stitution of Mechanical Engineers, London:

and when it is admitted for the return stroke into the bot than fifteen men formerly did in a whole day. tom of the second cylinder, of four times the area, the temperature is so much reduced as to cause no difficulty when cut shore. But the full and swift tides render them a pro- Smith Infirmary for the Sick," are located upon it. Some brought into contact with the piston rod gland. From the tection from ice in winter, and some other troubles of shoal of its old taverns bore the significant names of "The Black bottom of the second cylinder the steam expands into the water in more quiet seas. top of the same cylinder, which is of larger capacity than the bottom, and scrves as a chamber, and is in direct com-greatest enemy has been the "drum fish." When the interesting and important, are eclipsed by the healthful and munication with the valve box of the third cylinder; this oysterman hears him "booming" over his grounds he trem- useful oyster cultivation. last is double-acting, and is arranged to cut off at about a bles for his property; for this fish will crunch up oysters as quarter stroke, and at the termination of the stroke exhausts cattle will apples or clover. The "moss-bunker" fisherinto the condenser, with a total expansion of about thirty- men are now catching many of them, and thus rendering two times."

Although it has been some years since Mr. Perkins began many patents covering his inventions connected therewith, to time. It will be seen that considerable numbers of the the nuts themselves, or by attachment to the bolts, or by the difficulties attending its practical working, and the dis-people living around the shores of Staten [Island are work-] wedging between the head or base of the rail and the nuts. general adoption, although in several cases in England it: of these find steady work in this line. Seed oysters are may be easily and quickly applied and removed. has been successfully introduced. The boilers and engines found in considerable quantities from Rossville, on the of the Anthracite contain all the latest improvements of the northwest shore, up to Elizabethport, New Jersey. The feed water heater for the inside of a boiler, which serves at inventor, and it is believed they afford a practical demonisame is true around Schuten's Island, and from Kill von the same time as a depository of mud and sediment from stration of the entire success of the Perkins system, and Kull down to Port Richmond. show how all stationary and marine engines can be run at an expense of less than one-half the present cost for fuel, which their long experience has led the Staten Island oyster provement in windmills. The invention consists in a wheel Two and a half pounds of coal per horse power per hour is cultivators. now considered very economical running, and some of our best managed ocean steamers use one hundred tons of coal years. An element in the mud or sand, needful for pro-position of the vane being slightly inclined to the axis of a day in their voyages. To demonstrate the practicability ducing good oysters, becomes exhausted by successive the wheel, so that the wheel is held by the vane with its of reducing this more than one-half, thereby not only saving crops. To then leave the ground bare for a year or two edge more or less presented to the wind, according to the the cost of fuel, but giving so much more space for freight, enables it to regain that element anew. is the purpose of the visit of the Anthracite to our waters.

## STATEN ISLAND AND OYSTERS. [Continued from page 65.]

As soon as attention was turned to the necessity of culti- and "heal" over such holes. vation, the Legislature was applied to. Laws have been Some say the "poppy" mud holes render the ground one car engages with a jaw secured to the draw head of enacted that allow each individual to take up three acres in poisonous to the oyster. They note this condition by find the next adjoining car when the cars are to be coupled, his own name. The occupant must stake out and clearly ing an increasing number of black-meated oysters, and soon and in which chains secured to the spring jaw are employed mark the ground, and plant the same with not less than fifty after many dead ones. Ceasing all work there for one or to draw and hold the spring jaw in such position that it bushels of seed oysters within six months, or he forfeits his two years they can then plant anew with an assurance of will not engage with the jaw of the next adjoining car, so right to hold it. Those owning land along the shore have success. the first right to the ground in front of them. No oyster-3. The ground is affected by the change from winter to or may be readily uncoupled without going between the man is allowed to take fish in any county but his own, nor summer. Though no frost is in the bottom of the sea, yet cars. anywhere on public beds, between the 15th of June and the there seems to be a certain hardness of the mud or sand 15th of September. No dredging is allowed on natural beds. which holds the oysters and renders them more difficult to Isham T. Hardy and Noah H. Dibble, of St. Louis, Mo. The cultivators have found so much of their labor experi- secure. As the spring opens the men see a marked differ- The invention consists of a combined steam condenser, oil mental that they have earnestly resisted all efforts to tax them; ence. There is an evident loosening of the bottom much as for their grounds. They look upon a tax as a burden that takes place in the upland as the frost comes out of it. would overweigh and seriously check their industry. The 4. A wet summer is much more favorable to the growth densing therein will flow into the oil receptacle or tank and owners of grounds buy their seed from men who obtain it and quality of oysters than a dry season. This partly ac : force the oil thence through the gauge or indicator into the from natural beds. These men, by the hundreds, are en- counts for the varying quality of oysters produced in the steam cylinder, to which the device may be attacked. gaged in procuring such seed. It is their business only, as same waters. Thus, a year ago, New York Bay oysters they hire out to help in other things during the season that were much better than usual.

Most of the cultivated ground lies in Prince's Bay, New ing them superior to most others for several purposes. ments on the report of the Tay Bridge Investigating Com-York Bay, and Raritan Bay. The natural beds are found in Their shells are unusually hard and firm, and preserve mittee: "The Tay Bridge, it appears, was simply blown Staten Island Sound, the Kills, and in parts of the bays pre- their meats better than other kinds. Therefore they can be down by a violent gale of wind while a train was passing over it. This is the net result of the inquiry when disenviously named. Much seed is also brought from out of the shipped farther in good condition than almost any other. State. Many of the cultivators live at Mariner's Harbor, They are in considerable demand for the foreign and other gaged from its technical details. The bridge was not strong though their oyster farms are in Prince's Bay. Near New distant markets. They are sent in large quantities north, enough to bear the strain imposed upon it, and it gave way Dorp, on this bay, Mr. Petler has built a fine summer hotel. south, and west. One firm sent three thousand barrels to in consequence of the inherent weakness and defects of its He has endeavored to surround it with special attractions. California a year ago. They have been sent as far east as structure. The remoter causes which brought about this He has fitted up one room as the "Pompeian room." He to Constantinople. result were numerous and far-reaching. First, the spans of has made it to resemble a room in an old Pompeian palace, Some patrons are so attached to these oysters they con the bridge were enlarged beyond the original design in conhaving obtained many things to do it with direct from the tinue to send for single gallons of them even when they go sequence of difficulties encountered in connection with the remains of ancient Pompeii. In this vicinity was the Van- to reside in distant country places. foundations. Then, for the same reason, piers consisting derbilt home. It was a "pirogua" that Cornelius Vander- The demand for them increases in every direction from of cast iron columns were substituted for the piers of brickbilt first aspired to own when he began his career as a boat year to year. They are sold in three grades. The "box" work originally proposed. Moreover, the casting of these an. To this island of his birth he always remained loyal. is the finest grade, commanding the highest price. They columns was very slovenly and imperfect; they were found Most of the oysters grow for three or four years on ground must be good size, good color, good shape, hard shells, and in many instances to be of unequal thickness, and the boltman. that is a little muddy. They are moved the spring before even size. The next are "barrel" dysters, running a little holes connecting the various sections together, as well as using to a hard and sandy bottom. They are taken up by smaller and a little less even. The third are "culls." The those in the 'lugs' to which the cross-braces were attached, tongues or dredges, culled and put into floats, and taken second grade are also called "counts." The "culls" sell were all merely cast and left conical instead of being properly where they may have an infusion of fresher water, and then from thirty to forty-five cents a hundred, when the "box" drilled and reduced to a cylindrical form. Thus, the crossto the markets. Most of the Staten Island oysters have to grade cost from sixty to ninety cents per hundred. braces, on which the whole strength of the structure dependto taken up near Rahway for the freshening. They are Those that are sold out of the shell are opened on the ed as regards resistance to lateral pressure, were very imboats at New York. A single firm on the North River perfectly fastened, and, by consequence, ill calculated to usually left in the floats there over one tide. Sail boats or yachts are almost universally used. One sometimes opens one hundred and fifty thousand counts in bear the strain imposed upon them. Such being the initial cultivator has lately procured a small steamer. The harbor a single day. Men who open oysters there are able to earn defects of the bridge, its practical supervision was intrusted of New York abounds in tugboats. Their captains have an about three dollars a day. to a person very imperfectly qualified, in the judgment of understanding with the oystermen; so, if the wind is un- With a fair season and no special adverse circumstances, the court, to undertake such a responsibility. What defects favorable or the tide, they hitch on and pull the oyster boats the business is lucrative. But in the present stage of prac- he observed he did his best to remedy promptly; but he does up to the city. For pay the oystermen keep the tugmen tical knowledge the risks are so many and so great that no not seem to have been sufficiently alive to the serious indisupplied with oysters. These boats carry all the way from man is able to estimate with much certainty at the begin cations of weakness and danger shown in the loosening of one to four hundred bushels at each trip. The Staten Island ning of a season what its results may be. Every year shows the ties of the cross-braces, to the effect of which, as seems men are considerably annoved by persons from New Jersey improvement, however, both in the quality of the oysters most probable, the disaster must be immediately attributed. oystering in their waters. So far they have failed to secure and the modes and security of cultivating and handling In fact, it is impossible to resist the conclusion that the bridge a very effectual check to this. them. was an unsafe structure from the very beginning. A weak Thirty years ago the oysters were prepared for market by Hundreds of vessels, thousands of people, and millions of and slender bridge is built in a peculiarly exposed situation; men and boys handling them all over to sort them. Work- money are already employed in the business. Its growing no attempt is made to calculate the possible effects of wind-

cnt sized cylinders are employed, all jacketed with spiral men stood in the water even in the coldest weather beside a value only begins to be realized. It most certainly has a tubes cast in the metal, which are supplied with steam disple of oysters and sorted them into a boat. Then it took grand future. Staten Island has been noted for several imrect from the boilers, and keep up the temperature of the fifteen persons all day to get a boat ready. It involved portant things, but this developing industry promises more cylinders. The first and second cylinders are arranged one great exposure and hardship. Some years ago an old man<sup>+</sup> for it than all its other interests, ancient or modern. above the other, and their pistons are connected to a com- straightened himself up after such a job, saying he could mon piston rod. The operation is thus described by Mr. stand it no longer. He contrived a fork, at first a little thirty thousand troops there during a most important crisis Loftus Perkins, the inventor, in a paper read before the In- straight-tined affair, with a guard at the top to prevent the of the Revolutionary war. To the great disgust of its inoysters falling off. It at once took with the men. All habitants a quarantine station was maintained on its north "The high pressure steam is introduced into the upper quickly provided themselves The day of hand culling was shore for many years. Some of its names recall noted end of the first cylinder, where there is no gland, and where over. The fork was gradually improved in size and shape, places and persons of the Old World. Its climate is of the piston is formed so as to require no lubricating material. until it has reached a very perfect and complete form. Now great salubrity. Many seek its shores and elevations for The steam is cut off at about half stroke in this cylinder, with this aid two men can accomplish more in two hours quiet and healthy homes. Several humane retreats, like

good service to the oyster cultivators.

poppy" mud holes. These are holes where the mud has novel construction is applied to this mill. become so soft and slimy it kills all that is put upon it. A year or two of rest allows the action of the water to fill up an improvement in the class of automatic couplings for

The island was General Horn's headquarters, and he had "The Sailors' Snug Harbor," "Retreat for Sick Seamen," The beds here are in shoaler water than on the Connecti- "Home for Destitute Children of Seamen," "The S. R. Horse," "The Bull's Head," "The Morning Star," "The Stars and drills have at times been a trouble, but their Blazing Stars." But all these names and interests, though

# ENGINEERING INVENTIONS.

The nuts of bolts for securing fish plates to railroad rails have been locked by means of bars or slotted plates, which Every planter has from five to ten men in his constant were so constructed and applied as to abut against one or to advocate the merits of this system, and he has taken out employ. He also hires others for short periods from time more sides of the nuts, and were held fixed in position by position to oppose it of those who had enormous sums in- ing at some part of the oyster business. Quite a good many Mr. James W. Payne, of Tipton, Mo., has patented a vested in old style machinery, have thus far prevented its colored families live at New Dorp and Prince's Bay. Most simple means for securing a nut locking plate, whereby it

> Mr. Jacob Rhule, Jr., of Pittsburg, Pa., has patented a the water, and thereby prevents scale in the boiler.

Important facts are to be noted in the conclusions to: Mr. John J. Reed, of Lyons, Ia., has patented an imhung to swing in a horizontal plane, and having a vane 1. They think their planting grounds need rest every few hung on the wheel to swing in the same plane, the normal pressure. This movement is regulated by an adjustable 2. The continual working of the ground produces many weight connected with the wheel. Brake mechanism of

Mr. William Tucker, of East Toledo, Ohio, has patented railroad cars in which a spring jaw upon the draw head of that the coupling may be rendered inoperative when desired,

An improved lubricator has been patented by Messrs. receptacle or tank, and gauge or indicator, so arranged that the steam from the boiler entering the condenser and con-

## The Tay Bridge Disaster.

5. One peculiarity is found in Staten Island oysters, makthe law forbids their working upon natural beds. The London Times makes the following editorial com-

ally weakened by excessive speeds, by stress of weather, and pipes lead the air through the fire chamber into an air cham cotton pass over it a solution of nitrate of silver (50 grains by the original fault of the materials used, and the defects ber above, from which air chamber pipes conduct the heated to an ounce of water); dry it in the dark, and the coat of are very inadequately remedied by a superintendent imper- air through a drum placed above the air chamber, which chloride of silver formed on its surface will receive the imfectly qualified for such a task; a gale of wind comes, a train drum receives the products of combustion, which further on the bridge is exposed to it, and the whole structure gives heat the air as it passes through the pipes. way at it weakest point. It is very difficult to admit that such an assemblage of causes and effects is rightly to be patented by Mr. Joseph B. Underwood, of Fayetteville, as a photographer prints a portrait. Watch it until dark called an accident."

#### MISCELLANEOUS INVENTIONS.

Fletcher C. Scott, of Fincastle, Va. This invention is an 1879. improvement in the class of horse collars in which the hames and collar proper are permanently attached to each other. I tented an improved die for swaging carriage-clips. Dies of The collar proper is formed of a soft stuffed inner portion the ordinary construction have no side or end stops to conand an outer leather plate, which is comparatively stiff, and fine the metal in its proper place. It escapes at both sides forms the ornamental face of the collar, and also covers and and ends of the dies. The clip, therefore, has a rough edge protects the inner part. The collar is divided at top and and requires to be trimmed, which is done in a trimmingbottom, and to each of the two parts thus formed is attached press. From such press the clip is placed under a tripan iron hame, which is inserted and secured between the hammer, for the purpose of rounding and pointing the shank. outer covering plate and the inner or stuffed portion. Both The improved die produces a perfect clip at one operation. the hames and the parts of the divided collar proper are connected at top and bottom by means of straps, so that they A. Fleming, of Hoosick Falls, N.Y. The object of this ter's sake. Drs. Lee and Feuger conducted the operation, may be adjusted together to adapt the collar as a whole to invention is to cut a right and left hand thread in the same which is described as follows by a reporter of the Chicago necks of animals of different sizes.

ed an improved self-adjusting mast for boats and vessels. this by a change in the form of the machine-tap. Two taps a pair of scissors opened out, except that one part was about It is hung upon trunnions so that it may swing from side are used-the ordinary right hand tap, together with the new four inches higher than the other. On one face of the cross to side, and it carries at its lower end an arc which is pre-: left hand tap. It is equally applicable to vertical and hori-: the little girl was laid face downwards. On the other the ferably made tubular, and is armed with very strong springs zontal tapping-machines, either single or in gangs. which resist the lateral movement of the lower end of the mast. The mast is also-provided at its foot or lower end tented an improved process for making illuminating gas over the burn on the girl. The children were kept unconwith a heavy counterbalance weight which increases the which consists, essentially, in placing in a closed receiver a scious during the entire operation by the use of ether, and incrtia of the mast and answers as an automatically shifting quantity of caustic lime and pouring upon it as much naph-; two assistants constantly directed the vapor of carbolic acid ballast.

M. Ceis, of Abilene, Kan. The object of this invention is to from the saturated lime and forcing it into a gasemeter. five inches long, leaving it attached by the under side. The furnish weather strips for doors to prevent wind, snow, rain, The lime absorbs a small quantity of water from the hydroand dust from entering the house beneath the lower edge of carbon, and also a small quantity of condensed petroleum. The flap of the boy's skin was then laid on the wound and the door, and which is simple, effective, and durable.

double walled pitcher, so constructed that the inner wall or This gas answers every requirement for illuminating and the boy's fleshy covering. This was done to secure the lining can be readily removed and replaced, and which will heating purposes, and may be produced at much less ex- vitality of the boy for the skin which is expected to grow to not allow the contents of the pitcher to pass through the pense than ordinary coal gas. joint between the inner wall and its support into the space An improved magazine stove has been patented by Mr. Carl- ugly in appearance, but the skin had been separated, or disbetween the walls.

Albert F. Pflughaupt, Jr., of Brooklyn, N. Y. The object combustion shall pass downward through the bottom thereof position, were so bandaged that they cannot possibly tear of this invention is to furnish devices for connecting the into a pipe that leads under the floor of the room in which the flap of skin or move from their position. Thus their waste pipes of houses with sewers, which is so constructed the stove is placed and into the chimney, while the heat and dual existence was begun, which will last for about three as to prevent sewer gas from passing from sewers into houses light of the fire shall warm and light the room in which the weeks. By that time the success of the operation may be through the waste pipes.

improved duplex telegraph system for sending and receiving tented a support for pictures so constructed that it may be ter, and, at the end of that time, it is hoped that the transtwo sets of signals in the same direction on one wire at the put up and taken down without marring the wall, will allow same time. This invention cannot be clearly described with the positions of the pictures to be readily changed, and will burned portion. The flap is not quite large enough, and, out diagrams.

Messrs. Edward C. Smith and Leroy S. Winters, of Lincoln, Neb., have patented an improved carpet stretcher, of simple construction, which will stretch carpets and hold any desired portion of the edge thereof while being nailed to the floor

vented a device adapted for use in connection with harness, number without its golden show. From the paper of the gratulate himself on having saved his sister's life. for the purpose of enabling a horse to be detached from a 6th I took fifty-six pieces of gold, the thickness of the Call, vehicle. The device consists mainly of a buckle having a and varying in size from that of a small pin head to nearly sliding tongue to which is attached a strap that is held by or; the size of a three cent piece. I think I have more than a harness, so that the horse may go free.

improved target which may be thrown into the air without posits. In addition to the gold, I got platinum, silver, iron, the aid of a trap, and whose broad tail pieces or wings shall tin, and some lead." ball or by shot.

wooden cover proper of the vessel with a central opening, they have often noticed a substance that glistened in the the wells at the same time. Of course, these wells, working

An improved harness maker's sewing-horse has been N. C. This invention relates to a machine for harness mak- enough, and before removing the paper from the glass take ers' use, known as the "sewing-horse." It is an improvement upon that form of sewing-horse for which letters patent | hyposulphite of soda, which will dissolve the chloride of An improved horse collar has been patented by Mr. No. 221,373 were granted to the same inventor, November 4,

Mr. Stephen M. Hoye, of Mount Carmel, Conn., has pa- | shadow of the leaves will be white.-Chemist and Druggist.

stove is.

prevent the pictures from being accidentally detached.

### A Gold Bearing Newspaper.

paper as follows: "I had observed, previous to last Feb-| cation to the nostrils of a cloth dipped in brandy. Mr. Charles H. Brazeal, of Tye River Depot, Va., has in from the 6th of that month to the end it was rare to have a takes hold in the manner expected, the brave boy can con-

pressure or to provide against them; the structure is gradu- provement in heating stoves of that class in which a set of after it is dry, take it into a dark room, and with a tuft of pression. Then arrange your ferns between two plates of glass, and cut the paper to the same size as the glass plates; place it under them and expose to the sun, in the same way it into a dark room. Here place the picture in a solution of silver, but leave the decomposed material (finely divided black silver) which forms the black background, while the

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### A Remarkable Surgical Operation.

For about a year a little girl, ten years of age, has been a patient in the County Hospital, Chicago, suffering from a burn so extensive that the ordinary treatment by skin grafting hopelessly failed to effect a cure. It was therefore decided to try the experiment of transplanting a large section of skin partially detached from a healthy subject, the girl's An improved screw-tap has been patented by Mr. Timothy twelve year old brother consenting to be flayed for his sismachine without reversing the motion, as is customary, by Tribune: A curious box had been constructed under the Mr. John McLeod, of 127 W. 26th st., N. Y. city, has invent- additional shafting and pulleys. The inventor accomplishes supervision of Dr. Murphy. It resembled nothing more than boy lay on his side so that his leg crossed his sister, the part Mr. Thomas J. F. Regan, of Brooklyn, N. Y., has pa- of the thigh from which the skin was to be taken being just tha or other light hydrocarbon as it will absorb, and then on the wounds of both the boy and the girl. The surgeons An improved weather strip has been patented by Mr. John drawing from the receiver by suitable means the gas arising then cut from the boy's thigh a leaf of skin four inches wide, wound of the girl was then cleared of its decaying matter. or petroleum oil. The gas drawn off by the exhauster is stitched to the outer edge of the skin about the wound, Mr. Asa G. Golding, of New York city, has patented a permanent, and will remain uncondensed in the gasometer. without cutting the edge, which rendered it still a part of be a part of his exhausted sister. The boy's wound was ton Seaver, of Traer, Iowa. The object of this invention is to sected, so neatly that it will be easy to heal over by the An improved sewer gas trap has been patented by Mr. construct a stove so that the smoke and other products of usual process of grafting. The children, as they lay in this known. During that length of time the boy's vital forces Mr. William Hadden, of New York city, has patented an Mr. George H. Brown, of Mount Vernon, N. Y., has pa-will be in a measure transferred to the assistance of his sisplanting will be complete and the skin firmly grown on the before the skin is finally severed from the boy, a still further portion will be dissected and applied to the remainder of the wound. The little girl's pulse dropped considerably toward A correspondent of the San Francisco Call writes to that the close of the operation, but she was revived by the appli-The ruary, that the Call often contained golden nuggets, but operation was a success as far as it went, and, if nature

## The Driven Well for Fire Purposes,

The Firemen's Journal, in an appreciative article on this is accessible to the driver, and which being pulled will re- hundred pieces of gold taken from the paper that month. subject, recommends the general adoption of the driven tract said tongue and allow disconnection of portions of the All left a hole when removed, as the thin film of paper on well for fire purposes, and for all small country places, the inside was rendered brittle by the hard pressure which where there is no large and constant water supply, we should Mr. Sanford Bray, of Charlestown, Mass., has patented an the calender rolls gave as they flattened out the golden de- think the suggestion an eminently practical one. In the SCIENTIFIC AMERICAN, of March 13, we gave some account of this system of obtaining water, and what was being done be so attached to the body of the target as to be broken off The explanation of the discovery is that in the manufac- under it in New York city, where it is now largely used to or detached from the body of the target when struck by a ture of the paper pulp water is used that has been passed, save the expense attendant upon a large use of water from through a flume in which miners have washed dirt contain- the city reservoirs. To obtain a supply sufficient for the Mr. George O. Sanborn, of Boston, Mass., has patented an ing all kinds of precious metals. The gold is what is known usual form of fire engines in use in country places it might improved cover or top for wooden vessels designed to con as "float gold," and escapes the miners who still follow the be necessary to put down two or three of these driven wells tain pickles, preserves, etc., and to be used for shipping primitive methods of washing. Some of the water used is near each other, and connect them, so that the suction pipe such goods. The invention consists, first, in providing the taken from artesian wells. The manufacturers say that of an engine being attached, water might be drawn from all

and in closing the latter with a thin transparent glass plate, water, but that they supposed it to be mica, as the wells on the principle that the water is drawn from the ground which is secured by cement applied and held in an undercut, were bored through mica deposits. around them by making a vacuum in the tube, will supply

groove. The wooden cover proper forms a strong, stiff, and durable integral portion of vessel, while the glass plate enables the contents to be easily inspected without allowing ever it becomes requisite to have access to or to remove the with an atomizer pass over it a spray of very diluted mucicontents.

#### How to Make Fern Pictures.

There are two ways-the mechanical and the photograph-

much more water than an ordinary open well, and they are not ordinarily so expensive to put down. An abundant supply of water can usually be obtained at distances varying ingress of air, and it is adapted to be easily detached when ical. For the first, take a sheet of strong white paper, and from twenty to fifty feet from the surface, but, in each case where a well is put down, it should be at once thoroughly lage, so as to obtain a very thin and slightly sticking film, tested, to determine the probable permanent yield of the Messrs. Theodore Phillips and Harley Phillips, of Win- which will make the ferns adhere of which it is desired to water-giving strata when it is driven.

#### chester, Iowa, have patented an improvement in washing make the picture. The ferns and leaves must have been \*\*\* machines, which consists of a tank having a set of parallel first pressed in a book, and after arranging them to suit The Texas Cattle Drive, vour taste, cause them to lie as closely to the paper as possistrips in the bottom with rigid vertical bars at the end, and The Omaha Republican gives a detailed statement of this with inclined and notched upper edges forming a washboard, ble; fill an atomizer with very diluted India ink, and blow year's cattledrive, the total reaching 301,000. Of this numan oscillating beater consisting of a series of fingers passing a spray over the ferns, more or less in proportion as you ber about 50,000 head will be driven to the Union Pacific. between the parallel strips of the washboard and connected want a darker or lighter shade. It is well to do this with The cattle are in good condition, fully up to the standard of to the lower end of a horizontally pivoted lever handle, and intermissions, letting it dry a little, so as to avoid excess of previous years, and are mostly one, two, and three years a set of fingers fixed to a rock shaft and adapted to pass bemoisture and possibility of running the liquid into drops. old, very few being beef cattle. The drive to Nebraska When nearly dry, but still a little moist, remove the ferns, tween the vertical bars rising from the ends of the washwould have been larger had it not been for the drought board. which may be used over again several times. For the pho- making a scarcity of grass along the road. About 25,000

An improvement in heating stoves has been patented by tographic method, cover a sheet of paper with a weak solu- horses are being driven up from Texas this season, of which Mr. John H. Shimmons, of Lawrence, Kan. This is an im- tion of salt in water and some white of an egg, well beaten; number about 5,000 go to Nebraska,

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