

RECENT DECISIONS RELATING TO PATENTS.
Supreme Court of the United States.

PECK, ADMINISTRATOR, vs. COLLINS.—PATENT DRIVE WELL.
—REISSUE.

Mr. Justice Bradley delivered the opinion of the court.

1. Upon a surrender of a patent for reissue, an interference declared thereon, a decision against the patentee, and subsequent refusal of a reissue, the patent becomes destitute of validity and absolutely void.

2. Under the law as it stood in 1866 a patent surrendered for reissue was canceled in law as well when the application was rejected as when it was granted. The patentee was in the same circumstances as he would have been if his original application for a patent had been rejected.

3. Under the law as it then stood surrender of a patent was an abandonment of it, and an applicant for reissue took upon himself the risk of getting a reissue or of losing all. The question of his right to any patent at all was opened anew the same as upon an original application for a patent.

4. Whatever may have been the effect of the new clause introduced in the law by the act of July 8, 1870, that "the surrender shall take effect upon the issue of the amended patent" in cases where a reissue is refused for other reasons, it would still seem that if the patentee's title to the invention is disputed and adjudged against him, the effect of such a decision should be as fatal to his original patent as to his right to a reissue.

In error to the Court of Appeals of the State of New York.

United States Circuit Court.—District of Maryland.

BOOTH et al. vs. SEEVERS et al.

Bond and Morris, Judges:

The recovery of profits and damages from the manufacturers of an infringing machine debars the patentee from recovering from a user for the use of the same machine.

STATEMENT OF THE CASE.

[This suit was brought under reissue patent No. 1,826, granted to complainant on November 29, 1864, for improvement in grain separators, for the use of a machine, which was one of a number, for the manufacture of which the complainant had recovered from the makers.]

The Railway Tell-tale.

An ingenious machine, called the "tell-tale," has been introduced recently on the Erie Railroad. It registers the speed of trains, when and where they stop, and how long. It is used especially for freight trains, and is fastened at either end of small cabooses or at the side of large cabooses, about four and a half feet from the floor. It was adopted because freight trains frequently exceeded the prescribed rate of speed. They would run very fast for some distances, and then take things comfortably for a time.

NEW GANG BORING MACHINE.

The gang boring machine shown in the annexed engraving is made by William White & Co., Moline, Ill. It will bore six or less holes in wood in any position on an area six feet long by four inches wide.

The piece to be bored is laid on a table or rest attached to the side of the machine opposite that shown in the engraving, and is moved up to the gang of bits by a suitable lever. This table is abundantly provided with gauges and clamps for handling the work.

The pulley on the right hand of the machine is carried in sliding boxes moved by the hand wheel and screw to take up and let out the belt as the location of the boring spindle is changed.

The boring spindles can be adjusted independently of each other by a screw, and can be moved along the bed to within three inches of each other. They are carried on V-ways, and are consequently parallel.

All practical woodworkers know it frequently takes longer to "lay out" a stick in which a number of holes are to be bored than to do the boring. As the "laying out" is unnecessary with this machine it is easy to see why one man can do more than six men with a single bit machine, where there is six holes to be bored in each stick.

This machine can be furnished to order to bore over a greater area and a larger number of holes. The spindles are of steel, and the various parts are arranged for the greatest convenience and durability. Many of our extensive manufacturers are using these machines with great satisfaction.

Incandescent Electric Lamps on Shipboard.

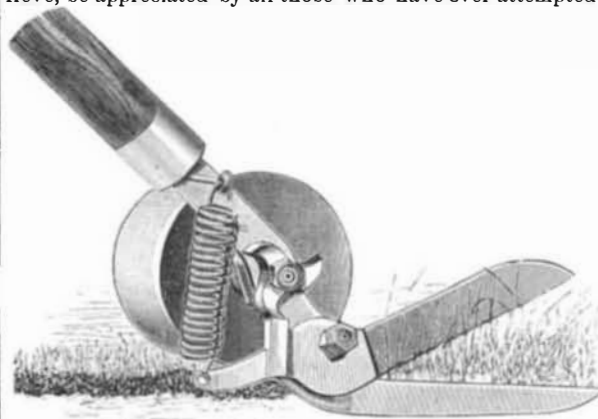
What has been wrongly described as the first attempt to light the saloons of an ocean steamer by incandescent electricity has been carried out with alleged success on the Inman steamer City of Richmond, which arrived in this port May 9. Our readers will recall the successful use of the Edison lamps on the steamship Columbia, on her trip from this port around Cape Horn to Oregon, a year ago. This later attempt, however, appears to be the first use of incandescent electricity in lighting an Atlantic steamer.

The system adopted on the City of Richmond is similar to Mr. Edison's, and was set up experimentally at the risk and cost of the inventor, Mr. Swan, an English electrician, whose lamps have been fully described in this paper. The main

saloon of the City of Richmond was lighted by six lamps, and eleven others were placed in other parts of the ship. The light furnished was described as mellow and pleasant. The power for the generator was supplied by the ship's engines, and no estimate was made of the amount of energy consumed.

NEW SPRING GRASS SHEARS.

The trimming of the edges of lawns or grass borders is not always effected in the best manner, even with a pair of long-handled grass shears on wheels. Automatic action in such a tool is, therefore, an evident gain, and the patent recently obtained by Mr. Adie, of Pall Mall, will, we believe, be appreciated by all those who have ever attempted

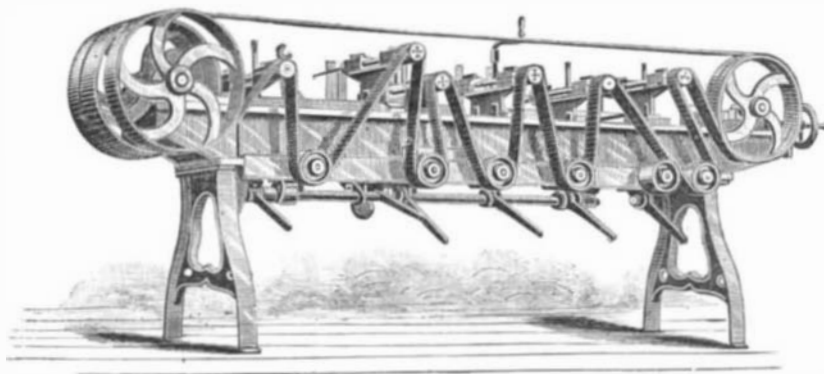


SPRING GRASS SHEARS.

the work to which we have alluded. On reference to the accompanying engraving it will be seen that the tool consists of a pair of grass shears, on the tang of the lower blade of which is fitted a cam arrangement with three arms or teeth, and working on an axle communicating with a small roller on the opposite side. The upper blade is so formed that a shoulder is thrown forward to intercept the teeth of the cam, and a projecting arm is attached to one end of a spiral spring, the other of which is fixed to the tang of the lower blade above the cam. The tool is fitted with a long handle, having a cross piece at the top, and in working the action may be thus explained: The roller being set in motion communicates its revolutions to the cam arm, which, in turning, comes in contact with the shoulder before mentioned, and raises the blade with a downward pressure. As the shoulder escapes from the cam arm the spring quickly closes the shears. It will thus be seen that while the power of the roller is slowly stored in the spring the latter gives out its power suddenly when the shoulder escapes from the cam.

Trial of a Petroleum Engine.

The naval board ordered to examine the machinery of the Brayton Petroleum Engine Company, have reported to Chief Engineer Shock, giving in detail the results of their experiment with the Mystery, on the Potomac. They say: "As to the adaptability of this type of machinery to steam



GANG BORING MACHINE.

launching and its fitness for naval purposes, we would state that the principal advantage to be derived from the use of motive power of this description is the celerity with which machinery can be put in operation, only a few seconds being required for that purpose. The use of this motor is unattended with danger, and it is well adapted for special naval purposes, such as launches used at navy yards, for attachment to cranes and stationary engines; but on account of the danger from fire in carrying large quantities of crude petroleum on board our cruising vessels, and as our vessels often visit ports where petroleum cannot be obtained, which would render this type of machinery powerless, we can only recommend its use as above mentioned. The liability to derangement is about the same as in the ordinary steam engine." The report is signed by Chief Engineers Philip Inch and William S. Smith and Passed Assistant Engineer John Lowe. The board also report that they consider the Brayton motor as economical as steam under certain conditions.

Length of Jupiter's Day.

The Emperor of Brazil has transmitted to the French Academy a note of M. Cru's upon the time of Jupiter's rotation. The sharpness of outline and the bright color of the brown spot which has been so long visible enabled him to deduce from nearly 1,100 rotations a period of 9h. 55m. 36s.—*Comptes Rendus.*

NEW INVENTIONS.

Mr. Edward K. Morse, of Fall River, Mass., has patented a sharp-calked supplementary shoe to fit the lower side of an ordinary shoe between its toe and heel calks, the supplementary shoe being provided with lips at its toe and heel to overlap the upper side of the inner edge of the ordinary shoe, and having a locking plate connected with its rear end by cam-headed pivots, so that the supplementary shoe can be attached to and detached from an ordinary shoe while upon a horse's foot by swinging the locking plate in and out upon its pivots.

An improved device for tightening belts without removing or shortening them, has been patented by Mr. Horace D. Hicks, of Whitefield, N. H. The invention consists of a fixed eccentric on a lever controlled shaft, and of a lever-controlled eccentric sleeve fitted loosely on the same shaft, each eccentric forming the central bearing of a pulley, which pulleys are clutched together so that they may be revolved together, though they may be independently moved eccentrically for tightening their respective belts.

Mr. William Coupe, of South Attleborough, Mass., has patented an improvement in leather-stretching machines. This invention is an improvement upon the machine for which Letters Patent No. 178,361 were granted to the same inventor June 6, 1876. The invention consists of improved devices for adjusting and holding the leather in the machine, so that the work may be performed more quickly and the leather be stretched more evenly.

Mr. David Flanders, of Sing Sing, N. Y., has patented a process of changing the bearing years of fruit trees. It is well known that fruit trees, especially apple and pear trees, bear heavy crops of fruit on alternate years, and but very light crops on the intermediate years, so that in the bearing years apples are a drug on the market, and in many localities will not pay for the cost of gathering them; consequently the apple grower realizes little or no money from a most abundant crop, while in the intermediate years the trees that have nearly exhausted their vitality the year before by such abundant fruiting produce but little or no fruit, so that, though the prices rule high, the apple grower can obtain but small returns from his crop, because of its poverty. Could the so-called "bearing years" be changed—could the trees be made fruitful by any means or process in the intermediate or barren years—those applying the process to their trees would have the heaviest fruit crop when the prices were highest. The object of this invention is to accomplish this result; and it consists in applying to the blossoms of the trees in the spring of the bearing year, by sprinkling or otherwise, acid or alkaline solutions of sufficient strength to check the development and destroy the vitality of the blossoms, and to cause them to gradually fall off, the solution being sufficiently diluted so as not to injure the tree.

Mr. Ernest W. Noyes, of Bay City, Mich., has patented a head for clipping machines, so constructed that it can be applied to any part of the animal, and will avoid the necessity of an attendant to hold up the feet or legs of the animal being operated upon.

An improved lump extinguisher, patented by Mr. George A. Greene, of Cool Spring, N. C., consists of telescoping tubes attached to a bellows, and provided with a loose curved tube and a tip capable of being inserted in the lamp burner.

An improvement in call-bells or alarms placed upon a single electric circuit, and so operated that any particular office or person upon such circuit may be called without disturbing or calling any of the other offices or persons upon the same circuit, has been patented by Messrs. George A. Cardwell and Nelson L. North, of Brooklyn, N. Y.

Mr. James M. Dennis, of Cambridge City, Ind., has patented a process for preparing the fibers of wood for the manufacture of brushes, which consists in first soaking the wood in heated alkaline water, then separating the fibers by pressing and pounding, or otherwise, then cleaning the fibers, then boiling them in agglutinated water, and finally oiling the fibers.

A simple and convenient device for containing shot and powder, and for weighing and delivering them without handling them, has been patented by Mr. Christopher I. Miller, of Richmond, Ky. The invention consists of a series of boxes, or a box subdivided into several compartments, whose bottoms incline to a common center. In the bottom of each box is an opening controlled by a slide, and beneath the boxes are inclined troughs or conductors, at the lowest point of which is fixed a receiver dependent from a spring balance, the bottom opening of the receiver being controlled by a slide, the intention being to devote some of the boxes to powder and the others to shot of different grades, so that by opening the slide on a box the contents of that particular box, or as much of the contents as may be desired, will run out into the conductor and thence into the receiver, to be weighed, whence they may be delivered into any suitable bag, box, or other receptacle by opening the slide of the receiver.

An improvement in carriage tops has been patented by Mr. Henry J. Miller, of Goshen, N. Y. The improvements relate to standing tops for carriages, the object being to produce more handsome, durable, and convenient tops than can be obtained by the usual methods of construction.

A Strange Accident.

A very peculiar accident occurred on the Philadelphia and Reading Railroad, near Tumbling Run crossing, on Monday afternoon. No. 62, one of the large engines lately turned out from the Baldwin Locomotive Works, was running down the road at a good rate of speed, when a number of persons who were watching her heard a loud report and saw the tank and caboose almost disappear in a cloud of smoke. Almost simultaneously with the report two figures which occupied the tank were seen to jump and turn half a dozen somersaults before they became motionless alongside the roadbed.

The engine continued on her way, the engineer being apparently unaware that anything of an extraordinary character had happened. Noticing, however, that his engine was the center of attraction to a large number of people who had been halted by the report of the explosion, the engineer, Andrew Quinn, left his cab and made an examination of the fire-box. The door was open and the tank contained a deposit of burning coal, but everything else was seemingly in proper order. The engine continued on her way and nothing of an unusual character has since been heard regarding her. The men who jumped from the tank were train men on their way down the line. Both of them were scorched by the explosion and bruised in their attempt to reach terra firma, but neither was seriously injured. Just previous to the explosion the fireman had put on a lot of fresh coal. It contained, it is supposed, a large quantity of gaseous matter, and this caused the explosion. The engineer was prevented from hearing the latter by the noise generally accompanying a moving engine, and as he was traveling at good rate of speed, and stood in the cab (on top of the boiler), while the force of the explosion was spent in the direction of the tank.—*Pottsville (Pa.) Miners' Journal.*

FEED WATER HEATER AND FEED PUMP.

The engraving shows the latest form of the now well known Berryman feed-water heater and purifier and feed pump. These appliances are in use in the principal manufacturing in the country, and have established their claim to superiority by long continued and successful use. It is a well established fact that the most economical way of feeding a boiler is by means of a good pump in connection with an efficient and economical heater. Our engraving represents the Berryman, showing the point in the center of the heater, near the top, from which the feed water is forced into boilers; the water, being under a pressure constantly maintained by the feed pump, is in a quiescent condition, and on reference to the engraving, it will be seen that the supply pipe extends far enough into the heater to draw the feed water from the quiet or dead water space, below all surface impurities, and where it is practically pure. This point has been brought out by a long experience in the manufacture of this heater.

The engraving shows a surface blow-off pipe, the use of which requires no loss of time; it will expel all sedimentary or surface deposits. The U-shaped tubes are not injured by any strain by contraction and expansion; hence the heater never leaks. The tubes are of brass, seamless drawn, and tested beyond any strain they can possibly be subjected to in actual use.

The double pump shown in connection with the heater is well made in all its parts, and is self-contained and complete. The four valves, the only parts that can get out of order, are so constructed that they can be got at by simply unscrewing a brass cap. The gears are made from cut iron patterns, rendering them noiseless in action, and the pump, being double-acting, is easy on the driving belt, and its action very smooth.

Mr. I. B. Davis, of Hartford, Conn., is sole manufacturer of these appliances, and has made a specialty of this heater and feed pump for over ten years.

Remedy for Acid Burns.

Since vitriol throwing has become a common offense, it may be well to point out that in a case which occurred during a chemical lecture, described in the *Bulletin de Therapeutique*, in which two students were seriously injured in the face by the explosion of a flask containing boiling sulphuric acid, the intense suffering at first experienced ceased entirely about a quarter of an hour after the application of a soft paste of calcined magnesia and water in a layer about two millimeters in thickness. M. Alande states that the magnesia requires to be renewed in twenty-four hours, but that patients, after recovery, retain no marks of the accident.

SMILAX and Japanese ferns are now made to twine around the same cord while growing, and thus become doubly valuable for decorative purposes.

NEW METHOD OF SPACING AND LETTERING SIGNS.

The engraving represents a new method of spacing and outlining the lettering for signs lately patented by Mr. John

**CALLOW'S METHOD OF LETTERING SIGNS.**

C. Callow, of 56 Beech St., Cleveland, O. With this device the spacing of letters in sign work can be easily and rapidly executed by unskilled persons with all the facility of practical sign painters, and letters and other forms can be readily traced around the edges preparatory to filling in with paint, and accuracy in spacing is secured.

This improved method consists in stretching a cord or wire at the proper point, and attaching thereto the appropriate pattern letters either by means of hooks or by passing

painted, grained, gilded, flocked, or otherwise ornamented, and tacked upon a suitable backing, form a handsome and durable sign. The lettering outfit furnished by Mr. Callow enables any one, without previous practice, to proceed and produce a good sign.

The Manufacture of Plate Glass.

To cast, roll, polish, and burnish plate glass requires machinery of peculiar construction, and a "plant" that is costly by reason of its complex nature. The pouring of liquid glass from the furnace upon the cast iron plates, and the subsequent rolling, are processes comparatively simple. Any housekeeper who has used a rolling-pin on a batch of pie-crust dough, performs an operation very similar to this stage of plate-glass making. It is the succeeding processes of grinding and polishing and final burnishing that require time and costly mechanism. After leaving the rolls and bed plate the glass is rippled and rough, and only fit for gratings or skylights. Each plate must be transferred to machines that resemble the turn-tables of a railway. On the revolving platform the glass is cemented into a bed of plaster of Paris, and the machine started. Bearing heavily on the surface of the glass are blocks of metal, and while in motion the surfaces are kept supplied with sharp sand and a constant stream of water. The next stage of the glass-grinding process is the same as to machinery, but instead of sand coarse emery is used. Then finer emery is used in another revolving table, and so on for half a dozen times. The final polishing is done by heavy reciprocating devices, fed with rouge, and maintaining a constant back and forward motion, and also a lateral movement over the surface of the crystal. All this requires the assistance of a large force of men, many of them skilled laborers. After going through these different grindings and polishings the plate that measured an inch in thickness is only three-quarters of an inch thick, has lost all its roughness, and is ready for the show-window of the purchaser.—*Pittsburg Telegraph.*

MECHANICAL INVENTIONS.

Mr. John H. Eddy, of Sidney, Ohio, has patented a cutter head so constructed that the knives can be adjusted to cut any desired bevel without pitching or tilting the spindle.

Mr. Albert A. Bennett, of Harveysburg, O., has patented a hand circular saw for cutting thin lumber, and it consists in a plate having near its middle and its lower edge a small circular saw loosely revolving in a bearing, and having in front and rear, and slightly projecting below the lower edge of the blade, a gear wheel which, as the plate is steadily pushed over the surface of the board, bites the latter, and through a train of gear wheels imparts a rotary motion to the saw, which, as the plate advances, cuts a kerf through the board with a circular sweep.

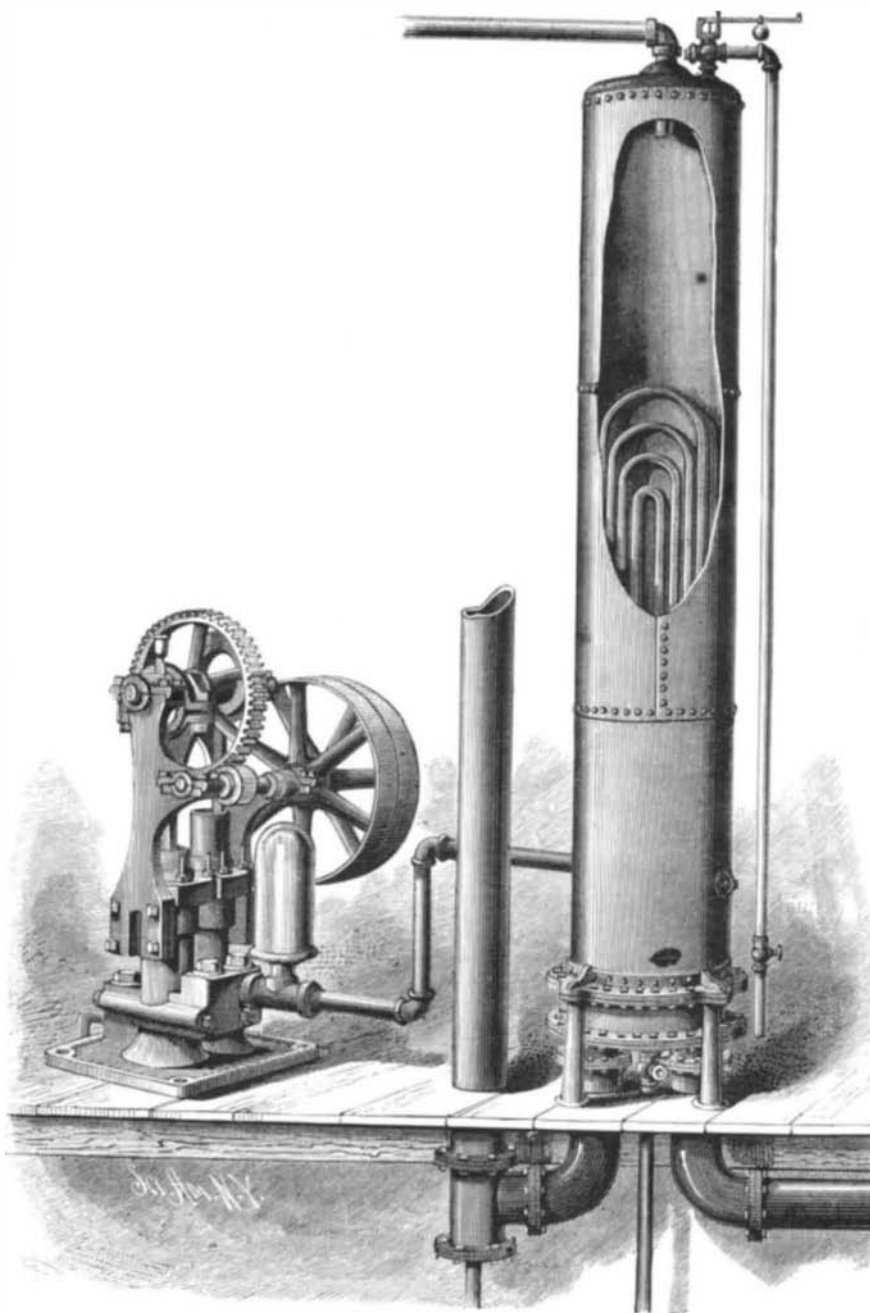
An improvement in pipe tongs has been patented by Mr. Deloss Worden, of Oil City, Pa. The invention consists in forming one of the tongs with a bit chamber or seat adapted to receive and hold a square, parallelo-piped, or any many-sided removable bite-block in such manner as to present one edge of the bite block in position to take hold of the pipe, the block being retained in place in the chamber by a recessed button.

An improved button-polishing machine has been patented by Mr. Homer W. Terry, of Springfield, Mass. This is a machine for applying buttons of horn or other material to the buff or polishing wheels in a more expeditious manner than by hand, as in now usually practiced. The invention consists in a movable and flexible or jointed band or apron distended between pulleys or drums, and provided with grips arranged in a plane parallel with the plane of the belt, and arranged to seize the button by a movement in the plane, and hold them while passing under the buffs.

An improvement in breasts for cotton gins has been patented by Mr. Charles C. Tate, of Brown's Station, Ala. The invention consists in combining, with the breast heads, horizontal rolls arranged on arms thereof.

An improvement in middlings purifiers has been patented by Mr. John A. Kister, of Mill Brook, Ohio. This invention relates to the arrangement of parts whereby the bran and coarser particles are separated from the middlings. The nature of the invention is such that it cannot be described without engravings.

Mr. Benjamin F. McCarty, of Rolling Prairie, Ind., has patented an implement for cutting the wire bands of bundles or sheaves of grain before feeding them to a thrashing machine. The invention consists of a hollow handle or casing having its upper end reduced in size, the casing being adapted to slide a suitable distance on a central spindle which carries a spring and the cutting blades, the blades being so constructed and pivoted that their ends or shanks will be brought together by the downward thrust of the handle.

**THE BERRYMAN FEED WATER HEATER AND PURIFIER AND FEED PUMP.**

the wire or cord through eyelet holes formed in the letters. In laying out a sign where several letters of the same kind occur more than once, it is only necessary to substitute any other letter of the same width temporarily, replacing it afterward with the outline of the proper letter.

The alphabets are cut from tough, heavy boxboard, and the letters are of modern shape and style, such as are used by the best sign painters. The letters themselves when