, and Suess has shown that the African mines bid fair to be exhausted as quickly as were those of California and Australia. This, however, is not the most important fact. While it is true that the world's production of gold last year (\$153,000,000) was the "greatest in the