

## MR. HAYES'S ADMINISTRATION.

BY the time this reaches our readers Mr. Hayes will have retired to private life, after an Administration in some ways the most remarkable and trying in American history, because he is the only President who has held office under a disputed title. The action of the Electoral Commission justified him in accepting the office; the vote of the Electoral College would not, as we maintained at the time, have done so, because it was clearly tainted with fraud. But, of course, the action of the Electoral Commission could not do more than make it decent for him to take the Presidency; it could not give him in the eyes either of friends or foes the moral weight and dignity which flow from election by unquestioned returns. The defect in his position being a moral one, however, the only possible palliative for it—cure there was none—was the diligent cultivation of moral strength, and the resolute avoidance of all courses which seemed likely to deepen the suspicion which clouded his accession to office. He was, however, so ill-advised that he did not see this. He actually came to the conclusion, as soon as he entered the White House—we do not know under what influence—that his first duty was, not, by an exhibition of unswerving integrity, to relieve the honest souls all over the country who had supported him with misgiving, “for the sake of the party,” but to provide the Louisiana and Florida politicians who had counted him in with substantial rewards for their services. As soon as he did this he delivered himself into the hands of his enemies; he discarded the warranty which he had received from the Electoral Commission, and confessed obligation to the Returning Boards. Under the best of circumstances, it would have been hard for him to live up to the standard of reform set out in his letter of acceptance; after this fatal compliance it became impossible. He could only have conquered by the aid of a sincerity which no man dared to doubt. After using the civil service to reward the Southern Republican counters, his enemies were able to deny his sincerity with the aid of proofs which his warmest friends found it difficult to meet. In fact, the battle was lost before a shot had been fired. That he had no strength to spare, even at the outset, for anything but the work cut out for him by the platform and his own letter of acceptance, we were fully persuaded as soon as he was nominated. On the 22d of June, 1876, commenting on the nomination, we said:

“But Mr. Hayes, though by no means conspicuous in politics, is not wholly unknown, and we presume there are few, even of those who know him best and like him most, who do not doubt whether he is the kind of man for which the crisis through which we are now passing calls. The civil-service plank in the platform, though doubtless well meant, has, in its declaration that senators and representatives should confine themselves to their legitimate duties and refrain from influencing appointments, a ludicrous resemblance to the resolution introduced into the French National Assembly calling on all the rascals to quit France. It brings strikingly to mind the great fact, that to get rid of the master-evil of the Government in our day—that which has already degraded and paralyzed it, and threatens it with serious fundamental changes at no very remote date—the President must be a man of no ordinary tenacity and breadth of view, and must be prepared to sacrifice personal ease and smoothness of administration, and party harmony and success, to higher and more important things. We do not believe, with our present knowledge, that Mr. Hayes is such a man. We do not know, for we have no reason for believing, that he thinks the condition of the civil service a serious evil, that he would make great sacrifices to amend it, or that he thinks anything of more importance to the country than the supremacy of the Republican party, managed substantially as it now is. Let us not be misunderstood. We have no doubt he will surround himself with a respectable Cabinet; that his secretaries of state will never be chance acquaintances made in the railroad-cars or at dinner-parties; that his associates will be men of honor and education; that he will be in good relations with the intellectual and moral as well as the material interests of the country; that he will not tolerate thieves or theft in his immediate view and presence; and that he will be the enemy of all kinds of jobbery. But this he might be and do for four or eight years without permanently or even sensibly reforming the Government, or removing one of its Oriental features, and without checking that growing tendency to rely on individuals rather than on laws for the salvation of the Government which is the great danger and difficulty of the day. It will be seen that we do not seek to conceal his good points, but we fear that it is these very points which make him objectionable at this juncture. We fear that he will, if elected, send the nation to sleep again, to wake up once more in four or eight years to look for a ‘truly good man’ to save it from the whiskey-

thieves and the speculators and jobbers and ringsters. This reliance on special providences is the sign, however, not of healthy but of morbid politics; and the truly great man and the real reformer will be he who will bring about the revolution which will render great men unnecessary, and make the type to which Mr. Hayes belongs sufficient for all needs of the state.”

It was not simply by his needless sacrifice of his influence for the benefit of the Returning Boards that he confirmed this view. He confirmed it still more strongly by his management of his Cabinet. Only one of its members has shown, or attempted to show, that he cared one straw about the reform over which Mr. Hayes was most strenuous when he took office, and one of them has in every way shown his indifference to it apparently without meeting with one word of rebuke from his superior. It may be said that Mr. Hayes submitted to all this because he could not help it, but his condemnation lies in the fact that he thought he could help it. There is no more serious defect in a statesman than inability to estimate his own powers, or, to use the homely phrase, readiness to “put up more machinery than he has boiler for.”

That his Administration has been very pure as contrasted with that of his predecessor, there is no doubt. Its freedom from all scandals, and the general sweetness of the social atmosphere with which it has surrounded the White House, must always give it strong claims on public gratitude. In this way, too, it has rendered very important service to the party. There can hardly be a question that it is to this that General Garfield owes his small majority. But, after all, it will be impossible to decide before seeing the kind of Administration General Garfield gives us whether it was a misfortune or a gain that the Republicans retained the Presidency in 1876. If it gave the party a chance to establish other claims on popular confidence than the successful conduct of the war, of which it will avail itself, the decision of the Electoral Commission was a lucky thing for the country. If, on the other hand, it simply ousted Mr. Tilden to enable General Garfield, after a sort of Hayes interregnum, to restore and perpetuate the Boss régime set up under General Grant, it probably simply postponed for eight years the Democratic accession to power. And assuredly when the Democrats do come into power, if they come before long, they will find in the history of Mr. Hayes's Administration plenty of excuse for persistence in the practices which were the disgrace of Grant's. It is true Mr. Hayes leaves behind some good precedents, such as the withdrawal of the New York Custom-house and Post-office from politics, but it is one of the misfortunes of a President's position, as it is of a clergyman's, that when he sets up as a reformer he cannot afford a single lapse from virtue. He has to be a reformer, as they say in the conventions, “first, last, and all the time” in order to save himself from the reproach of hypocrisy. We have reached a stage in the history of the country when, owing to the great strides made in population and industry, we are threatened with a distinct change in the form and spirit of the Government, through the use of the civil service, in connection with the nominating system, for building up a power in the Senate unknown to the Constitution and dangerous both to purity and liberty. The movement can only be arrested by a President of indomitable energy and strength of will, who relies on and is supported by an aroused public opinion. We shall probably see more than one offer himself for the task and lose heart after putting his hand to the plough; but the right man will at last appear, and when he does people will be surprised by the ease with which he will do the work.

## CONGRESS AND THE BANKS.

THE sort of panic created by the section of the Funding Bill which proposed to compel National banks that wished to withdraw their circulating notes, to collect them and pay them into the Treasury before receiving back the bonds pledged as security for them, instead of redeeming them in “lawful money” of any kind, will probably, in whatever way it ends, have two very useful results. It will bring home to the public, with a force and impressiveness which no amount of mere preaching could have, the exceeding inconvenience and danger which lie in arming Congress with the power of interference with the currency. It will, in addition to this, give Congress itself a useful lesson in finance. It was in this way precisely that Congressmen learnt the real nature of

the "premium on gold," as it was called during the war. When this premium first began to rise high it found the majority in Congress possessed with the old notion of the Continental Congress, that the depreciation of Government paper was due to the machinations of speculators, and that it could be prevented by punishing persons who tried to sell it for less than the value which patriotic persons thought it ought to have. On this topic Thaddeus Stevens had more authority in the eyes of the Republican members than all the financiers in the world; a bill introduced by him sending gold speculators to jail was passed without difficulty. It was repealed, however, after fifteen days, when it was shown by actual experiment that it made the premium on gold higher than ever, and no attempt was ever again made to raise the Government credit by penal legislation. This could not have been brought about by any display of the recorded experience of other generations and other nations. The ordinary Congressman is seldom satisfied about any financial problem without trying its solution himself. He has an exhilarating and deep-seated belief that with his appearance in the House or Senate a new era in human affairs has begun, and that human society lies before him, like a sheet of white paper, ready for anything he likes to write on it. In most fields his experiments only affect a small number of persons or of interests; but when he takes hold of the currency he is able to disarrange the whole social machinery, send terror or foreboding into every household in the country, lower the value of every man's property, and bring ruin on every variety of business enterprises. Luckily he is as easily frightened as a boy playing with explosives, and runs away at the first blast of danger, and thus far the country has suffered little from the really momentous fact that he has its money in his power. This security, however, has only been purchased by great and protracted exertions on the part of the public. A fortunate veto from General Grant prevented Congress from inflating the Government paper in a way which would probably have finally resulted in bankruptcy, and it was only by a combination of cajolery and hoodwinking that it was induced to permit the resumption of specie payments. In fact, it probably never would have created the resumption machinery if it had felt sure it would work. It provided it because it thought it would amuse the hard-money men and do nobody else any harm.

Those who have been long possessed with the belief (and Mr. Sherman is amongst the number) that it would do to entrust the Secretary of the Treasury with the management of a huge bank of issue, by directing the Treasury to engage in the permanent emission of paper money under the superintendence of Congress, must surely be enlightened and warned by the history of the Funding Bill. The bill is necessary; and it may be that in fixing the rate of interest at three per cent., even though the weight of financial opinion is against it, the majority in the House have not overestimated the strength of the national credit. But they could not bear to pass it without inserting in it "a dig" at the national banks, which have long been the *bête noire* not only of the inflationists, who wish to see all paper money issued by Government, but of all that class of demagogues, principally Democrats, who look on persons engaged in the introduction and diffusion of capital in this country as public enemies, whom it is the duty of the legislator to vex by every means within his reach. It is to be observed, too, that the stroke at the banks contained in the fifth section was not inserted on the suggestion of any member known to the country as an experienced financier, whose conclusions on any business matter command respect or attention. The provision which has come near producing a panic, and would have produced one if men's engagements and commitments had been a little further increased by a longer continuance of the present period of prosperity, was, it appears, the work of a gentleman named Carlisle, from Kentucky, of whom the country outside his own district has heard for the first time in connection with this extraordinary mistake, of whose competence for financial legislation nothing whatever was known, and who apparently has hardly any acquaintance with business machinery or the working of business motives. If he had, he would have foreseen at a glance what the banks would do when his device seemed likely to become a law. As a matter of fact, it has taken him wholly by surprise, and the only excuse he can offer is that he meant well. There is no other commercial nation in the world in which such a suggestion

charged with the responsibility of the financial administration of the Government.

The national banking system is the one piece of legislation produced during the war period on which we may look with unmixed satisfaction. The suggestion of it, of course, came from the banking system of this State, but, considering the confusion of the times in which it was produced, its efficiency as a means of furnishing a safe and elastic national currency is very remarkable, and something of which the country may be justly proud. In so far as this legislation makes provision for the safety of the note-holders and depositors of the banks it may be pronounced almost perfect. It ensures the note-holders absolutely against loss, and it ensures the depositors against loss as far as a good system of inspection backed up by legal penalties can do it. The banks are cut off from every kind of business and every mode of doing business which are at all likely to diminish the security of those who commit money to their keeping. Now, when the Government has done these things it has done all that it ought to do. Any power of interference with the banks or their business which is not necessary for these things it ought not to have and cannot safely be permitted to have. All attempts to convert the banks into state functionaries or agents, or treat them as such, have the seeds of mischief in them, as the events of the past fortnight show. The "Carlisle amendment" undoubtedly had its origin in a reminiscence of the circumstances under which the national banks were started. They were started largely as a means of disposing of a mass of Government bonds during the war, and this fact, coupled with the strange interpretation which many people put on the word "creature" when they use the phrase that a "corporation is the creature of the law," has left behind a strong tradition that one of the functions of the national banks is the "floating" or absorption of Government bonds. When any fresh issue of Government bonds which does not seem likely to be popular, such as bonds at a very low rate of interest, is projected, one of the first things of which many a Western statesman thinks is the means by which they can be forced on the national banks or by which the national banks can be made to distribute them. In like manner, when the issue of depreciated silver coin was resolved on, the refusal of the banks to receive it except as a special deposit—that is, their refusal to allow persons who deposited silver only to draw out gold or greenbacks—was actually treated in Congress and by a portion of the Western press as an act of "rebellion" and as a "defiance" of the Government, just as if the banks were bound by their charters to help to carry out every financial scheme, however wild, the majority in Congress might devise. In the agitation against the railroads, too, the phrase "creature of the law," which was so freely applied to corporations, had the effect at last of persuading many people that the property of the corporation—which has all the incidents and immunities of individual property—really belongs to the Government, and is only handled by its nominal owners on sufferance or as a sort of favor. Consequently not only are the banks thought of by large numbers in and out of Congress as owing some kind of duty to the Government not set down in the Bank Acts, but as being in a certain sense managers of Government property, which Congress may deal with in any manner it pleases.

The banks, however, owe no duty to the Government except obedience to the provisions of the various Banking Acts; and the object of these acts is to permit the carrying on of the "business of banking by discounting and negotiating promissory notes, drafts, bills of exchange, and other evidences of debt; by receiving deposits; by buying and selling exchange, coin, and bullion; by loaning money on personal security; and by obtaining, issuing, and circulating notes" under the provisions of the law. No bank is, however, obliged to do all of these things. It may do any of them it pleases. It is not even bound to issue circulating notes. It is simply "entitled" to do so if it pleases. It is not bound to receive deposits in silver, or in anything else, unless it pleases and thinks it profitable. It is not bound to assist in "placing" Government securities, and owes the Government no more fealty or service than any other business corporation. The *raison d'être* of the banks is the making of money through the accommodation of the public on the capital invested in them by their stockholders. The object of the Govern-

builders. It is in no sense a business or political partnership, and we shall never have safe banking until the idea that the banks have any political function has disappeared from the public mind. Therefore it is the duty of those bank directors who think that the operation of the Carlisle amendment, by compelling them to redeem their bonds with their own bills, instead of, as provided by the original bill, with any "lawful money," would be injurious to their stockholders, to withdraw their circulation now before the Funding Bill takes effect. They owe this to their stockholders and depositors. They are bound to act in the matter on purely business considerations; there is no place in sound banking for any other consideration either towards the Government or anybody else. All talk of their trying to "bully the Government," because they refuse to share in the risk of carrying out the Carlisle experiment, has a very odd sound in a business community. The more reckless or sentimental Congress is in dealing with the finances of the country, the more imperatively are the banks bound to stand on business ground and work under business motives. They would become most unsafe and even dangerous institutions if they allowed themselves to occupy the position of the agents of political experimentation about currency or the public credit. A bank president who acted at such a crisis under a patriotic or other sentimental impulse would prove himself unfit for his position. He has no right to be patriotic or public-spirited with other people's money or at other people's expense. He has no right to assist in placing Government bonds if the process is, in his eyes, likely to entail loss or embarrassment on the institution which is in his immediate charge. The success of Government loans is the concern of Congress and the Treasury. The safety of the funds of his own bank is the concern of each banker.

#### THE NEW STAGE "AMERICAN."

THE play of "Fresh, the American," now running at the Park Theatre, differs in almost every respect from the American comedies which have preceded it. It is a wild melodrama, reeking with improbabilities, in which the American, *Mr. F. N. Fresh*, of the New York Stock Board, is introduced in the midst of European surroundings and in contact and contrast with European and Oriental characters. The facts upon which it is announced to have been founded are as follows: That some years ago several of the daughters of high Egyptian officials were sent, by order of the Khedive, to Paris to receive a French education; that in 1879 the Khedive was expelled from his kingdom and sailed with his harem and suite on his steam-yacht to Naples, and there purchased and occupied a palace into which he removed his harem and attendants; that less than a year since a young girl eloped from his harem with a foreigner with whom she had fallen in love. Out of these simple historical materials the author has manufactured a thrilling drama of adventure, love, and revenge. In the first act the scene is laid at Nice, in the *Hôtel des Anglais*, and we here make the acquaintance of an Italian *Marchesa*, who has buried three husbands and desires a fourth; a young Egyptian Princess, *Erema*, daughter of *Achmet Pasha*, who has received a French education and is emancipated from the traditions of the East on the subject of her sex and its position; a Russian officer, whose brother was murdered after surrendering at Plevna, and who has only two passions—love for the *Marchesa* and a thirst for the lives of all Turks, but especially for that of his brother's murderer; *Mahomet Ali*, an officer of the Egyptian army and really the murderer of the Russian officer's brother; *Achmet Pasha*, chief officer of the ex-Khedive of Egypt; *Mathias Manassah*, a Jew banker and financial agent of the Khedive in Europe; and finally *Mr. Fresh* himself, who is privately married to *Erema*. The *Marchesa*, filled with the determination of becoming the wife of the rich American, intrigues to get rid of *Erema*, and has her taken off by her father and married to *Mahomet Ali*. The action of the play consists in the frustration of this intrigue and the final recovery of *Erema* through the wonderful energy, perseverance, and indomitable pluck of her American husband; the whole ending in the gardens of the ex-Khedive on the Bay of Naples, where, while an eruption of Vesuvius is going on in the background, the foreground is suddenly filled with the gallant crew of *Mr. Fresh's* yacht, the *Greenback*, who, with the assistance of the yacht's cook, overpower the nearly triumphant Egyptians and rescue the hero and his bride.

There is nothing in the play itself, nor in the acting of the European and Eastern characters, to explain the success with which it has met. All of the newspapers on its first production severely criticised or ridiculed it as a dramatic product; nevertheless it draws crowded houses, and is evidently going to have a long run, owing to the acting of the American part of *Fresh* by Mr.

about his present performance is that the type of American character presented in it is altogether new on the stage, and that it is the truth of the type which so greatly excites the delight of the audience. *Mr. Fresh* is a member of the New York Stock Board. He has made a fortune of millions by "consolidation," and these he goes to Europe to enjoy. His qualities of character are very marked and they are all entirely anti-European. He is, in the first place, a citizen of a country without a past, and consequently the feeling of reverence for the past is not simply wholly lacking in him, but its place is supplied by something like a good-natured contempt for antiquity. The sight of Cleopatra's Needle produces in him no lofty emotions or sentiments, but he is profoundly struck with the fact that it has no "eye." He familiarly abbreviates the names of all the venerable objects and places with which he comes in contact. As he has no reverence for the past, neither has he any regard, in his intercourse with persons invested by European traditions with a personal dignity, for the respect due them. He slaps *Achmet Pasha* on the back and brings down immense applause by calling him "*Ach*." In fact, he treats the chief officer of the Khedive (and this is the touch of nature which goes to the heart of the audience) precisely as he might if he were "one of the boys" who turn up in the office of the Windsor Hotel to do a little evening business after any particularly exciting day at "the Board." There used to be a story of an American captain whose vessel, while lying at Civita Vecchia in 1848-9, is supposed to be boarded by the Pope of Rome and King of Naples. On receiving his distinguished visitors he says, "How d'y'e do, King; how d'y'e do, Pope. Mr. Smith, you just take the King down to the cabin and let him have something to drink, while I show the Pope round the deck." This story would hardly have been accepted by an American audience at that period as a good illustration of American manners, but it is just this tone of monstrous familiarity and disrespect which in *Fresh* the audience recognizes and applauds.

These traits of character are not pleasing to everybody, and the theatrical critic of the *Times* pronounces *Mr. Fresh* "a conceited, boorish, impolite, offensive, and utterly repulsive donkey," and a "vulgar castaway from Wall Street." But this is really a mistake. It is an attempt to describe *Mr. Fresh* in the terms of a code which is inapplicable. He is anything but a donkey; for he is a shrewd, observing man of the world, always able to take care of himself under any circumstances. His vulgarity, too, is by no means what the term and its associations imply among Europeans. He is not mean, or close, or "caddish." On the contrary he is generous, brave, and chivalrous towards women. His bravery, however, it should be said, is not connected with or supported by the sentiments which according to European notions are inseparable from it. He has no sense of insults, and when the Russian officer endeavors to fasten a quarrel upon him by staring him out of countenance he only tells him to "glare away," and finally with great good humor engages him in a glaring-match. According to European notions, a brave man must not only be brave, but he must never seem to be anything else. Such is not *Mr. Fresh's* view of the subject. He runs away in the face of danger without the slightest hesitation, if he thinks it is for his interest to do so, and here again the audience marks its approval of his good sense by applause.

We have said that he is chivalrous to women, but that is not precisely the proper word in *Mr. Fresh's* case, for he is altogether devoid of the sentiment generally connected with the idea of chivalry. He does not worship woman in the abstract, or entertain any romantic ideas with respect to her. He knows that there are all sorts of women in the world, and would probably see little reason for idealizing the traits of character they have in common. In his relations with the *Marchesa*, whom he finally "sells short" to *Achmet Pasha* for the *Khedive's* account, he is governed by purely practical considerations. Another of his virtues is constancy. He comes of a strictly monogamous race, and, absurd as the play is, the audience derives a real satisfaction throughout from the excellence of his character in this respect. He trifles with no one. He does not pretend to be in love with the *Marchesa*, but is governed throughout by that spirit of fidelity in love which Tacitus, Taine, and other writers have pointed out as one of the strongly-marked characteristics of all the Teutonic races, whether in the forests of Germany or the civilized homes of modern Anglo-Saxondom. It is pleasing to find this primitive trait strongly displayed in one who so distinctly belongs to the modern world as *Mr. Fresh*. Another virtue is his humanity. Any suggestion of cruelty, particularly cruelty to the weak and defenceless, rouses his indignation, and it is really on this subject alone that he feels indignation at all. Other forms of immorality may excite his curiosity, his interest, or his sense of humor; it is inhumanity alone which makes him indignant.

What chiefly draws the audience in *Fresh* is, of course, his humor; on the stage we do not insist upon refinement, and *Fresh* is not refined. He is about as delicate as the "end-man" of a negro-minstrel troupe, but he is a humorist of a different order. The period since the war has witnessed the disappearance of several old American types of character and the development of some very novel ones. The Yankee whom Jefferson used to play in

twang, his unfamiliarity with other countries and customs than his own, his half-nervous national consciousness, his absurd costume, already belongs to the past. *Solon Shingle*, the degraded village Yankee of the same period, is seldom acted any longer. The reason is that the Yankee type itself has disappeared in the country. There is hardly a single trait in the typical American of to-day that is not the opposite of the traits of the Yankee period. The Yankee was close about money; the American is known all over the world for his lavish expenditure. *Fresh* opens the play by breaking the bank at Monaco, travels through Europe in his yacht *Greenback*, and thinks nothing of paying a hundred thousand francs for the jewels of the ex-Khedive of Egypt. He is enormously rich, and has made his money, as we have said, not by any tedious, monotonous labor and economy, but by brilliant operations in stocks, so that he is a millionaire and a young man at one and the same time. This has always been an ideal of the melodrama. It is one of the constant possibilities of actual life in America, and is one of the things which excite the warm admiration of the house. The audience is evidently composed very largely of the kind of Americans of which *Fresh* is the type. It is not in the least a fashionable audience. You look about in vain for the faces of the people you are accustomed to see at "first nights" at Wallack's, for instance; but it is an audience which is perfectly familiar with every term used on "the Street." If Jay Gould were "running" the theatre in connection with his many other enterprises, and had filled the boxes with "large operators," the orchestra chairs with "strong holders," and the galleries with "two-cent brokers" and "weak holders," he could not possibly get together a more appreciative and intelligent assemblage.

The late James Fisk used to say of his father, that while he would not tell a lie for ninenpence, he would tell eight for a dollar—a story which pleasantly illustrated the family love of truth, and brought out in a strong light the difference between the commercial spirit of the two generations. Fisk's father was a Yankee of the *Solon Shingle* period; but this type did not outlive the war. It is since the surrender at Appomattox that the stock-broking type of which Fisk was, in a certain sense, a pioneer, has been so enormously developed. A financier who would draw a distinction between telling a lie for ninenpence and telling eight for a dollar, was a product of country life. He could derive a great deal of quiet, rural humor out of a "bar'l of applesass." But *Solon Shingle's* children are cosmopolitan humorists. They belong to the new America brought into being by the war. Although not themselves warriors, they have the confidence, the audacity, the recklessness naturally produced by war. They are necessarily brokers or "operators," for it is only on "the Street" that this sort of national type could be developed. The curious thing about it is that it should actually be a national type. We defy any native American to go to the Park Theatre and see Mr. Raymond's *Fresh* without sharing the peculiar enjoyment that the audience gets from it. It is an exaggeration, but it is an exaggeration based on facts. We do live, as no other people in the world ever lived, in an atmosphere of "operations," "consolidations," and "combinations." We are all more or less interested in the rise and fall of stocks. We all have some broker who is our great man, at whose word stocks rise and fall, who is able to ruin his enemies by "disquieting rumors" and enrich his friends by means of opportune "points." We all know too well what "putting up margins" and "covering our shorts" and "laying down on our contracts" mean. Our varied rights and duties arising upon "puts," "calls," and "options" are subjects which constantly occupy our thoughts. A generation ago it was a question how far transactions of this sort had any validity at all. Now we look for the latest decisions of the Court of Appeals on "straddles" as among the most important contributions of our tribunals of last resort to commercial law. Before the war, and down to a comparatively recent period, the "operator" was an object of public detestation; and Jay Gould himself, who is now respectfully called "Mr. Gould," and approached by all with a kind of awe, and interviewed as an authority on the rights of corporations, was daily denounced as a "pal" of Fisk's, and frequently had to hide in interior offices or run for his life to the shelter of a cab. Jay Gould cannot have materially changed in character since those days. He must be the same man who caused "Black Friday," made money tight, depressed stocks, plundered the Erie Railway, corrupted judges, and led for years an outlaw's life. If the operations which caused him then to be regarded as a public enemy cause him now to be set down as almost a public benefactor, it must be in a measure because we are all living, not merely in "flush" times, but in times in which the rising tide of prosperity seems to be partly caused by these very operations which are made possible by it.

#### THE AQUEDUCTS OF ANCIENT ROME.

ROME, February 4, 1881.

THE well-printed and well-illustrated quarto volume of four hundred pages whose title I subjoin is the most important recent work on the archaeology of the ancient capital of the world. It is by the engineer Ro-

dolfo Lanciani of Rome, and it received, as it well merited, the prize of ten thousand francs offered by his majesty the King of Italy, and adjudged to the author by the Royal *Accademia dei nuovi Lincei*. It is based on the treatise of Frontinus, 'De Acquæductibus Urbis Romæ,' and may be described as a perpetual commentary on the text of that important work. Frontinus, who lived in the first century of our era, enumerates nine aqueducts (five of the Republican, four of the Imperial period), being all that Rome possessed up to that date. The number was considerably increased afterwards, but there do not appear to have been any significant changes in the plans and methods of construction. The rules and principles laid down by Frontinus are applicable to later Roman hydraulic structures, and the work presented by Signor Lanciani\* is the fullest and most satisfactory account we possess of the arrangements for furnishing water to supply the vast consumption of ancient Rome.

Of all the cities of the Greek and Roman world, Rome was most abundantly provided with water, the importance of which element, in its domestic and sanitary aspects, is now again, after centuries of neglect, beginning to be recognized as paramount among the physical conditions of urban life. We have, however, not yet quite learned to allow to water, as affecting the health, comfort, and decencies of life, the position which was accorded to it at Rome; but even to us it is inconceivable how many great cities of mediæval and even of modern ages could have existed, and been considered as elegant and refined abodes, with no artificial, or at best most inadequate, arrangements for the introduction and distribution of water among the people. Even Paris, in some sort the *arbitrator elegantiarum* of modern Europe, until recently derived its supply of drinking water from the Seine, the grand recipient of the sewage of Paris, and from wells polluted by infiltration, and so late as 1836 Parent Duchâtelet published a work in which the water of the Seine was proved to be altogether inoffensive to the taste and wholesome, because the foul matter contributed to its current by the superficial and subterranean drainage of the city was not sufficient in quantity to affect sensibly the taste, the limpidity, or the salubrity of its waters!

The ancient Romans discriminated carefully between the waters of different springs. What tests they employed we in general know as little as we know their rules for judging of the quality of stone and other materials employed in architecture. After the great natural division of water into fresh and salt, the most obvious distinction was between cold and hot springs. The latter of these were everywhere sought, and in all the wide domain of imperial Rome there is to be found scarcely a single spring above the ordinary temperature which is not surrounded by the ruins of old constructions obviously designed for bathing. They also considered the specific gravity of drinking-water a matter of much importance. A letter of Synesius to Hypatia describes and recommends an instrument for testing the weight of water. This was simply a graduated brazen tube, closed and weighted at one end. This, of course, by the height at which the tube stood in the fluid, would answer for comparing the gravity of different waters. Chemistry had not yet taught natural philosophers that water, even in its simplest form, is not an elemental but a compound substance; they knew, however, that not only spring-water, but even the purest rain-water, contains, in suspension or in solution, a variety of foreign ingredients.

Much of the water introduced into Rome by the aqueducts was employed for feeding fountains—the younger Pliny speaks of a *jet d'eau*—as well as for domestic uses; but the principal object of these constructions was to supply water for bathing, for which an enormous quantity was required. Thus the aqueducts subserved the purposes of luxury as well as the necessities of life. Cast-iron being scarcely known to the Romans, the distribution of the water from the reservoirs was effected by pipes of baked clay, and, where those were not applicable, of lead; and it is singular that, though skilful in casting bronze, the Roman founders were not yet able to cast lead pipe. The conduits of this material are made from cast sheets, or rather plates, of lead, wrapped around a mandrel and riveted or clamped at the opposite edges. The plates being thicker than modern rolled lead, the pipes were heavier, and accordingly the consumption of that metal was very great. From one single point of distribution of an aqueduct the Borghese family took, in the sixteenth century, not less than forty thousand pounds of lead pipe. The citadel of Alatri was supplied with water carried across a deep ravine by an inverted siphon of earthen pipes, imbedded in concrete, to a height of more than three hundred feet above the bottom of the ravine, and, of course, under a pressure of fully ten atmospheres.

Until comparatively recent times, the Romans were popularly believed to have been ignorant of the principle that water in conduits open only at the end will rise to the height of its source; but the discovery of distributing pipes at Pompeii and elsewhere, and careful study of the methods of employing them, have shown that they understood that law as well as we, and practically were much in advance of the engineers of some great cities of modern

\* I Comentarîi di Frontino intorno le Acque e gli Aqueducti: Silloge Epigrafica Aquaria. Roma, 1870.

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