hights, formding them at the same time to look out of their windows or doors, on pain of death, after which, the un-
furtunate prisoners were conducted, gagged, just behind the iurtunate prisoners were conducted, gagged, just behind the upper barracks and hung without cer
by the black Pioneer of the Provost.'
This "dying confession" bears the marks of palpable fabrication, and has been branded as such by cautious writers. So far from having been executed as a forger, Cunningham is said to have died peacefully in a coun ry home.
After the Revolution the "Provost" was promoted in dignity. All common criminals were sent to the Bridewell, and the "Provost," ncw called the "Debtors' Prison," was reserved for genteel prisoners, who had forgotten to pay their debts
In 1830, at the urgent request of the Register for a fireproof building in which to house the city records, the "Debtors' Prison" was remodeled. By New Yorkers of a half century ago the structure was considered an uncommonly good reproduction of the temple of Diana of Ephesus.
For the last sixty years the building has remained unchanged, at least so far as its exterior is concerned The thousanis of people that daily climb the stairs leading from City Hall Park to the Brooklyn Bridge probably never realize that the time-worn, insignificant structure which they pass was at one time considered an architectural masterpiece, a building which New york proudly regarded as its most beautiful public edifice.

The First Wireless Message from the United States
On the night of January 18, Marconi succeeded in outdcing himself when he transmitted a message of greeting from President Roosevelt to King Edward directly from the Cape Cod station to Poldhu, Eng land. The distance covered is greater by 600 miles than that over which messages have previously been sent.
The performance is all the more remarkable when it is considered that the message was sent without any previous attempt to establish communication by preliminary signals.

It was on Sunday, January 18, that President Rooseelt sent to Marconi, by the ordinary telegraph, a message for King Edward. The message read as follows:
"His Majesty King Edward VII., London, by Marconi Transatlantic Wireless Telegraphy:
"In taking advantage of the wonderful triumph of scientific research and ingenuity which has been
achieved in perfecting a system of wireless telegraphy, I extend, on behalf of the American people, most cordial greetings and good wishes to you and to all the people of the British Empire.

Theomore Roosevelt.
Washington $\mathrm{D}, \mathrm{C}$.
Marconi's success came unexpectedly. After having busied himself all day in preparing his sending apparatus, he began to practise sending President Roosevelt's message without calling either the Poldhu or the Glace Bay station, contrary to the arrangements which he had made. Thinking that he might not be able to get the English station for a day or two, he decided to send the President's message by way of the Glace Bay station. Calling up the operator there he gave him the message with instructions to forward it to England. To Marconi's astonishment he received a reply from Glace Bay that the operator had been informed by the station at Poldhu that the message had been received directly from Cape Cod. There was not the slightest hitch in the process of sending. About four minutes were require to transmit the entire message.
King Edward replied to the message which he received from the President by cable as follows:
"Sandringhani, January 19, 1903.
"The President, White House, Washington, D. C., America:
"I thank you most sincerely for the kind message which I have just received from you through Marconi's transatlantic wireless telegraphy. I sincerely reciprocate in the name of the people of the British Empire the cordial greetings and friendly sentiment expressed by you on behalf of the American nation, and I heartily wish you and your country every possible prosperity. Eldwamb, R. and I."
The King sent his message by cable for the reason that Marconi was adjusting his instrument for sending tests to England and did not wish to upset his plans by making any attempt at receiving from the other side of the ocean.

Severe and successful tests were recently made by the Fire Department in New York city of the 6 -inch standpipe in the new "Flatiron" building in New York. The purpose of the test was to determine if the 6 -inch pipe would stand the great pressure of twenty-three stories of water, and to find out how much force could be given to a stream from a hose attached to a standpipe at so great an altitude. Were there no standpipe, the upper stories of the building would be practically
unprotected from fire. Two tests were made: First $11 / 8$-inch nozzle was attached to a 3 -inch hose on the roof, and the hose to the standpipe. The roof of the building is 304 feet above the street level. After the connections had been made, the full force of a fire engine in the street was turned on; in two seconds a strong stream spurted from the nozzle on the roof. A gage showed that there was a nozzle pressure of 120 pounds even at that great elevation. The second trial consisted in playing nine streams of water, one from each of the eight floors above the twelfth story and one from the roof; $3 / 4$-inch nozzles were used; a pressur of 200 pounds was obtained upon each. The Chief of the Fire Department of New York considers the test eminently satisfactory

## The Current Supplement.

The current Supplement, No. 1413, contains a great variety of interesting articles. It opens with an ac count of the making of pins, illustrated by photo raphic views. Mr. John Joseph Flather continue his discussion of the modern tendencies in the utilization of power. In the present installment of the series of the Naval War Game, by Mr. Fred. T. Jane, an ac count of an interesting battle off Manila between the German and American fleets is given. The American fleet is crushingly defeated. The present state of wireess telegraphy is made the subject of a good article by Mr. Maurice Solomon. Not so long ago, there was published in the Scpplement a full description of Prof S. P. Langley's aerodrome: Some account of the ptero dactyl, the greatest of flying creatures, and therefor the greatest of flying machines, should not be without interest. Valuable comparisons are made between this creature and the modern flying machine and modern products. Mr. E. O. Hovey summarizes the proceedings of the American Geological Society at the convention of the American Association for the Advancement of Science. Mr. James Francis Le Baron discusses a new method of dam construction. Oil as fuel in war ships is made the subject of an extensive article.

Ira F. Gilmore, of Bloomington, Ill., has perfected and patented a wireless piano which he has been work ing on for thirteen years. Being unable to get the reed made satisfactorily in this country, he set abou this task himself, and from a piece of steel he fash ioned with drill and file a five-octave comb reed from which, it is said, combined with a bridge and sound ing board, he secures a fine, sharp tone.

his invention to the particular application of
improvement to the low-pressure cylinder of the
corliss engine. The device may be used for improvement to
corliss engine.
other purposes.
AI TOMATIC HORSEDPOWER ANI, PRES SLRE INDICATOR ASI RECORDER.- EDand Fortier, Kankakee. Ill.. This auto-
matic device is an inpuovement in steam-pres sure and horse an innprovement in steam-pres steam engines. and has for an especial object to provide improvements upon the construction illustrated in a former patent. In the present in-
vention, the steam-rressure and borse-powe indicators are combined to secure an accurate indication upon the same dial of both, and the horse-power indicator is arranged to operate
the recording device and also to connect with the means for operating the borse-power-indlcator devlces. by which to show the different points at which steam Is cut off in the cylinder

## Hardware.

Pipe-wrencil.-I W. Johsion, Jerome, Ariz. Ty. The object of this invention is to
provide an improved pipe wrench which is arprovide an improved pipe wrench which Is ar-
ranged to permit of conveniently and accuratey adjusting the movable jaw relative to the fixed jaw according to the diameter of the work
under treatment, and to securely grip the work nder treatment, and to securely grip the work
for turning the same without danger of the jaws slipping from the work.
Shearing atpacinment for anvils. C. A. Christenson. Viroqua, Wis. Mr attachable shearing device of novel construcion for an ordinary anvil., thus affording conrenient means for shearing plate or bar metal
into form, as the case may require. An iminto form, as the case may require. An im-
proved gage is also employed as a co-acting depoved gage is also employed as a co-acting de-
tail for the sluraring device that sreatly faciliates subdividing the material int
PREMITATION-PADLOCK. T. Kivi, Glem-PERMITATION-PADLOCK, T. Kiva, Glem-
oo. Mich. This permutan-padock relates coe. Micli. This permutation-padiock relates
to a class of padocks having rotatable locking
rings that leg of a bowed shackle bar within the tock-
body and by a proper change of addustment release the shackle-bar. permitting its with-
leand drawal from the locking rings. The obje.t of
tive inmprovement. is to provide nowe features tile improvement, is to provide nowel features
that are simple, easy to manufacture. and conthat are simple, casy
venient to manipmate.
Wrescil-mamen Mahlen, Osakis, Minn. This tool belongs to a class of lever-wrenches ruplosed to rerrev or unserew plpes into or
from thein fittings or twolts and studs whin from thein hitings of belts and studs whict aim of the inventor is to produce a lever-

faEs Trical, ri\&illator.-C. P. I'hil Buck, Wymore, Neb. The present invention
relates to pressure-controlled electric me chanism for regulating the flow of fuel to a firnace located beneath the boiler. The boiler is provided with a pressure motor conssting briefly of a diaphragm so held within a casing
as to buckle outwardly when the boiler becomes ineated above its normal temperature
motion is communicated by means of a movable clrcuit of a pair of electro-magnets. These. in turn. attract an armature. which is directly comnerted to the valve controlling the flow of
fuel. This How of fuel is thus cut off and the fuel. The How of fuel is thus cut off and the
heat of the boiler is gradually colecked. causing heat of the lowiler is gradually checker. caus
THOLLEY-HARID-F. J. CAswell and $C$.
 proper engasement of the troiley with the whe. ous, and the road irregular. The invention comprises certain novel forms involving a
spring-sustained trolley. An important feature is in the arms allowing the trolley-wheel to make turning movements on the pole. but not
great enough to impair the proper engagement of the trolley-wheel with the wire, while' a the same time permitting the freedom of nove ment necessary for the wheel in thrmingy cillves
and other irregular portions of the road. $1: 5$ this swivel motion a wheel is kept on in very sharp curves and on all curves. with proper tension on top of the car. Another vaiuable feature is that hy means of the construction fremply withine trolley-wheei is allowed to move novements are effectively prevented. In these movements the running of the trolley-wheel is the groove or the avoid any marked wear in the groove or the hub. The arms also prevent
the trolley-harp from catching against crossing wires. brackets and other obstructions, the device easily riding under.

## Mechanical Devices.

Latile.-C. Semadr, Defiance, Ohio. The invention pertains to woodworking machinery, and more particularly to lathes for turning ir is to furnish a new and improved lathe espe cially designed for turning irregular formssuch as handles used in brushes, tools, and other implements-the lathe being arranged to turn the rough blank from end to end to form the handle complete and oval in cross-se tion. The design is also to finish the handle with great and symmetrical accuracy, without the aid of skilled labor
MilL.-G. M. Kbir, Williamsport, Md The meethanism designed by Mr. Kemp is an improvement in mills, having for its objerts, anong others, to furnish improvements in the grinding devices, in the means for feeding the
matertal to the grinding-suifaces. and in the means for controlling the grinding by regulat ing the disclarge of the ground material from the grinding surfaces.
Washing maciine.-S. hates, Ellensburg. Wash. The novel features of this apparatus were designed to provide a new and
improved washing in construction. very effective in operalion pasily manipulated, and arranged to insure a constant turning over of the clothes while the machine is in action to effect a thorough wash-
ing of the articles to be cleaned. Very little ing of the articles to be cleaned. Very little physical exerlion on the part of the worker is
called into play while operating this washor. mechanical mulement: h. Theissen. lavenport. lowa. The improved mechanical
movement developed by this invention, through a novel construction, provides for the
conversion of continuous rotary movement into an oscillating or reciprocating rotary move
ment. The invention is especially designed for ment. The invention is especially designed for
use in apparatus such as washing-machines, use in apparatus such as washing-machines,
where it is desired to give an oscillating movement to a beater or the like for cleaning ment to a beater or the like for cleaning
the clothes. The invention may be used in hurns or otherwise wherever desired.
PUMPING APPARATUS.-F. J. Donotghe, Gallitzin, Penn. An improved apparatus is provided in this invention for pumping vartous iquids, and also gases, more especially to force oil to heavy bearings or to raise water or pump and for age in air-compressors. The chief cper devices connected with reciprocating pistons working in cylinders, whereby the liauid or tuid is taken in and ejected alternately. connection with the apparatus the inventor employs a rotary valve of peculiar construction. DRILL.-G. W. Hays, Birmingham, Ala. This contrivance invented by Mr. Hays is an improvement in drills, being in the nature of a
hand-drill having its handle-lever provided with pawl-points for operating the drill head or socket, and also furnished with a reed arranged hand-lever

## Raflway Improvements.

RAILROAD-TRACK SECURER. - J. H. Crowley, Duluth, Minn. The design of this nvention is to furnish a securer adapted to ing apart or from turning or roiling. In adopting this securer, several advantages are found, namely, in locating spikes so as to minimize the breaking or splitting of ties and in preventing rapid deterioration of the same due to the
clustering of spikes: in avotding danger of spreading ralls, especially around curves; in easily applying the tie-plates of the securer to a track already built; and in cases where it is can be placed under the tie-plates without disturbing the ties.
tie-plate.-J. h. Crowley, Duluth, Minn. Mr. Crowley's invention relates to improvements in railway tie-plates or rail-chairs, the
object being to supply a tie-plate of simple construction that may be manufactured at a comparatively low cost, and one that may be quickly placed in position, and when in place the ralls.

## Miscellaneous Inventions.

METHOD OF PRODUCING WATER MARKED PAYER.-E. R. and O. F. BEHREND, Erie, I'a. By an improved method these inentors secure, irst, a genuine and indelible watermark which cannot be impaired or effaced by any test known to the trade, including the
severe action of caustic soda, which is sufficient to obliterate the mark made by compression of the fibers on many grades of paper, and, second, the rapid and economic production of such watermarked paper with perfectly and sharply defined marks of any figure or pattern. BRAKE FOR BABY-CARRIAGES.-W. H. ramscar, Cornwall-on-the-Hudson, N. Y. This device is a simple form of brake which is automatically applied and mancally released when the handle-bar is grasped, and, further, the
construction of the brake provides for its apconstruction of the brake provides for its ap-
plication to any baby-carriage without weakening the vehicle or impairing its appearance. The device may be used equally as well on grocers' push-carts and like wheeled apparatus. MANUFACTURE OF PHOTOGRAPHIC FILMS.-L. M. J. Ariandy, 3 Rue Brantôme, of these films for photographic purposes the object of the inventor is to provide improved means whereby such films may be readily detached from their support or backing. The invention consists, essentially, in arranging be-
tween the support or backing and the sensitized film, a layer of suitable material capable of giving to the film a certain plasticity and of being readily dissolved out, during the ordinary operations of developing, fixing and washing. GAR'TER-SUPPORTER.-MARY L. Buckau, New York, N. Y. The aim of this invention is port may be quickly and handily attached o detached. The support is adapted for attach ment to the side of a corset, so that the hose may and without the aid of clips thus preventing laceration of the hose. From this position the garter is prevented from slipping and the wearer is assured of perfect safety even when the garter is worn comparatively loose. Waistband.-L. P. Kleideher, Louisville, Ky. This invention relates to improvements in waistbands for trousers and other garments, and the object is to provide a band with belt feature is, that the waistband has adjacent parallel slits, between which, material is folded
to form a belt-strap; and another, is in the to form a belt-strap; and another, is in the
waistband comprising an outer portion, and a lining; the outer portion having parallel slits. the material between them being folded inward to form a box-plait, and the edges of the outer portion being turned against the linine and box-plaited inward of the straps.
necktie-fastener.-J. h. Frana, Baltimore. Md. Mr. Franz's invention is an im.
provement in fasteners for the shields of
neckties which are provided with a bow
some suitable fabric. The fastener is forme of spring wire and so constructed that it is jacent edges of turn-down collars.
FOOT-REST FOR CAR-SEATS.-L. JAN son, Brooklyn, N. Y. A simple form of foot rest for car-seats is provided by the present invention which employs an improved mechanism for hanging the foot-rest between the side rames of the seat in such manner that the othe position of the back and seat through movement of the back
CIGARETTE OR CIGAR BOX.-S. Gold shan, Brooklyn, N. Y. The box is so con
structed that after being emptied or partly emptied cigarettes or cigars cannot be replaced therein, thus not only protecting the purchase from buying inferior goods other than those indicated by the box label, but also protecting he manufacturer from false representations groas contalned the box
BRCSH.-H. F. Ebert, Brooklyn, N. Y. The invention provides certain useful improvements in brushes whereby the bristles are securely liable to break when the brush is in use. At the same time the cord or flexible binder is prevented from becoming loose or broken, thus insuring long life to the brush.
SLIVER-CAN-J. B. Crocch, Mayodan, Mr. Crouchs invention relates to im-
provements in sliver-cans adapted for use in connection with various kinds of spinning machinery. It provides a novel construction by which waste of the mass in the receptacle is
overcome and the sliver remaining in the reovercome and the sliver remaining in the re-
ceptacle after the charge shall have been nearly exhausted may be more readily spliced than heretofore.
folding box.-W. E. Burton, New York, N. Y. The object of the livention is to
provide an improved folding box made of paper or light material which is simple and durable in construction, very ornamental in ap pearance, and having its body or cover made rom a single piece of paper adapted to be shipped flat to take up little room, and arversion into the box body or cover without the aid of skilled labor
Latch.-J. W. Convolly. Toledo, Ohio Mr. Connolly's invention relates to door produce a simple and efficient latch which can normally be released from only one side of the door, but which can be so arranged that it may be releásed from either or both sides of
DEVICE FOR REMOVING SNOW.-J. Sulran, New York, N. Y. The purpose of the invention is to provide a durable, economic
and portable device for removing snow, the device being used in connection with a stream of running water from any convenient source of supply and having its outlet end adapted to enter any opening communicating with a

DESIGN FOR A STOVE-LEX:-(i. IH Droege, New York, N. Y. The design conof the leg to the other near the top and enscroll panel, and intermediate scrolls. The main portion of the leg below the main scroll is decorated with a longitudinal box tluting. TOY.-H. V. Lovgh, North Plainfield N J This toy belongs to that class in which a disk is made to revolve alternately in opposite directions by alternately tightening and loosening a twisted cord. Means are provided for carrying two disks on the cord, one mounted o turn loosely upon the other, also means evolution. The lissely mounted disk at each they will rotate spirally with relation to each other, and each disk is differently colored to produce
calculator.-T. Fregoso, Hermosillo, Mexlco. This measuring instrument is more ranged to permit of accurately finding, without calculation, rectangular coördinates to any dis tances with any angle in the sexagesimal or cenglesimal and oblique angle triangles by giving immediately and accurately three required or three measurements are known to reduce stadia distances to the horizon and to find the differ解 angeles, Cal. The improved holder will de tachably hold a pencil at a given point, so that it will always be accessible for use, as for example, the device may be used in connec tion with a writing pad or tablet. The holder injury to the device.

STARTING-GATE.-P. McGinnis. London, in starting gates for racetracks, the object being to provide a gate of simple construction having a locking means so arranged as to be quickly and positively released to permit the ate to move te open position.
Nopr.-Coples of any of these patents will be Please state the name of the patentents each the inventiva, and date of this paper.

Busimess and Persohal Wants. INDEX OF INVENTIONS


Marine Iron Works. Chicago. Catalogue free.
Inquiry No. 3y 2 .- For manufacturers of cribInguiry No. 37:27.-Kor dealers in McKinle Coin-ope
Brooklyn.
Raguiry
machines. Dies, stamp
Racine, Wis.
Inquiry No. 3729.-Yor an automatic machine
for iuserting and looping wire tlrugh several thich-
nesses of paper. Handle \& Spoke Mchy. Ober Mfg. Co., 10 Bell St.

Iuquiry No. 3730.- For parties engaged in man Sawmill machinery and outfts manu
ane Mfk. Co.. Box 13, Montpelier, Vt. uquiry No. 3731.-For manufac
Metal working dies and novelties manufactured by laquiry N
natiug paitut.
a obsso \& Colate street, New York.
Inquiry No. 3733 .-F'r
motor about $2 \%$ horse power. L.et me sell your patent. I have buyers waiting.
Cbarlès A. Scott, Granite Building, Rochester, N. Y. Inauiry Na. 3734.-Hor power printing press and
full equipment for a printing office. SAw Mills.- With variable friction feed. Send for
Cata'ogue b. Geo. S. Comstock, Mechanicsburg, Pa. Iuguiry. No. 3833 . For a boiler and engine of lo
and Machine Work of every description. Jobbing and re Inquiry No. 3736.-For an engine from 50 to to For SAle.-Patent No. 718,750. trigker tongue for
kame traps. Big money saver on old styles. H. M. kame traps. Big money
Dreyer, Mikkelson, N. D.

## Inquiry No. 3737.-

Manufactura of tools. light machinery. Qaudrika Manufacturing Company, is South Canal Street, Chicago.
Inquiry No. 373s.
pressure water works. Crude oil burners for beating and cooking. Simple,
effcient and clieap. Fully guaranteed. C. $\boldsymbol{F}$. Jenkins
Inquiry No. Sy39.-For partiey furnishing bond
or linen paper in rolls.
For SALE.- Broaching or drawing press at a barkain.
Pratt \& Whitney nake. Hlead 1 in. to $1 / 4$ in. Samuel Pratt \& Whitney nake. Head 1 in. to $1 \frac{114}{4} 1 \mathrm{n}$
Hall's Sons, 222 W West IOc Street, New York.
Jnguiry No. 3740. - For deaters in map mould-
The larkest manufacturer in the world of merry-go rcunds; shootink kalleries and band orkans. For
and teraus write to C. W. Parker, Abilene, Kan.
Inquiry No. 374, -For makers of "The Wonder
Water Consumption" macline.
We manufacture anythink in metal. Patented arti-
cles, metal stamping, dies, screw mach. work, etc. Metal Novelty Works, 43 Canal street, Chicak

## Inquiry No. 374\%.- For parties to m patented stove pipe joint ou a larke scale.

The celebrated "Horusog-Akroyd "Patent Safety Oi,
Engine is ouilt by the De La Verkne Refrigerating Ma chine Company. Foot of East 138th Street, New York. Inquiry No. 3743.-For the makers of , the Starr
oval and circle cutting machine. Wateh Power for sale.-Reliable 1,500 horse power located in State of New York. Owner would
equip and rent power. Davidson, Box 7 Tis, New York.
Huquity No. 3744.- For makers of auger bits fit-
ted with damond points.
For SALS. - Patent for 1 nsect trap. for the United
States: or sell the right to manufacturer states. August Laiser, 428 S. Cillifornia Ave. Chicako. luariry No. $\mathbf{3 7 4 5}$.-For makers of street urc lamps
us ilig mantle burners and which ke ne rate serosene. Wishing to add a few desirable lines to a well-estab-
fisbed manufacturing business, I should like to bear from inventors havink good
J. C. Coristen
Inquiry No. 3746.-For mak Sts., St. Lonis, Mo.
of model steam engnes, etc.
Gasoline Automobile Batteries. William Roche's .. A a togas" used properly will carry vehicle twice as
far as any obter battery of same weight. William Roche, inventor and manuf New York. N. Y., U.S. A.
Inequiry No. 3747.
Wanted-Revolutionary Documents, Autorraph Let Aers, Journals. Prints. Washinkton Purtraits, Earls
American llustrited Magazines, Early Patents sixned by Presidents of the United States. Valentine's Manuals of the eurly $40^{\prime}$ s. Correspo
Address C. A. M., Box Thi. New York.
For SAL.E.-Sure money maker. About one-third interest is offered for sale to man possessink practical
experience, a desire to take active, aRkressive hold, and buyt ten thousand dollars to invest in a brass and iron specialty fuctory, which has been established seven
years. and which bas very valuable putents. and is neever able to tlll orders promptly owing to beavy
nemand by railrumds and power plaits all over the
nited States. Address Box 17̈A, Pittsbugg, Pal. Inventors and parties desiring to have patented articles mannufactured please take notice :-An old eatab-
Ished New Finkland concern, with large experience in lished New Finkland concern, with large experience in
manufacturing and marketink specialties of different manufacturing and marketine suecialties of diferent
kinds, desires to obotain chutrol of patented inventions
of merit, and would ent her purchnse same outrikht or of merit, and would eit her purchnse same outrikht or
nanufacture on royalty. All connunications will be nanufacture on ruyalty. All communications will be
considered strictly confldential, and we reserve the considered strictly confidential, and we res
rikt to reject any or all tiventions submitted. Bux No. Sliti:
Bridgeport, cont

For which Letters Patent of the United States were Issued for the Week Ending January 20, 1903,
AND EACHBEARINGTHATDATE. [See noteat end of list about copies of these patents.]


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(Continued on page 84.)

