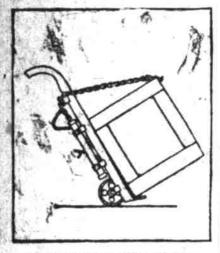
CHARLOTTE DAILY OBSERVER,



NOVEL HAND-TRUCK.

Among the ingenious devices re-cently patented is the novel attach-ment for hand trucks shown in the ll-Instration bolow. With a truck equip-ped with this device a man can, with practically no effort, raise a heavy acking case, barrel or article of any escription onto the truck, whence he easily transfer it to the point desired.

It is well known that articles of reat weight, after being placed on a and-truck can be readyly moved by ne man, but the latter very often strains himself getting the article on the truck. Imagine what it means to usye the lifting done automatically. yet this is what the attachment shown here does. The hook is attached to the whatever the article may be a lever released, and presto, the case



PULLS CASE ONTO TRUCK.

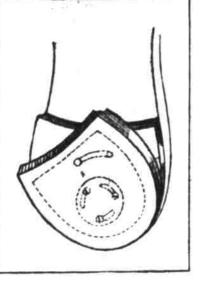
is pulled upon the truck. The chain moves in and out of a holder containcompressed air. When the lever released the slack of the chain is taken up, pulling the case onto the truck. In addition the chain prevents ing off as the truck is being wheeled along. the case from tilting forward and fall-

NEW RESCUE APPARATUS. Many a drowning may be sverted the result of a simple yet effective life-saving apparatus invented by a Massadhusetts man. Indeed, so simple is the apparatus that the wonder nobody thought of it before. It is





vice is an interchangeable heel which locks to a heel pad by means of pins attached to the latter. Probably the and wearing out in the uppers is the running down of the heel, which



SAVES PEDESTRIANS MONEY. throws the foot to one side and brings a strain on a part of the shoe not prepared for it. Rundown heels, too, are responsible for many cases of sore feet and have aided largely in making the business of chiropody a lucrative one. With this new device it will be possible to take off an old heel and put on a new one whenever the first so worn as to be uncomfortable or unsightly. If people only realized the importance of a flat heel there would be few limps in the world of walkers

A NOVEL BRACKET.

FOLDS AGAINST WALL

against wall or door. A board can be

A BOON TO ARTISTS.

Something new and decidedly con-

centent in the way of artists' outfits a the very complete work rest of

HANDY FOR COPY WORK.

ontains an easel and drawers to hold-

he colors, brushes and palette. The

carried handily, but when open

whole folds into a small space and can

placed across the top if needed.

HAD.

place and the bracket folded



METAL RAILWAY TIE.



RAILS ARE SET IN GROOVES.

grooves and held firmly in place by

not only very strong, but separation means of a tube and pointed injector of the two sections between the into the ground close to the roots of tracks relieves the strain and reduces the noise of traffic





HOLDS DOUBLE ROW OF TOWELS. the roots of the plant. The kaited die 19

ation of the lever causes the paddles to revolve continuously in one direc-tion. The more quickly the lever is like the ordinary violin. Thaving to revolve continuously in one direc-tion. The more quickly the lever is

OPERATED BY FINGER.

operated the more rapidly the paddles revolve, the current of air being thus readily controlled. A person reading or otherwise occupied where the use of the hands is not essential, can easly keep himself cool with this fan with little effort on his part.

WEED KILLER.

similar undesirable weeds is a probaround the plant invariably destroys the grass also. A colorado man sugholding devices. The advantages of the grass also. A colorado man sug-these metal ties over the wooden ones gests getting at them with the murare several. In the first place, they derous-looking implement shown here. are much more durable, and there is He claims that it will do the trick no danger of their rotting and having thoroughly and with dispatch. A to be replaced. They can also be chemical compound deadly to weeds made very cheaply and the tubing is is placed in the bottle and forced by

No.

like the ordinary violin, having strings, tuning pega, etc., and is play-ed with a bow. The addition is made of a portion of a form, the latter serv-ing to increase the volume of sound and also to preserve its purity. The sounds are collected by the horh be-fore they emerge from the violin, and are emitted in an even, smooth tonc----not ragged nor disconnected, as is often the case with the ordinary vio-in. As with a graphophone, the horn sort.

A government expert has figured out that by the year 2055 the United States will be using more than 2,000.-do,000 tons of coal a year. The states will be using more than 2,000.-do,000 tons of coal a year. The out that by the year 2055 the United States will be using more than 2,000.-do,000 tons of coal a year. The average annual production in the de-cade from 1916 to 1925 is put at 600,000 tons. The total produc-tion of 1907 was 480,450,042 tons. The official predicts that future genera-tions will have so far developed methods of subduing and utilizing other forces of nature that the nated

The business of the Chicago freight subway has now reached a point where the financial loss, occasioned by the withdrawal of the government contract for the carriage of mail matter, has been overcome and the business of the company is said to be on a sound basis. The action of the government officials was based en-tirely on the fact that transportation could be made by horse and wagon gross tons. at a slightly lower cost, although it is contended that it is not so safe or

satisfactory. The company has an arrangement with eleven of the rallroads entering the city for the transfer and delivery of freight, and while this does not save the shipper from the cost of cartage to the receiving

How to get rid of dandelions and milar undesirable weeds is a prob-which cost is exceedingly high under base of the tanks. The windows of the base of the tanks. The windows of the base of the tanks were lem hard to solve to the man who is anxious to have a well-kept lawn. Pulling them up does not destroy them. Sprinkling of weed killers traffic from the crowded streets of the 30 minutes after the explosion. The business section, but also affords timber gable roof of a city fire engine many advantages to shippers, in ad- house 25 feet from the drums was many advantages to shippers, in ad-dition to the saving in transportation charges. The mail service was practically perfect during the two years the contract was in force, besides avoiding the use of over 100 teams that had formerly been engaged in hauling mail through the streets of the central business section.

possessing any great amount of what is called "semi-arid" land This is where less than twenty inches of rain faits in the course of the year. art of dry farming consists of working the soil in such a manner as to secure the full benefit of every particle of moisture which it absorbs. The success attending this kind of agriculture bears out to a great extent the adage that in agriculture "the man with a hoe can do more than a man with a hose." Dry farming is now successfully carried out in localities where the annual rainfall is 14" inches and it is hoped, as more is, learned of it, that it will be commerctally possible to utilize lands where the rainfall is as 'ow as 10 inches.

Experiments conducted abroad have demonstrated that balloons traveling at a height of from 600 to 2,000 yards could be hit only once out of six shots. while they are absolutely safe at a height of 3.000 yards. Even when struck the damage to the gas bag was so small that the balloon was able to

necessitry.

produced in Nova Scotia, the remain-der being imported from Great Brit-ain. The rivets were all made in Dartmouth, N. S., and the rope for the rigging all came from the same town. The sails were made in Yar-mouth. The vesset has been built without government subsidy of any sort. with 1,800,000 in the previous fiscal

methods of subduing and utilizing other forces of nature that the need of coal for the production of heat, light and power will to a great ex-tent have been eliminated." Since been practically exhausted the mining of the deeper and thinner beds will increase the cost, which must be made up by higher prices. It is doubted if the production of anthracite will ever greatly exceed the production of 1907, which was about 76,000,000 gross tons.

Au excellent demonstration of the resistance of a concrete structure to severe shock took place recently in

severe shock took place two acety-Indianapolis. Ind., where two acety-lene tanks on the roof of such a struc-ture exploded. Ordinarily such a shock would have been attended by stations of the tunnel company, it serious damage, but in this case it does save the shipper the cost of was confined to the making of two the existing conditions. The use of factory and many of the doors were the employes from returning to work traffic from the crowded streets of the 30 minutes after the explosion. The

nouse 25 feet from the drums was wrecked, and also a portion of the for-nice of a brick building 100 feet from the drums. The roof was of tile and concrete construction, with 12-meh tile and 4-meh concrete joints, each teleforead with a her The tile was reinforced with a bar. The tile was covered with 1 inch of concrete. The

materials were not injured outside the area of the hole blown through the roof. The concrete seemed to be shattered, breaking away from the bars. couraged by some of the Western States, including Colorado and others condition by using the same bars, merely bending them back to place.

> large grab-bucket of the clam-A large grab-bucket of the shell type, having a capacity of seven was recently and a half cubic yards, was recently installed at Joilet, Ill., in connection with a cantilever coaling bridge to re-claim coal from stock piles and to feed it through hoppers to an extensive system of belt conveyors. The bucket will handle five to six tons per

load, according to the position In which it is landed on the coal. Al-

that the bucket is balanced by counterweights. /

The problem of taking care of the 'peak of the load" is agmatter which has interested electric, power station men for sometime. Much gray matter has been expended in the endeavor to solve the problem of taking care of the extraordinary demand for current

which is experienced at certain hours continue its feurney for hours before every day, while at other times the the escaping gas made a landing capacity of the plant is not approached. In Marion, Ind., the working hours of many establishments have been re-

PROGRESS OF THE DAY.

Venezuela has eight-ounce beetles.

The French Congo has a pigeon

The population of Canada is now about 6,500,000.

The average height of the Lapland-

Four Miles of a spider's thread

The best time for exercise is about two hours after a meal.

Sixty languages are in every-day

In Belgium a revenue of \$85,000 i derived from roadside fruit trees.

At least \$720,000,000 worth of Brit-

converts to the vegertarian

Some of the largest ocean steamers an be converted into armed crutsers a 39 hours.

use in Freetown, Sierra Leone.

An acre of cotion land in Egypt yields four times as much as one in this country.

In no country has the ready-made clothing trade developed as in the United States.

In China more traight is transport-ed by the wheelbarrow than by any other method.

The simple cost of setting up in type a new edition of the Bible amounts to \$5000.

The oldest national flag in the world is that of Denmark, which has been in use since the 1219.

There are but seven establishments in this country with the facilities for casting brons statuary.

An elephant's burden is from 1.800 to 2.500 pounds, and that of a horse from 200 to 250 pounds.

The horn of a rhinoceros is not join-ed to the bone of the head, but grows on the skin like a wart,

. Seventy-two races inhabit the world and use 3004 different tongues. There are about 1009 religious.

Out of every million letters that pass through the postoffice it is calcu-lated that only one goes astray.

Louisiana has 7,000,000 acres of marsh lands which, if properly treat-ed, are capable of great fertility.

Women are barred from the Island of Ferdinand de Norouha, belonging to Brazil. It is reserved for convicts.

A two-mile railroad bridge has been recently completed across the Colum-bia river, in the State of Washington.

When excited or frightened an elephant can attain a speed of 20 miles an hour, and can keep it up for half a day.

A man can hire a horse in Japan, keep two servants and live on the fat, of the land, all for a little over \$20 a month.

A hen attains her best laying ca-pacity in her third year. She will lay in an average litetime from 300 to 500 eggs.

According to the latest figures, the anthracite coal of Pennsylvania will last but 100 years, and the bituminous 400 years.

The first English regatta took place on the Thames, between London Bridge and Millbank, on Friday, June 23rd, 1775. ٠

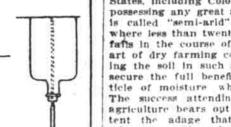
though the bucket is huge and the The record of shipbuilding on the amount of coal carried enormous, the Clyde in the first six months of the power required to operate the bridge year is the smallest for a like period is comparatively small, due to the fact | since 1893.

> The clock at St. Chad's Shrewsbury, has a record pendulum, its length being 22 feet and the weight of the ball 200 pounds. .

The Church of England hishopric of Mackenzie river, in British North America, is five times as large as the United Kingdom.

The reclamation of the marsh lands of the United States is one of the most important natural developments confronting us at this time ...

Sums have now been received amounting to a total of \$225,000 for the Koch endowment, to be applied in the crusade against tuberculosis as Dr. Koch may direct.



the earth by means of the foot, and

minate it.

88

AIDS HIM IN THROWING. merely a rope with a wooden handle handle that makes an effective res-

Dry farming is being liberally en-The

heavy the wall.

enced hand, and how necessary it is arms and holds, them upright. The for the struggling person in the water whole apparatus can be put up anyto grasp the rope before it sinks. So whole apparatus can be put up any-the devised a board with a hook on it down easily. When not in use the

and fastening one end of a long rope supporting arms can be slipped out to the end of the board, colls the remainder over the hook. To the free end of the rope he attaches a wooden handle, which not only improves the aim, but floats until it can be grasped.

RUNNERS FOR GO-CARTS.

An ordinary folding go-cart, which ic practically useless on pavements and roads covered with snow, can be easily made valuable for use in such weather by the addition of runners, as is shown in the accompanying illustration. The wheels are readily moved and the runners substituted. the latter being clamped to the front



GO-CART WITH RUNNERS nd rear axles. Instead of plodd along with the wheels cutting deep into the snow, the runners reader travel easy and enjoyable. A go-car thus equipped would also be far supe rior to a sled, as there would be no danger of the youngster slipping off. nother advantage is the fact that this go-cart can be folded up as for-merly, in case the owner desires to ride on railway cars.

MINERS' ELECTRICAL LAMP. The old-fashioned oil lamp still being used by miners seems soon to be supersided by the electrical lamp a recent design being shown in the illustration. It can readily be imillustration. It can readily be im-agined what the general use of the electrical lamp would mean to the niner-the elimination of the rible accidents of daily occurrence due to explosions from contact of th with invisible gases. The Samir. rical lamp shown here is operated conjunction with a specially de-med cap, in which is stored an ្លានព lectric battery. lectric battery. Light is furnished y a much incandescent lamp sur-ounded by a reflector on the fore art of the cap. The light is operated y a push button secured to the under urface of the vizor, where it is con-tantly in convenient reach of the venter. The cup and attached lamp re light in weight and in no way iterfore with free movement of the rms. The battery is readily re-hanged at little expense. In fact, he cost of maintenance is duly Light is furnished forms an adjustible easel with paint box attached. The sliding stand can

eving device from what was otherwise and having lateral extensions at the has been greatly increased by a slight The storage capacity of this article out of business. a hap-hazard affair. Probably the in-sentor saw several futile attempts at are screwed into wall or door. Be- accompanying cut. This feature is Be- accompanying cut. rescuing drowning persons by throw-low and between these plates is a particularly desirable from the fact third, which holds a pair of support-that it permits of fresh towels being seen how wide of the mark a rope can be thrown unless cast by an experi-in circular loops in the longitudinal in use may hang from the front.

MUSIC LEAF TURNER. Among recent patented devices is

an ingenious apparatus for turning into which the nail punch fits. The the leaves of music, designed by a Pennsylvania man Numerous at-tempts have been made to devise a music leaf turner, but none has a vet proved practical. At least we do

not see orchestras or bands using any of them. The one shown in the illustration certainly seems practical in every way. At the same time its operation is very simple. It can be used in connection with any of the ordinary music stands generally ployed for the purpose. Attached to

older, designed by a Massachusetts This consists of a sliding sup port bearing a table which in turn PRESSING BULB TURNS MUSIC. the frame is a receptacle containing as hens' teeth." the operating mechanism. Extend-

ing from the receptacle are six or more rods, which are bent at right angles and end in fingers. The lat-ter when in position rest on each successive page of the music. Depend-ing from the operating mechanism is a rubber tube and buib, the latter resting on the ground close to the musician's foot. When the musician has reached the end of the page and desires to continue on the next, he presses the bulb with his foot, and the first page of music is turned over. On each successive page he does the same, each finger in turn forcing the next page ever.

AUTOMATIC FAN.

During the hot summer season everybody resorts to the fan te afford temporary relief, yet few people realize that the exertion necessary to manipulate a fan, especially on a very warm, day, will cause the perspiration to flow more readily than if the fanning was omitted. Unfortunately, the electric fan is within the reach of but a few, but a contrivance, recently patented by a Detroit man, should prove equally as effective, and is yet pro-curable by everybody. As shown in the accompanying illustration, this fan somewhat resembles the electric fan, being made of metal and has sim-

box attached. The storing stand can be made any height and the easel, which is hinged to the top of the table, can be fixed at any angle de-sized. This device is more for use in smaller work, such as copying. For thar revolving prodles. The latter are joined on a shaft which is mounted on mp table, can be fixed at any angle de-tay sired. This device is more for use in the smaller work, such as copying. For re-copying work in art gallerice it is just ct. the thing needed, as it can be moved if y from place to place with no trouble. Held in the hand. The occasional oper-latest is shown in the illustration be-latest is shown in the illustration be-the inter being in position to be push-the inter being in position to be push-inter being in position to be push-inter being in position to be push-inter being in position to be push-the inter being in position to be push-the inter being in position to be push-inter being in position to be push-the inter being in position to be push-the inter being in position to be push-inter being in position to be push-so as to be at once noticeable. The latest is shown in the illustration be-

de-

lawn can be quickly attacked and put

LOADED HANDLE TO HAMMER.

Rochester invention suggests a simil

means of overcoming this instinct of

the nall punch to get fost. He has a

recess placed at the end of the handle

Carpenters have a bad habit of los-

never be found when wanted. A

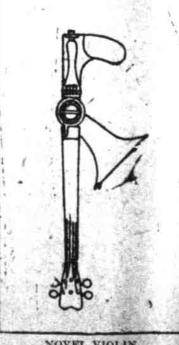
NAIL PUNCH IN HANDLE.

latter has a plate at the end which clamps over the top of the opening probably the most complete series of its kind that has ever been prepared. and prevents the nail punch falling

Hammers having similar recesses in the handle would also be of great country, and this set of models can-value for housesold use. Nails, tacks, not fail to be of interest. The followscrews and similar could be stored in the aperture, and, fruits of the island: Cashew, ginger of course, would always be easy to plant, mango, alligator pear, castor find when wanted. Hammers sim! oll seed, custard apple, pomerranate, larly equipped would also prove a guava, tamarind, naseberry and a boon to tenants in office buildings, large green bread fruit. where tacks and nails as as "scarce

UNIQUE VIOLIN.

Improvements in musical instruments are very rare-in fact, so much



This insect is so pugnatime varies according to the season. ranging from 5:15 to 6:05 p. m. in the clove that it quickly drives out

the native ant which has some consider- first half of October to 4:30 to 6:95 p. m. in the latter part of December. able economic velue and which is not eplaced by the intruder from Argen- Such a contract keeps the motor load ing their nall pouch. Being small, it is time. The latter is not only destruct- off the station during the time of the very readily mislaid, and, naturally, ive in itself, but it protects scale peak, and makes the ratio of opergrowth and plant lice. The Argentine ating expenses so gross earnings much ant is regarded as one of the most in- lower than is usual in central stations inclous pests which was ever brought of the same size. It is customary to of the same size. It is customany to rate the average yearly load as 25 per

into the United States. cent. of the maximum, but at Marion it is 43 per cent. The necessary The Baku-Batoum pipe . line been in operation for about a year, shop-hour re-arrangement is not very and as far as the mechanical opera- radical and can be very easily accom-

tion of the line is concerned it is a plished by smaller establishments. great success, but because of the decrease in the exports of Huminating oils from Batoum, there is not suf-An entirely new design in the construction of electric lamps has been ficient oil to keep the nipe line and its recently brought out, the novel feacostly machinery continually at work. ture of which is the entire absence, at

postal service.

er is less than five feet.

vould weigh one grain.

and the undertaking is, therefore, not far as the eye is concerned, of all remunerative. Simultaneously wirds. One-half of the transformer is with the operation of the fine, it was fastened to the under side of a table, found also that the consumption of while the other half of the transformcil at several of the towns along the er is incorporated in the base of the line had also decreased, and after lamp standard. By proper transformsome prolonged investigation, it was er design, it is possible to supply the discovered that the line was being lamps on the standard with electrical tapped at several points and the oil energy when both parts of the trans-stolen from the pipe. In some in-stances from eight to ten car loads of er. The advantages of such an ararngement are that no holes need be

oil were stolen each night. made in the table or coverings for the The National Museum of the United passage of the wires; while the lamp itself can be removed from the table States has recently acquired a collec-

when so desired without disconnecting tion of models representing over 100 different fruits of Haiti, arranged for any wires. exhibition purposes. This collection of models of fruits and vegetables.

which was exhibited at Jamestown, is

The fruits of Haiti include many forms that are rarely seen in this appurtenances, ing are the names of the most curious

> Startling results have been obtained by Dr. Francis J. Allan, an English medical officer, in some experi-ments to ascertain the real character of the germs found which find lodg-ing places in the mouthpieces of telephones. The mouthpieces of a few public call office telephones in London yielded enough baccill to kill a

guinea pig after 3 days, death being due to "galloping consumption." The

It will make a careful examination of any device offered which seems to have any merit. There have already been submitted to the body no less than 20 devices for the prevention of collisions.

The first steel ship built in Nova The arst steel ship built in Nova Scotia is now under constguction at New Glasgow, which was once a very active wooden ship building centre. The new vestel is a schooner, the James Williams. Her tonnage is

about 600 and most of the material entering into her construction was

three-pence.

Only two total eclipses of the sun have been visible in London during the last 100 years. It is estimated that the next total collpae visible in London will be on June 14. 2151.

The Manchester Ship Canal improvements, which were undertaken in 1904, have been completed, and vessels of 28 feet draft can now go up to the largest docks in Manchester.

The Canadian government is expending great sums of money in new railroad construction. in improveconstruction, in improvements of waterways, in industrial bounties, subsidies to steamships and in various other ways to develop tha. country.

The British railways in 1907 are reported to have had a total length of 23,101 miles. There were 1,260.117,000 passengers and 515,971,000 tons of freight carried during the year. The gross receipts were \$591,465,000 and the total expenditures were \$373,085,-000.

Since the operation of its subsidy law nearly \$11,000,000 has been paid by the Canadian Government in bounties to 13 iron and steel companies in Quebec, Nova Scotia and Ontarlo, with a view of developing that industry.

The production in this country dur-ing 1907 of mica was to the value of \$392,111, in 11 States. The imported mica was worth \$925,259. The large and increasing consumption of mica is attributed to its greater use in electrical work.

The anthracite output of about 75,000,000 long tons in 1907 will probably never be greatly exceeded, coording to Edward W. Parker, of the United States Geological Survey, as its price must rise so steadily to make it a luxury.

The State of North Carolina is one of the most notable in the Union for the production of gems, particularly diamonds, emeralds, rubies, aquama-rines, beryls, hiddenite, rhodolite, amethysts and remarkable rock crystals. These gems have been found mainly in the course of mining operations, although a few systematic searches for them have been made and two companies are now engaged exclusively in such work.

An improved dynamite for blasting has been recently put on the market which has a great advantage in that the freezing point of the nitrogen is lowered 35 degrees F.; moreover, when the temperature continues to 23 sink still lower the new dynamite freeges with extreme slowness. When frozen it can be thawed with a small fraction of the time and expense experienced with ordinary dynamites.

The production of lemon oil is an important Italian industry which is carried on extensively on the Island of Sicily. Three methods of production are used—the two-piece method, in which the lemon is cut in half: the pulp removed and the oil extracted by means of pressure within a sponge and the three-piece method, in which the ignon is pared, the skin being re-moved in three pieces, leaving the pulp with a small portion of the skin adhering to each end, the parings for extraction. The use of machines in the production of eil is confined to the province of Calabria, upon the mainland, less than 5 per cent of the total output being thus manufac-tured.

The arrivals of alien immigrants to the United States in the year ending Sune 30 numbered 680,000, compared tured.

