

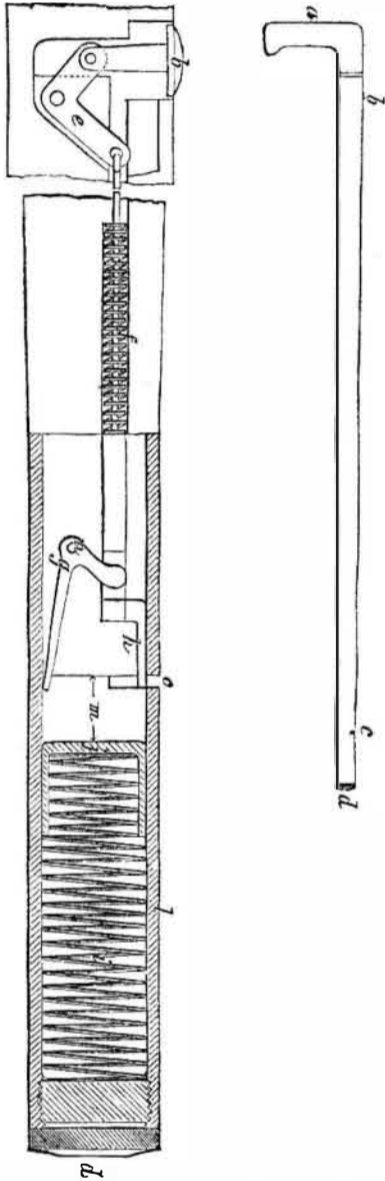
New Inventions.

Francis' Omnibus Cane.

Fig. 1 is a general view of the cane, *a* being the handle, *b* a little knob to be pushed by the thumb, *c* a slot out of which two three cent pieces are made to project; *d* the bottom which is unscrewed to fill the cane. Fig. 2 represents a longitudinal section of the cane. Unscrewing the bottom, *d*, and taking out the spring, *i*, with the pusher, *j*, joined to it, the space *m* is filled with three cent pieces, and the bottom screwed on.

FIG. 1.

FIG. 2.



The operation is as follows:—Knob, *b*, being depressed, the bell lever, *e*, pulls the wire, *f*, and consequently the first movement is the slipping back of the cover, *h*, which confines the pieces and prevents their falling out of *c*. The latch, *h*, being removed, two three cent pieces are made to project through the slot, *c*, as they are pushed up by the long arm of bell lever, *n g*, whence they can be easily taken by the driver. *l*, the ferrule, holds 32 three cent pieces, sixteen rides.

It must be obvious to all persons who ride in omnibuses that some new means of paying their fare is demanded, thereby dispensing with the inconvenience of leaving their seats, crushing their hats, treading on crinoline, or otherwise rendering uncomfortable those who are their fellow passengers for the time being. This cane answers in every other respect the purposes of a walking-stick.

A patent was issued this week for this invention (see List of Claims), and any communication may be addressed to the office of S. W. Francis' Patent Printing Machines, 442 Broadway, New York.

Improved Cotton and Hay Press.

This cotton press belongs to that class wherein the power is obtained by a system of levers called "toggles." It is intended for horse or hand power; and the inventor states that with the one which was tried at Madison,

Ind., he put twenty-seven pounds of hay into a space of one cubic foot, and that he has a power of 300 tons. It is equally applicable for hay or cotton, and the chief improvement is, that the horse only travels in one direction—one round in the same direction that pressed the bale rendering the press ready for the next.

In our engravings, Fig. 1 is a perspective view of the press, and Fig. 2 a section of its working parts. The same letters refer to similar parts in each.

A is a base or platform, quite level, and A' is the casing or frame. B is a door, there being a similar one on the opposite side. C is

an upper door or shutter, which is held down by a catch when the bale is being pressed, and D is a bar, connected with the opposite door to B, having a catch on it, which fastens into a slit in a cross bar on B, and so fastens them both. E is the bale, and F is a bar that has a pendant from its end, which, when the

PENNISTON'S IMPROVED COTTON AND HAY PRESS.

Fig. 1

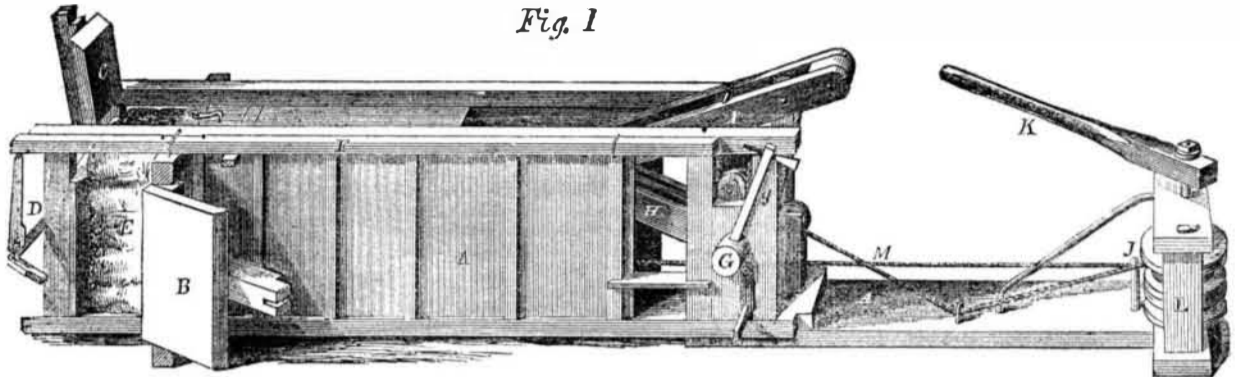
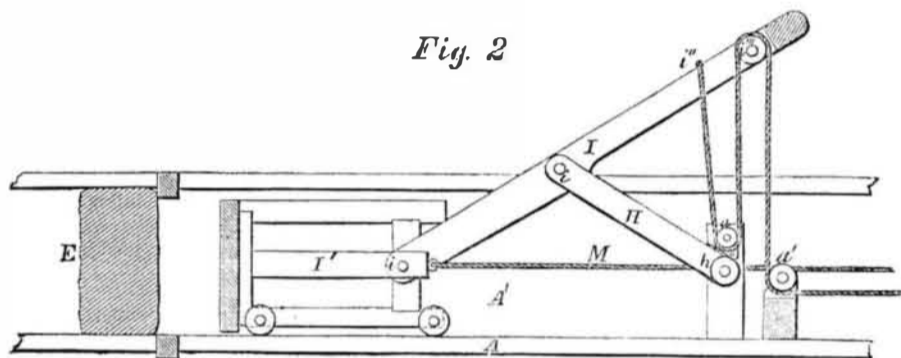


Fig. 2



follower has pressed the bale to its full extent, releases D, and allows it to be bound and removed. G is an axle, having an arm, *g*, with a screw through it, that operates F by pushing it out, and being also connected with the toggle, H, which is hinged at *i* to the lever, I, which is hinged to the follower and carriage, I', by a pivot, *i'*.

The rope that pulls the lever down, and so moves the follower, is fastened at *i''*, then passing round a pulley, *a*, goes over another pulley, *i'''*, on I, and passing under the pul-

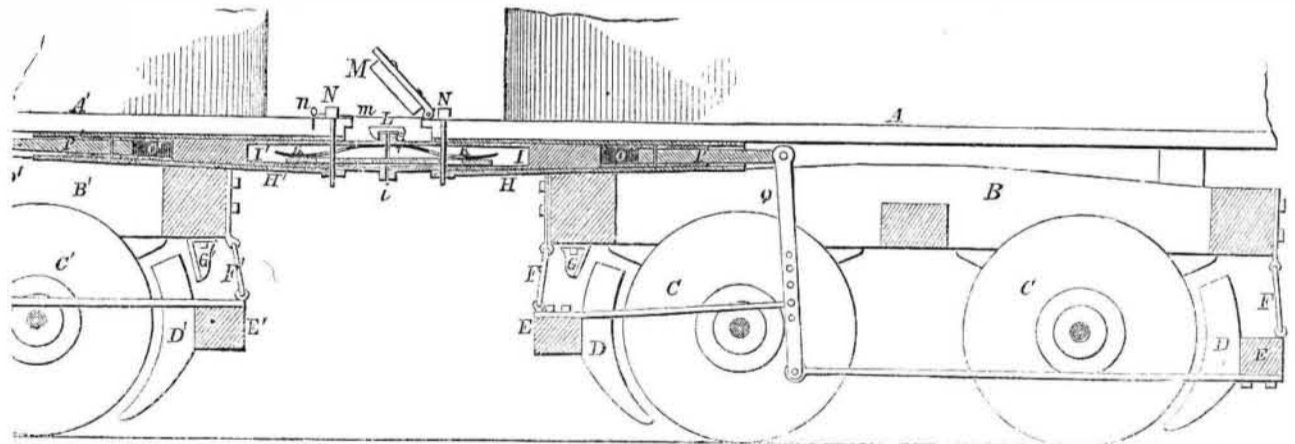
ley, *a'*, is wound round J. This pulley is so arranged on an axle that by raising or lowering it, it can be thrown in or out of gear with the axis, so that the lever, K, will either turn it or allow it to rest, and instead, turn the lower pulley that contains the rope, M, which draws back the follower carriage, I'.

The operation is simple; the follower being drawn back, A' is filled with hay or cotton, and the ropes adjusted; the doors, B and C, are shut and secured, and the lever, K is rotated; this pulls down I, and consequently

forces in the follower, and when the cotton or hay is fully compressed, the screw stop on *g*, pushes F, the pendant on which releases the catch, D, the doors open, and the bale can be bound and drawn out; the top wheel of J in the frame, L, is then slightly raised, another turn given to the handle, K, and the follower drawn back, ready to repeat the process.

This press was patented December 1, 1857, by the inventor, G. W. Penniston, North Vernon, Jennings co., Ind., from whom all further particulars can be obtained.

BRAUER'S SELF-ACTING CAR BRAKE.



Inattention on the part of the person having charge of a train of cars has often caused the loss of many valuable lives, and it is desirable to, as far as possible, make the braking operation, on which frequently the safety of a whole train depends, automatic. This has been done by the inventor of this system, our illustrations giving a side view of the car and section of the working parts of the brake.

A and A' are the platforms of two cars, B and B' being the trucks on which they are supported, and C and C' are the wheels. D D' are the brake blocks attached to bars, E E', that swing by links, F F', from the cars. G G' are stops to prevent the brake blocks from going too far back. H H' are two cases or square tubes suspended by braces underneath the platform, and in these again are placed hollow frames, I I', which meet in a flanch at *i*. J is the coupling link, kept in its place and pre-

vented from shaking up by the springs, K. L is a hook passing over the flanches, *i*, and keeping them in contact, while the space between the two cars is filled by a door, M, wound round the axle of which is a cord, *m*, tied to a small pin, *n*, that fits in a hole in A'. N are the two pins that pass through the platforms, springs, and coupling link, and thus fasten together the two cars; the slot in the link and springs allowing an horizontal play on them.

The pieces, I I', are connected with the bars, P P', by a hinge, and the joint is made elastic by placing between them pieces of india-rubber, O O', or similar elastic substance. The bars, P P', are pivoted to the levers, Q Q', that operate the brakes.

The operation of this brake is as follows:—So long as the cars are being pulled by the locomotive, the tension of the cord, *m*, keeps M

in the position shown in the engraving, but the moment the speed is slackened gradually, that is, by means of the pistons of the locomotive and not by its brakes, and the train left to run out its momentum, the door or shutter, M, drops down and keeps the cars at a proper distance apart, and also prevents the brakes operating. Should it be required, however, to stop the train suddenly, and the driver not only shuts off steam but applies his brakes, the suddenness of the jerk loosens *m* so quickly that M drops down, and rests on the platform, A', and thus does not prevent the action of the brakes. The cars pushing one against the other compress the pieces, I I' in H H', and they push back the bars, P P', and these by operating the levers, Q Q', bring the brake blocks, D D', in contact with the wheels, and so apply a braking force on the wheels exactly in proportion to the speed o

the train. The moment the train is stopped, the brakes are released, and it is ready to again resume the journey, and at any time the operation is repeated. This brake, as will have been seen from the description is perfectly automatic, and requires no more attention than coupling the cars together before starting as at present, with the exception of pulling in the pin, *n*, which is no extra trouble; everything can be done from the platform of the car, and thus for many reasons it is an accident preventer.

Louis Brauer, of Washington, D. C., is the inventor, and he patented the invention May 12, 1857. Mr. B. will be happy to furnish any further information on being addressed to the care of C. Shaeffer, Ninth street, in the same place.

Scientific American.

NEW YORK, APRIL 10, 1858.

Decision in a Telegraphic Case.

We learn from one of our exchanges that Judge Logan lately rendered a decision of some interest in the Chancery Court, at Louisville, Ky., in a telegraphic suit. The suit was entered by A. E. Camp against the Western Union Telegraph Line, to recover damages for loss resulting from erroneous transmission of a message. Plaintiff ordered a certain amount of whisky by telegraph, at the rate of *fifteen cents*. The wires delivered the message with *sixteen* substituted for the correct figure. The order was filled, but plaintiff refused payment at the increased price, and came upon the company for damages. Judge Logan decided for defendants, on the grounds that the failure to deliver the message correctly was not alleged to be the result of negligence, but the result of a mistake, to which, from the very nature of telegraphic operations, communications are liable; and that the message in this case was sent subject to the express condition that defendants would not be liable for mistakes arising from any cause, unless the message was repeated by being sent back, in which case the mistake would not have occurred. The learned Judge moreover declared that the points of difference between the nature of telegraphic companies and the nature of common carriers are so numerous and so obvious, as to render the unqualified application of the law of common carriers to telegraph companies delusive and dangerous.

With all proper deference to the judgment of the erudite judge, we beg leave to differ from him in the main positions he has assumed. Our mind tells us that neglect may arise from carelessness or inattention; and we humbly opine that the mistake of sending the word *sixteen* over telegraphic wires instead of the word *fifteen*, or rendering one word for the other at the opposite terminus, clearly indicates a most flagrant lack of comprehension or care on the part of the operators, or else an inability to properly operate the telegraphic instrument, in all of which cases we believe the company to be, by law and equity, liable for any damage that accrues from such inexcusable blunders. The fact that the message was sent subject to the condition that the company would not be liable, unless an additional sum was paid for its return and repeated transmission, does not, in our opinion, remove the liability of the company for such damages, any more than the repeated declarations of railway and steamboat companies, "all baggage at the risk of the owners," frees them from their legally acknowledged responsibility for its safety.

In regard to the alleged difference between the nature of the two chartered companies, in respect to the messages to be transmitted by the one, and the baggage and passengers by the other, our theory is simply this:—In the former case, the telegraphic operator receives a written message to transmit, either directly from the author or from an agent through

whom he can communicate with the author, in the event of its illegibility. If he and the receiver at the station to which it is sent understand their business, and properly observe their duty, it is utterly impossible for such a blundering error as the substitution of one word for another to occur. After the delivery of a message at the office it is out of the sight and power of any controlling influence of the one who sends it. The operations of the telegraph are entirely free from the liabilities to the many unforeseen and unavoidable accidents that frequently happen in railway conveyance, and are so exclusively under the control of the employes of the company, that we really think the just principle which binds the common carrier for the safety of his charge, should in like manner apply to telegraphic companies, and make them equally liable for damages arising from their blunders.

As there is no method of ensuring correctness but by reading the proofs of the messages sent, which is now done by telegraphing back, it would be an improvement to have a registering arrangement operating in connection with the key which transmits the message. This would enable the message to be read as transmitted by one operation, and correct mistakes (if any) on the spot.

Colt's Application for Extension of Patent.

We have received the printed copy of an able remonstrance to Congress, praying that body not to grant the late petition of Samuel Colt for a renewal or extension of his patent for seven years, which we trust will be freely circulated for signature among the great body of our people, who, although fully alive to their obligations to the meritorious class of inventors with which our country fortunately abounds, are yet sensible and jealous of their own privileges, and ever ready to check and rebuke the attempts of one individual or company to establish an unjust monopoly at their expense, or in any manner curb or check the inventive genius of others. The exercise of this duty is peculiarly called for at this time when numbers are endeavoring to secure to themselves for a longer period than the ingenuity, skill, time and expense exercised and expended would justify, an exclusive right to combinations and arrangements of parts essentially necessary to the production of certain results, but susceptible of greater improvement.

We have always opposed the system of special legislation in relation to existing or expired patents, except so far as is necessary to correct errors developed by judicial decisions, or to grant pecuniary rewards or indemnity, or cases of an analogous character. We have not hesitated on former occasions to animadvert with such a degree of firmness against the attempted renewal by Congress of many patents, as to produce the strongest feelings of pain and resentment in the minds of previously personal friends interested in their success. In many of these cases some substantial grounds for the interposition of Congress were adduced, although not sufficient in our opinion to justify the granting of the extension applied for, but in the case of this last appeal of Mr. Colt for the re-establishment of a monopoly, whose exclusive enjoyment for twenty-one years has brought millions to his coffers, after the law has virtually given all claim to the invention to the public, we can only see additional reasons for the previous animadversions we have thought it our duty to make. The injury which the consummation of this measure would inflict upon the public at large, although great, would be but trifling compared with that which it would have upon the many enterprising and deserving manufacturers in the East and West, who have commenced the manufacture of revolving pistols, different in the construction and arrangement of many of their parts to Colt's, yet embodying the main features secured under his expired patent. Such an act of injustice would not only be fraught with the evils we have heretofore stated, but in direct opposition to the very spirit and genius of our laws, and the objects for which they are formed.

In the grounds assumed for the additional renewal, Mr. Colt does not deny that the pecuniary reward he has derived has compensated him in a most extraordinary degree for the ingenuity, skill and expense bestowed upon his invention, nor does he deny the oft-repeated statement that the long, exclusive protection he has enjoyed, has enabled him to realize such an immense capital, and construct such perfect machinery for the fabrication of the most intricate parts of his pistol, as to pre-eminently place him in a superior position to compete with all rival manufacturers. Indeed, the necessity of what he has now more than accomplished, in these respects, by his last seven years' protection, was one of the main arguments he used to Commissioner Burke in 1850; and common fairness to his co-laborers in the field of invention and enterprise, if not the desire to adhere to a tacitly implied promise, should have prevented him from making this additional demand. The granting of this extension would place in the hands of Mr. Colt a supreme power over the actions of a large number of manufacturers, who have in good faith, and under manifest disadvantages, invested their all in their establishments. It would, moreover, deprive the public of the use of many improvements, which ingenious mechanics throughout the country have devised, and at many sacrifices of time and money, put into successful practice, under the firm conviction that they would be allowed to use the very base of their contrivances, the revolving chambers, after the expiration of the patent in February, 1857. We commend this remonstrance, as well as the able opinion of Judge Mason attached thereto, to the perusal and signature of our readers, and trust that when the consummation of the grave outrages, which it is intended to avert, is attempted in Congress, the Representatives of the people will properly comprehend the mission entrusted them by their constituents, and defeat this odious scheme. By such a course they will vindicate the purity of their motives from the improper imputations cast upon many of them by the press throughout the country.

A Curious Freak of Nature.

We have received a letter of interest from J. E. Holmes, of Newark, Ohio, who informs us that there is a white oak tree, of fine healthy growth, standing near Robinson's Coal Oil Works, in Perry county, on which, at fifty-five feet from the ground, is engrafted a black oak top of lofty and vigorous growth. It is about two feet in diameter at the usual height of cutting trees, and the body stock is fourteen inches at the grafting portion, and the black oak immediately above it at once enlarges to twenty-two inches. The grafting is represented as being of the most perfect description, and there is no appearance of deterioration in either the white or black oak portions. There are several limbs below the union, and those above are said to be equal to any tree of the same description in that section of the country, and would form a luxuriant and proper superstructure for a stock of three feet in diameter. The only reasonable supposition for this curious growth is, that the white oak portion was broken by the falling of a black oak tree near it, and that a branch of the latter must have been so driven into the fracture as to unite and grow in a firm manner to produce the singular phenomenon above related.

Daniels' Patent Granular Fuel.

An engraving illustrating the manufacture of this fuel was presented to our readers on page 228, Vol. XI, SCIENTIFIC AMERICAN. It consists in converting the stunted growth of brushwood, with which farms generally abound, into a compact excellent fuel for light fires, or for igniting the more solid materials employed in heavy ones. This is effected by cutting the several twigs and heavier portions of brushwood into lengths about equal to their average diameter, by means of a machine constructed and operating

after the manner of an ordinary straw-cutter, and thus producing a new and useful article of manufacture from a material which has heretofore been considered as worse than useless. Whether the exclusive claim to a fuel prepared in this way is a legal one or not, we do not pretend to judge, as the question has not, to our knowledge, been subjected to any judicial test since the issue of the patent under which it is held, and which was issued to Reuben Daniels, of Woodstock, Vt., in June, 1852.

As a fuel for kindling coal fires or for heating small apartments, it possesses the important desiderata of inflammability, cleanliness and economy, as we can confidently assert from experience. We think this invention well worthy the attention of farmers in the vicinity of cities, who are overrun with brushwood, and annually destroy large quantities of it, from the fact that from its nature and cumbersome character, they are unable to transport or store it in a compact form. Persons desiring further information, with a view of entering into a business of this kind, can address Daniels & Raymond, Woodstock, Vt.

To Sportsmen.

S. Sutherland, of Richmond, Va., gives the following rule to load a gun properly:—"Try it repeatedly with charges, consisting of equal bulks of powder and shot, till you come to a quantity with which the gun will not recoil, or but slightly; this will give you the proper quantity of shot. With this load, however, the gun will scatter in all directions. To correct this, reduce the quantity of powder until you find that the shot is carried as close as you desire. A gun loaded thus, will never burst. To make it carry further, use shot of a larger size. No gun should be fired more than twenty times without being wiped out. When in the field, it will be much safer to carry the piece always at half-cock."

Freaks of Cold.

While our past winter was one of the mildest within the memory of man, it was very different in Southern Europe and some other countries, where frost and snow are seldom seen. In Italy, the river Po was frozen over at Ferrara, the first time in the present century. At Constantinople snow fell for 14 successive days, and in all the Isles of Greece snow and frost were common. Snow also fell in the Island of Malta for the first time since 1812; and on the shores of the Mediterranean and throughout various parts of Asia Minor, snow was seen for the first time in half a century.

New Food for Bees.

It is stated that two agriculturists of the department of the Ver, France, recently discovered their bees feeding upon cakes of oil seed, which had previously been subjected to the oil press, and which was being beaten up into a paste with water, to be used as manure for potatoes. The bees were afterwards allowed abundance of this food, and their owners have since been rewarded with nearly ten times the usual increase in their productions of the insect. This is a piece of valuable information to our bee-keepers, and we should advise them all to try the experiment.

Lightning and Gas.

The galvanic gas igniter of Saml. Gardiner, Jr., illustrated on page 320, Vol. XII, SCIENTIFIC AMERICAN, has been applied to the great chandelier of the Senate Chamber in Washington, and, as we are informed, with decided success. By the simple turning of the circuit key, fifteen hundred gas jets were ignited in an instant!

Preliminary Examinations.

A correspondent writing from Georgetown, Ill., sends us a sketch and a fee of \$5, for the purpose of having a preliminary examination made at the Patent Office. There is no name signed to the letter, therefore we cannot answer it until we can receive this information from our correspondent.