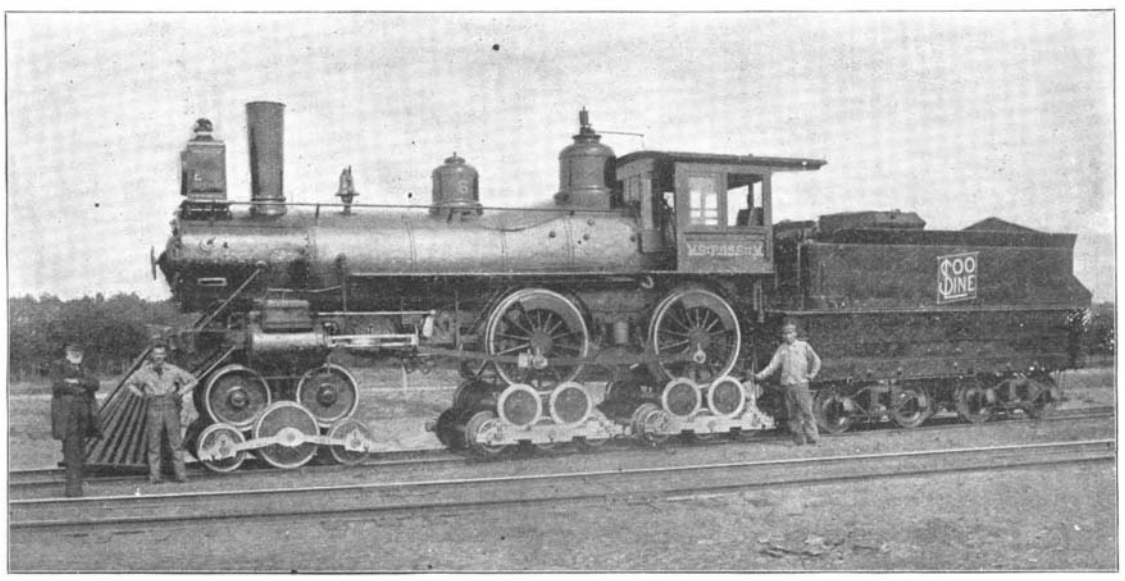
Hazing a Custom to Abolish.

The Western Druggist makes this pertinent inquiry: "Is the spirit of savagery creeping into our American universities? Hazing, in all conscience," the writer goes on to say, "is bad enough, and barbaric enough; but what must be the mental condition of 'students' who would run the risk of committing murder for the sake of indulging in a 'practical joke'? Not enough that chlorine gas was discharged with fatal effect into a hall filled with students of Cornell University; not enough that this crime found its imitators in the university at Lawrence, Kan., where bromine was similarly used (charged, in both instances, to the students of the pharmacy departments); now the list of these heinous jokes has been extended by the action of undiscovered individuals who burned a lot of cayenne pepper in the rooms occupied by the lady students of Northwestern University at Evanston, Ill., causing untold suffering to the students there assembled in meeting, and even prostrating a number who had inhaled a larger proportion of the penetrating, irritant fumes. The authorities are derelict in the execution of their duties if they do not discover the perpetrators of these crimes and make such an example of them as to deter in the future all evil-intentioned imitators."

THE HOLMAN LOCOMOTIVE.

So much has recently appeared in the columns of the daily press and also of the European technical press in connection with the so-called "Holman" locomotive, and its trial by the Minneapolis, St. Paul and Sault Ste. Marie Railroad Company, that definite information concerning same will no doubt be appreciated by the railway world and others interested. As will be seen by the accompanying illustration, reproduced from a photograph taken in the yards of the "Soo" Railway, the "Holman locomotive" in question is not a locomotive at all. On the contrary, it is one of the railroad company's regular 17x24 inch, eight wheeled Baldwin locomotives, placed on experimental trucks, for the purpose of demonstrating the possibility of decreasing the piston speed for a given rate of progress. The railway company is not interested in any manner in this device, the engine simply being leased to Mr. Holman for the above mentioned purpose. The engine up to date has not been in service except for a few days in the yards of the company at Minneapolis, although it is expected that a road trial will shortly be made. Without expressing any opinion as to the merits of the device, it would seem that even for the purpose of demonstrating the theory it would have been better to have dispensed with the front set of Holman trucks and obtained the necessary height for the front end of the locomotive by blocking on the top of the ordinary engine truck. This would have avoided much of the complication which at present attaches to this experimental device, and rendered it much less liable to accident. When the actual trial occurs, we will endeavor to supply our readers with a full account of the performance of the engine.—The Railway Review.



THE HOLMAN LOCOMOTIVE.

Standard Screws for Watches.

A general meeting of the Institution of Mechanical Engineers was held in London, October 24, the president, Professor Alexander B. W. Kennedy, occupying the chair. One of the papers read and discussed was "The Manufacture of Standard Screws for Machine-made Watches," by Mr. Charles J. Hewitt, of Prescot.

Mr. Hewitt's paper, remarks Nature, was of an interesting nature. He is the works manager and chief mechanic of the Lancashire Watch Factory, an establishment recently started at Prescot for the manufacture of watches on a large scale in one works. The factory system of watch production has been, as is well known, carried to a very successful issue in the United States, where the Elgin and Waltham Watch Companies annually make large numbers of excellent timepieces wholly by machinery. As in all cases where highly skilled hand labor, performing intricate operations, is superseded by mechanical appliances, the machines used are of a highly organized and costly nature. In the case of the minute parts required in watch making, this feature is very strikingly emphasized. Perhaps some of our readers may remember the exquisite little machine tools exhibited by the Waltham Watch Company at the Inventions Exhibition, in the year 1885. These were a revelation to most English watchmakers, accustomed to the small factories and perfectly rude appliances of the British industry, in which the highest skill of the operators, due to special training from earliest youth, compensated for the lack of ingenuity displayed in the construction of the tools used. In the case of watches, as with so many other mechanical productions, the brain capital expended in the employment of construction of machines bears fruitful interest in the shape of less skilled labor required in their use. The same thing may be observed throughout the whole range of mechanical industry. The file, the hammer, and the chisel are the primitive tools of the engineer, requiring simple inventive power in their inception, but great skill in their use. The planing machine, by which the same end is obtained mechanically, of producing a flat surface, as was got originally by chipping and filing, required knowledge and skill for its production, but a comparatively small amount of those qualities for its operation. The same thing is true, even to a greater extent, in the case of the still more modern machine tool, the milling machine, which is often attended by boys, possessing no mechanical knowledge whatever, during its production of finished forms such as would have required a highly skilled workman in former days.

The beautiful machines referred to by the author in his paper, examples of which were shown at the meetings, carry the same principle many steps farther. As was remarked, the machine shown for making watch screws may be said to stand in the same relation to ordinary engineers' machine tools as costly gems to common building stones.

Mr. Hewitt commenced his description by dwelling upon the difficulties experienced by watchmakers in old times, when there was no general standard for dimensions and pitch of screws, or form of thread. Such was necessarily the case with hand work, but a machine can be depended upon to turn out many thousands of parts exactly similar, so that a screw could be put into a watch made years previously. The advantage, naturally, is most apparent in the case of repairs and renewals. The standard of screws adopted by the Lancashire Watch Company, at their Prescot Works, is that recommended by the committee of the British Association, and described in the report of 1882. It is a V-thread of 47½ degrees, rounded top and bottom through $\frac{2}{11}$ of the height, and the pitch is directly related to the diameter of the formula $D=6P^{8}$. In arranging the standard the first business was to make master taps, which were produced on a small screw cutting lathe specially designed for the work, and having a corrected screw, accurate within very close limits. Taps being thus produced, screw dies were made to the exact standard. When cut the thread requires hardening, and this causes some amount of distortion, which is corrected by grinding the threads with a soft steel lap charged with diamond dust, the operation being performed in the same lathe that cuts the thread. The die used is simply a tapped hole in the center of a small thin disk of steel, it being an object to have as little metal as possible surrounding the hole, so as to reduce the distortion produced by hardening. Although the die is not split, the pressure exerted by the die holder is sufficient to produce a slight modification in the diameter of the screw, and in this way the alteration caused by hardening is corrected. During the discussion this fact was questioned, but Mr. Hewitt says that the statement is absolutely correct. The machine itself is of an intricate design, as may be imagined when it is stated that perfect screws are turned out automatically from the plain rod or wire. There are four hollow spindles through which this wire is fed forward to the operating tools, which are four in number, and are carried on a revolving turret. There is also a further tool for making the slit in the screw head for the turn screw. It would be useless to attempt to describe the mechanism of this very ingenious lathe without the aid of elaborate drawings. Indeed, during the discussion several engineers, well skilled in mechanical appliances, confessed themselves unable to follow the train of mechanism, even with the aid of working drawings displayed on the walls of the theater. It is enough to say that the machine will go on without any attention so long as the wire to form the screw lasts, when it stops of itself.

The Goodwin Sands.

Midway between the North and South Forelands, and right in the fairway track of the most crowded marine highway in the world—the road that leads to London—says the Nautical Magazine, lies that famous shoal, the Goodwin Sands.

There are few larger shoals off the coasts of the United Kingdom. Their extreme length, northeast and southwest, is 17,980 yards, or very nearly ten miles and a quarter, and their greatest breadth 7,669 yards, or a trifle more than four and a quarter miles. The area of the reef which is exposed at dead low tide is a little more than two-thirds of its entire surface, that is to say, two leagues and a quarter in length and about a league in width. Few more erroneous notions exist than the popular idea that the Goodwins are a quicksand. The nature of the particles is, indeed, as firm as the beach of the seashore, and when the yellow ridge has been long enough uncovered to become dry it may be walked upon with security and comfort. No doubt the quicksand theory originated with the discovery that wrecks which become stranded upon the Goodwins gradually settle away out of sight. But it is the nature of all sand when it gets wet to grow of an absorptive character, with a tendency to suck down any object resting upon the surface. Then again, the insidious process of silting caused by the ceaseless flow of the current has much to do with the seemingly mysterious disappearance of vessels upon this shoal.

The character of the various strata of which the Goodwin Sands is composed was revealed by a very interesting experiment made at the instance of the Brethren of the Trinity House by Sir J. H. Pelly, in the year 1849. The purpose of the undertaking was to determine the geological formation of the sands, and to ascertain on what bed they rested. In order to carry out this scheme an iron cylinder of two feet and a half in diameter was constructed in ten lengths, and sunk by the application of atmospheric pressure until it had gone down a depth of seventy-nine feet, when it was stopped short by coming to the solid chalk. The results of this boring are very interesting, as establishing the exact nature of the famous shoal. For the first ten feet nothing came up but pure, bright sand. From this depth up to forty-six feet sand continued to be bored through, turning gradually to the color and substance of blue clay, with a strong sulphureted smell. At fifty feet fine shingle, intermingled with broken shells and chalk nodules, was found to exist. Six feet deeper came another stratum of clear sand, then in successive layers for the next twelve feet, clear broken shells, decayed wood, sea coal, fine stones and shells; dark, rank-smelling sand, more shells, and black nodules of clay. At seventy feet was again found clear, bright sand, containing many small pebbles, and permeated with chalky water, and this continued to the solid chalk at bottom.

Ornamenting Glass.

The following is an example of the means of carrying out the inventor's process: A coat of acid resist is laid upon the glass; from the parts forming the background to the design the "resist" is removed with a stencil; soda and hydrofluoric acid are then poured upon the surface. Hydrofluoric acid is next applied; the resist is then removed and the glass is cleaned. The glass is next coated with stain, and by means of a stencil the ornament is freed from the stain, which remains as a protection for the background. The stain is then burnt into the glass. The glass is then taken from the kiln, cleaned, and the required outline traced upon the glass, the background being filled with acid resist. The solution of soda and hydrofluoric acid is again poured on so as to leave a white "mat" on the whole ornament, leaving the outline, which is protected by the resist, clear. The shading-in is then done according to the ordinary process of the trade.

A SOCIETY has been recently established in Chicago entitled "Association of Practical Electricians." The object of this organization, of which Mr. George E. Sanford is president, is the education and advancement of men engaged in electrical work.

New Method of Casting Iron.

The American Architect and Builder copies from La Revue Industrielle a description of a new method of casting iron. It is well known, the editor adds, that iron castings are very liable to "blowholes," "cinders" and so on, which occur in the middle of the mass and destroy its strength, or at least its appearance. These defects are caused by particles of scoriæ, oxide or other impurities, which flow out of the melting furnace into the ladle, or are formed by the contact of the hot metal with the air or with the sand of the mould; in fact, if the molten iron is watched as it is drawn from the furnace, the surface is soon seen to cover itself with dull lumps of scoria and impurity, which rise to the surface. It is usual to fill the moulds more than full, so that the lighter substances may float to the top and collect in the portion to be subsequently cut off; but this does not entirely remove them. M. Van Riet, to give the impurities time to separate from the melted iron before it runs into the mould, sets on top of the flask a sort of little bath tub, lined with some refractory substance, and presenting three cylindrical hollows of different sizes, communicating with each other by tangential channels. The iron is poured from the ladle into the larger hollow, where it whirls around for a time and then escapes into the second basin, where it revolves in the opposite direction. From this it reaches the third compartment, which has a hole in the bottom, and, as this hole is set over the pouring hole in the flask, the iron then runs out into the mould. When the metal is poured into the large end of the tub, it is seen to whirl around until the surface is covered with the larger particles of impurity, which collect near the middle, the centrifugal force developed by the whirling serving to separate the purer and more liquid iron from the light and spongy scoriæ, very much as cream is separated from milk by a centrifugal churn, or molasses from sugar in the centrifugal tanks of a refinery. By the tangential channel the purer iron passes into the second division, where the same process is repeated, the scoriæ, which are now in fine particles, collecting in the middle, while the liquid metal keeps to the outside. The third canal, also tangential, leads this twice purified iron to the third compartment, from which it runs into the mould, a few particles of dross floating up from the mould and collecting at the top. On cooling, the first division of the "bath tub," or "poche intermédiare," as its inventor calls it, is found to contain the large lumps of cinder, while the second compartment contains a spongy mass of impurity, in the shape of an inverted cone, the base of which occupies the whole area of the compartment, the pure metal having escaped around the sides below. In the third compartment nothing appears but a little ring of particles, the last to rise to the surface out of the mould. The castings made from iron thus purified are extremely sound and solid, and there is no loss of metal, all the pure and liquid iron escaping into the mould. The "bath tub" is easily cleared out, and is relined for a second operation by plastering with fire clay mortar.

Pussy Rides in a Flywheel.

"I have got a kitten at home," said W. L. Slocum, of Manchester, N. H., "which I think has traveled about as rapidly and as far in one day as any other animal in the world. One morning, about a month ago, the kitten strayed into my factory a short time before the machinery was started up. It got playing around the floor and soon took up its position in the big flywheel, where, without being noticed, it nestled down and went to sleep. Soon the machinery was put in motion, the wheel moving so rapidly that the poor kitten could not escape. Indeed, it is probable that puss was soon unconscious from dizziness.

"A little computation shows the distance the cat traveled. The wheel moves at the rate of 250 revolutions a minute, and at every turn pussy went 17 feet. As the wheel was kept in motion 390 minutes without stopping, the kitten must have traveled during that time a little over 300 miles. When the wheel was stopped the kitten was discovered and taken out more dead than alive, but it shortly recovered, and, although it has remained about the factory ever since, it is observed that it always gives the flywheel a wide berth."—St. Louis Globe-Democrat.

Pussy Captures an Eagle.

Charles Wiswell, of Carbonate, Lawrence County, S. D., has a cat that is a king of its kind. Besides being a good mouser, this remarkable feline is death to mountain rats, night hawks, and other small game, not long ago bringing home as the result of its prowess a large jack rabbit. But the most remarkable incident in the cat's history happened a day or two ago.

It was an encounter with a full grown bird of freedom, and pussy was the victor. The cat was sitting on a pile of quartz patiently awaiting the reappearance of a chipmunk, which but a moment before it had chased into a hole, when suddenly the sky above the cat became darkened, and an ominous swish as if from a rapidly moving body fell upon pussy's ear. The cat sprang aside with a motion so rapid that the eye could scarcely follow it, and in the place it had occupied but a moment before stood a full grown bald eagle, its plumage ruffed and thirsting for blood. Pussy had sand and accepted the gage of battle, and in less time than it takes to tell it, the famous "cat and parrot" time was being re-enacted. It was a desperate struggle, and although pussy was pretty badly scratched by the eagle's talons, it, when taking the initiative in the fight, secured a decided advantage, having landed on the eagle's back. For a few moments the air was filled with fur and feathers, and the ground was all torn up, but pussy held on, and in a short time succeeded in biting through the neck of its antagonist. The struggles of the eagle grew weaker and weaker, and soon ceased altogether, and pussy, exhausted by the violent exertions and sore from wounds inflicted by the eagle's talons, rested for a moment, then, as calm as though sitting on a rug before the kitchen hearth, went carefully over the ruffled fur, made its toilet, and, seizing the body of the vanquished antagonist, drew it with much difficulty to the home of its master. Laying it at the master's feet, the cat purred its satisfaction, and in this way boasted of the victory.

The combat was witnessed by a number of people, every one of whom expressed a desire to buy the cat, but Mr. Wiswell says he would not sell it for the best mine in the Black Hills. The eagle measured six feet four inches from the tip of one wing to that of the other.—St. Paul Pioneer Press.

He's Dead at Present.

Julius Cæsar was considered a great man, and so he was. But he had his limitations, and some unknown writer gives a few illustrations: He never rode on a 'bus in his life; he never spoke into a telephone; he never sent a telegram; he never entered a railway train; he never read a newspaper; he never viewed his troops through a field glass; he never read an advertisement; he never used patent medicine; he never cornered the wheat market; he never crossed the Atlantic; he never was in a machine shop; he never went to a roller skate rink; he never controlled a manufacturing company; he never dictated a letter to a typewriter girl; he never invested in railway stock; he never played a game of billiards; he never saw an electric light; he never listened to a phonograph; he never posted a letter; he never had his photograph taken.

RECENTLY PATENTED INVENTIONS.

Engineering.

ROTARY ENGINE.—Oscar E. Morse, Dillon, Montana. This engine has a casing in which are cam races, and within the casing is a rotary cylinder in which the pistons move, links connected to the pistons extending beyond the center of the cylinder, and projections carried by the links having movement in the cam races. The construction is designed to be very simple and economic, having but few wearing parts, and working either forward or backward with equally good results. A dead center is avoided in this engine.

BOILER.—Benjamin F. Conner, Columbia, Pa. This invention provides a boiler consisting of a series of water circulating sections set one on top of the other and forming a passage for the smoke and gases. Surrounding the sections is an exterior shell into which leads the upper end of the smoke passage. The exterior shell is preferably made in sections simil r to the water sections. The spaces between the several water sections are readily cleaned of soot or other accumulations, and the heat generated by the fuel is utilized to the greatest advantage to heat the water in the sections.

Railway Appliances.

CAR FENDER.—Elie B. Graff, Baltimore, Md. This device is adapted to be connected to either end of the car, and has cushions, springs, and a receiving bed, designed to prevent injury to persons caught in the way of a moving car. The bed of the fender is preferably of heavy woven wire or similar material, fastened between side bars of spring steel, and made elastic by means of coil springs. Along the front edge is a hollow cushion, preferably of soft rubber, a similar second cushion being also attached to the rear upturned edge, to prevent violent contact of one falling with the car body.

Electrical.

TELEPHONE.—John Serdinko, San Antonio, Texas. In this instrument, combined with the magnets of the magneto call, the bobbin and the diaphragm fixed in front of the latter, an iron disk is fixed in proximity to the magnets, and a core fixed to the disk extends through the bobbin into close proximity to the diaphragm. The improvement is designed to afford a simple and effective magneto telephone in which the receiving and transmitting instrument will receive its magnetism from the magnets of the magneto call.

Mechanical.

DEVICE FOR TRANSMITTING POWER.—James Evans, Linn Grove, Iowa. This inventor has devised a simple and flexible device, particularly adapted for transmitting power from the pump rod of an ordinary windmill to a washing machine, churn, or other light machine. It is arranged to pass around corners and angles to be connected with a macbine in any position desired. To the pump rod is attached a rope extending over a guide pulley to an oscillating lever, from whose free end extends a transmitting wire, the latter extending over a guide pulley, etc., to convenient connection with the machine to be operated. A coil spring is arranged to take up the slack on the return stroke of the pump rod.

SAW GUMMER OR SHARPENER.—Jerrold E. Oglesby, Ladonia, Texas. This is an improvement in devices for grinding the saws of a cotton gin or linter, the inventor providing a simple apparatus which may be easily applied to a gang of gin saws, and quickly and nicely adjusted to properly fit the teeth, entering between them to any desired distance. The apparatus also has an efficient feed mechanism which moves the saws tooth by tooth as they are ground, while also regulating the pitch of the grinder, the machine doing the work rapidly and nicely to leave the teeth their full original length and openness.

Agricultural.

CHECK ROW PLANTER.—Edward W. Collins, Coalville, Iowa. With the use of this machine a marking compound is dropped upon the ground to check the rows, simultaneously with the dropping of the seed from the boxes. The machine also smooths or levels the ground to receive the marking compound, and a driving mechanism operated from one of the supporting wheels has simultaneous and timed action upon the drop slides of both the marking and seed boxes.

Miscellaneous.

SMELTING TITANIC IRON ORE.—John L. Randall, Brooklyn, N. Y. This inventor has devised a method of and composition of matter for smelting by which this ore may be profitably smelted in an ordinary furnace, and the operation continuously conducted without injury to the walls of the furnace. Employed with the ore is a flux composed of cast iron fragments, puddling furnace slag, feldspar, all used with any suitable fuel in a blast furnace. With the method described a superior cast iron is produced, and the cost of operating the furnace does not exceed that of smelting the ordinary iron ore.

HAME TUG.—Julius C. Clausen, Hensall, Canada. This tug is hinged to a buckle, and has cross bars provided with notches on their inner sides, cross rods being arranged in front of the bars. The trace and its fastening hook has a tongue and out-turned point adapted to engage the cross bars and rods. To adjust the trace it is only necessary to slacken the tension on it, and when adjusted there is always a straight pull on the tug.

HORSE COLLAR.—William T. Fell, London, England. This is an open-topped collar constructed upon a steel spring as a frame which occupies the position of the fore wale and also serves the purpose of the hames. It is designed to facilitate the operation of harnessing and unharnessing of vicious and timid horses, as the collar does not need to be passed over the animal's head. A snap lock engages the ends of the two members of the collar, and a safety catch engages the bolt of the lock to lock it in closed position.

SHOE.—Thomas F. Marshall, Oakland, Cal. A lining for the elastic gores of boots and shoes, that will be both yielding and watertight, has been devised by this inventor, the lining also presenting a substantially smooth surface to the foot. A watertight lining for the gore is connected by a bellows fold with the edges of the boot or shoe lining, the members of the bellows fold lying normally beneath the lining and meeting at an angle to lie substantially flat on each other.

DRYING RAW OR PREPARED GOODS.—August Rubenkamp, Dortmund, Germany. The apparatus designed by this inventor allows of the gradual warming and cooling of the goods treated. It comprises a series of drying chambers, each having lower channels connected with a source of heat and with conduits from which lead valved outlets. The heated air which dries the goods is afterward brought back to the closed furnace to effect combustion of the fuel.

DOOR HANGER.—William F. Johnston, Buffalo, N. Y. The blocks adapted for attachment to the door, according to this improvement, have inclined faces with longitudinal grooves, while adjustable inclined end bars have loops on their upper ends and projections on their lower ends that work in the grooves. A horizontal top bar, on which wheels are centrally carried, is adjustable at its ends in the loops. The construction is such that the door may be readily hung in thorough balance, and easily adjusted to keep it plumb, no matter how it may warp or settle.

ADVERTISING MACHINE.—William T. Shirley, St. Elmo, Tenn. This inventor has devised improvements in mechanical devices for the continuous display of advertising cards, and particularly adapted to exhibit a series of advertisements on a longitudinally moving sheet of canvas or other flexible material. The improvement comprises a novel, power-driven, compact and simple apparatus, which moves the display sheet in one direction until all the advertisements have been exhibited, then reversing the direction of travel of the sheet to display the same advertisements in reversed order.

WAGON BRAKE.—Vardiman T. Sweeney, Springfield, Ky. This is an improvement on a formerly patented invention of the same inventor, designed to simplify the construction and increase the efficiency of the brake, providing also for conveniently applying the brakes to both the forward and rear wheels of the vehicle, either by backing the team or by means of a lever or its equivalent.

SASH FASTENER.—John H. Dickson, New Philadelphia, Ohio. According to this improvement, the socketed side bar of the sash and socketed casement are rubber lined, and a slide bolt adapted to be longitudinally moved therein. The sliding locking bolt has a projecting pusher bar on which a spring acts, while a hinged pendent locking plate, sliding on its bearing, is adapted to be raised and adjusted and dropped into engagement with either side of the pusher bar. Applied to the upper and lower sashes, it affords means to lock either sash partly open or closed.

SASH LOCK.—Charles A. Robert, Portland, Oregon. This is a lock of simple and inexpensive construction, adapted to be located in the jamb of the window to engage with the sash, the lock being manipulated from the front of the window frame. It is so made that two locks may be employed in connection with each sash, one for the upper and the other for the lower, without having either interfere with the other, and without presenting an unsightly appearance.

TRACE.—George S. Duffin, Cheneyville, Ill. This trace is formed in two sections, united at their adjacent ends by jointed coupling, the shanks of which enter and are riveted in the split ends of the trace sections, the inner side of one section having a rearward extension crossing the coupling to take the wear, and the coupling being in rear of and wholly independent of the back strap connections. The construction prevents twisting of the trace, and gives perfect ease and freedom to the animal at all times.

HAY PRESS.—John F. Adams, Aledo, Ill. With this machine hay, grain and similar material may be raked from the field, delivered into the body of the machine and automatically baled and delivered in compact form upon the ground. The construction is such, also, that the rakes may be detached and the baling apparatus connected with the separator of a thrashing machine, so that the straw which issues from the machine may be gathered and baled.

MICROMETER GAGES.—Herman V. Bernhardt, Brooklyn, N. Y. An automatic stop for gauges and similar tools, designed by this inventor, is so arranged as to prevent the operator from exerting an overpressure and causing a consequent spreading of the contacting ends of the micrometer or other tool. The invention consists of an internally toothed head or cap adapted to be engaged by a spring-pressed pawl or pawls mounted to slide laterally on and turning with the micrometer spindle.

INK STAND.—Francis B. Pratt, Canton, Miss. In a base piece circularly recessed at two points in its top, one recess has a funnel-shaped bottom, and a passage extends therefrom to the bottom of the other recess, in which is an interiorly threaded shell, in which screws a hollow plug, there being a set screw adjustable in the top of the plug. The ink stand may be readily filled and kept clean, and the supply of ink in the ink well graduated exactly as needed.

PAINT.—Carl L. C., Max W. H., and August M. H. De Bruycker, Brooklyn, N. Y. This is a new enamel paint designed to leave a good body, so that one coat of it will equal two coats of ordinary paint. It is made of Venice turpentine, linseed oil and litharge, mixed and boiled, to which are added turpentine, benzine, white lead, zinc white and plaster, the whole being ground together.

VALVE FOR OIL CANS.—Charles Wagner, New York City. This is a valve attachment for the spout of a jet oil can which affords a reliable and convenient means for regulating the discharge of any desired quantity of oil from the can, prevents leakage and seals the receptacle against accidental discharge of its con-