IMPROVED TONGS FOR LAMP CHIMNEYS, ETC.

The illustration herewith represents a recently patented invention of Mr. John T. Evans, of Minersville, Utah Ter. The device consists of tongs in which a spring is inserted near the pivot to press apart the outer ends, these ends being curved outwardly and supporting upright arms, on the upper and lower ends of which are slightly curved cross pieces. Cords or bands of a soft material are wound upon these cross pieces, to prevent the breaking of a chimney or fountain of a lamp they are adapted to seize. On the rear of the handle ends of the tongs are formed knife blades, by which the device is adapted for the trimming of wicks and other purposes.

EVANS' TONGS.

Inventors, Take Courage.

A bill is before the United States Senate authorizing the Committee on Patents to sit during the recess of the Senate, to inquire into the condition of the present system of issuing patents and the cause of delay in granting the same. It is to be hoped that the measure will receive its sanction, and that the committee will enter upon their task of investigation vigorously, and we are quite sure they will discover the necessity of recommending an increase of appropriation for the Patent Office to enable the Commissioner to increase his clerical force and keep the work of the office well up.

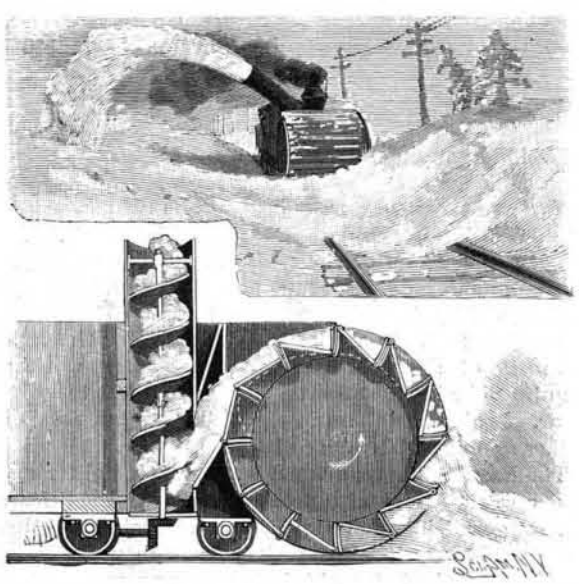
AN IMPROVED BASKET OR CARRIER.

A simply made basket or "carrier," of a construction also suitable for the manufacture of light barrels and other receptacles, is illustrated herewith, and has been patented by Mr. Isaac J. W. Adams, of Adams & Co., Laurel, Del. It has inner and outer slats oppositely inclined, so that the two series cross each other, the slats being held together by hoops at their ends and middle portions, while nails or other fastenings are driven through the slats and hoops from the inside and clinched at their points. A small inner hoop is placed near the bottom as a support for the bottom board, the latter being also held by nails passed through the lower outer hoop and slats. A hoop is likewise placed on the inside at the upper end.

ADAMS' BASKET OR CARRIER.

AN IMPROVED SNOW PLOW.

The illustration herewith represents a snow plow designed to remove the snow from a railroad track and force it to quite a distance to one side, leaving a solid and compact wall at each side. It is a patented invention of Mr. Oren Williams, of Gouverneur, N. Y. The body of the plow is made similar to a box car, and adapted to receive an engine to operate the plow, which is pushed forward by a locomotive in the usual way. From each side of the box body arms are forwardly projected, between which is mounted a drum wheel divided into a series of pockets by transverse semicircular partitions extending from end to end of the drum. In front of each of the partitions a radial slot is produced, the center of the circle of the slots being immediately above the partitions, at which point the upper ends of discharge plates are pivoted, one plate for each pocket. A trip plate is rigidly attached to the inner face of each of the frame arms, having a cam face, indicated by dotted lines, whereby the discharge plates are held in open position to allow the pockets to be filled with snow as the pockets are ascending on the forward side of the wheel, while these plates assume a position to push the snow out of the pockets into the hopper at the rear during the further progress of the wheel. Between the drum wheel and the box body is an essentially T-shaped tubular casing, its horizontal member constituting the base, and in this horizontal member are two screw conveyers, one with a right hand and the other with a left hand pitch, a short vertical conveyer being centrally journaled in the casing. To the upper end of the vertical conveyer a second conveyer is hinged, the latter projecting upward within an inclined portion of the casing. The upper vertical and connected inclined conveyers are adapted to be revolved at least once and a half or twice as fast as the two lower or horizontal conveyers. A hopper is attached to the forward end of the T-shaped tubular casing, and extends from side to side of the main frame of the plow, communicating with the horizontal and vertical portions of the casing, the forward end of the hopper being open and facing the wheel. The snow is continuonsly delivered, as the plow is operated, from the several pockets of the wheel into the hopper and upon the horizontal conveyers, the latter continually forcing it from the sides upon the vertical conveyer, by which it is thrown to a distance from the track at one side.



WILLIAMS' SNOW PLOW.

The Cocoanut Crab.

On the Agala Islands, in the Indian Ocean, there is a very strange crab. He is known to science as the *Birgus lutro*, or thief crab, and his depredations are carried on in the cocoanut groves which abound on these islands. This crab grows to be twenty-two inches long, measuring from the tip of the tail to the end of the long claw, and resembles in generalappearance the hermit crab. The abdomen is fleshy and not covered with a shell, and in order to protect this it is the habit of the thief crab to take forcible possession of a shell of the Trochas family, in which it lives. It is nocturnal in its operations, and has the faculty of selecting the trees having the finest cocoanuts upon them. Climbing up the trunks frequently for twenty-five feet, it reaches the limbs and severs the stems which attach the nuts to the branches. These are frequently as thick as your three fingers, and would require a strong knife to cut them. Having brought down the nut, the crab now descends to the ground, digs a hole and rolls the cocoanut into it.

He then commences to tear off the husk, fiber by fiber, until the nut is completely exposed, and then breaking in what is known as the eye he eats the meat completely out. The fibers stripped off the cocoanut by this crab will frequently fill a bushel basket, and they are gathered for making mattresses, and are also twisted into ropes. Cocoanut groves are cultivated by those who make a business of extracting the oil from the nuts to be used for illuminating purposes, and the depredations of this crab are of a very serious character, in many cases the efforts of the natives to exterminate them proving fruitless. CHAS. D. BAKER.

Treatment of Rifle Barrels to Prevent them from Becoming Crooked while Firing.

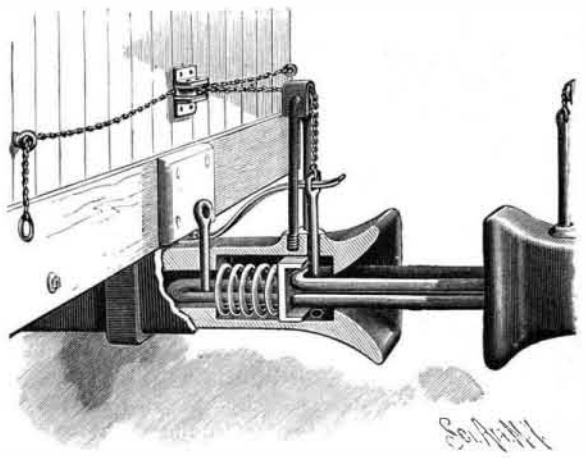
BY H. S. MAXIM.

The gun barrel having been finished in the ordinary manner is mounted in a lathe so that both its external and internal surfaces run true. Acurrent of carbureted hydrogen gas is then passed through the bore, and at the same time a series of gas jets are applied to the external surface of the barrel. As the barrel becomes heated it runs out of truth, and this is corrected from time to time by straightening it by means of levers or mallets, or otherwise, while it is in the lathe and while hot. The barrel thus treated is not liable to become crooked while firing. The current of gas passing through the bore prevents damage to the gun by oxidation during the straightening operation.

THE official test of the Bell Telephone Company's long distance telephone system was made February 16, between Buffalo, New York, Albany, and intermediate points. A local newspaper says: A conversation with the metropolis was carried on most successfully. The line worked entirely free from induction, and the distinctness with which the voice could be heard at so great a distance was surprising. Conversations with Boston, Syracuse, and other points werecarried on successfully. The company have fitted up their rooms at 14 West Seneca Street with thirteen compartments for the convenience of patrons, who can thus carry on conversations in strict privacy.

AN IMPROVED CAR COUPLING.

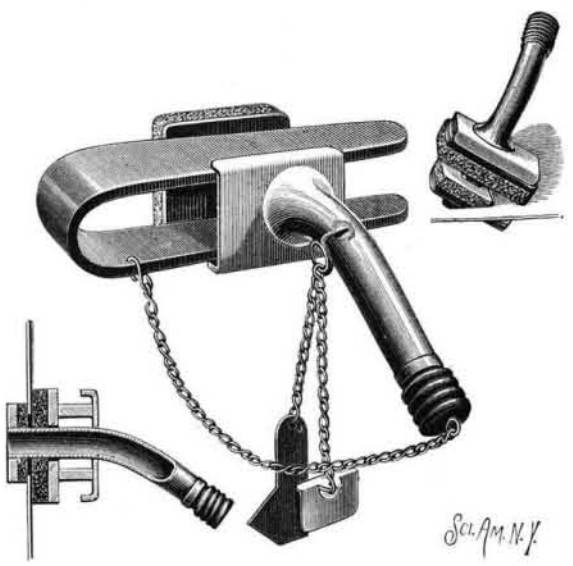
The car coupling herewith illustrated has been patented by Mr. John Clarridge, Sr., of Libertyville, Iowa. The rear of the draw bar chamber in which the link is held, surrounded by a spiral spring, has an abutment against which the spring strikes, shoulders limiting the forward motion of a follower pressed outward by the spring, and one link being permanently retained in place by a pin passing through a vertical aperture at the rear. The follower, when the coupling is ready to be connected with another coupling, is held in its outermost position, and then forms a support for a coupling pin held in a vertical aperture in the drawhead. To the coupling pin is attached a chain extending upward and through two pulleys to either side of the car, within convenient reach of the train men, whereby cars may be uncoupled without going between them. A spring passing through a suitable opening in the top of the coupling pin is adapted to force the pin down when the entering link of an approaching car enters the drawhead and pushes back the follower.



CLARRIDGE'S CAR COUPLING.

AN IMPROVED SPOUT CONNECTION FOR CANS, ETC.

An attachable spout especially adapted for use with the tin and thin metal vessels of commerce, without the use of solder, and which can be readily removed when the vessel is empty, is shown in the accompanying illustration. It has been patented by Mr. Ernest W. Vacher, of Moore's Station, Texas. The outer end of the spout is adapted to receive a screw cap, and around its inner end is secured an oblong rectangular metal plate, the spout fitting in near one end of this plate, which is lined with felt on the side that is to come next the inner wall of the vessel. A similar metal plate is fitted to slide on the spout just outside the can, this plate being faced with felt on the side next the outer wall of the vessel. Beyond this sliding plate the spout is provided with a shoulder and corresponding fixed plate, these two plates being slightly inclined so that a wedge inserted between them, when the inner end of the spout with its plate has been inserted in the can, will press the felt-faced sliding plate close to the outer wall of the can, at the same time that the plate, lined with felt on the inner end of the spout, is drawn against its inner wall, thus making a thoroughly tight joint. To insert the spout in the can, a small cutter and pattern are used, these being attached to the spout by light chains. A hole of just sufficient size having been made, the aperture is pried open sufficiently to insert one end of the plate fixed on the inner end of the spout, which is then pressed completely down through the aperture. The device is then turned one-quarter around and the plate pressed up against the inner side of the aperture, when the sliding plate is pressed against its outer edge, and the wedge inserted and driven tight. The construction of the device is extremely simple, making an article which can be sold at a low price, while an absolutely tight joint is made on the thinnest metal.



VACHER'S ATTACHABLE CAN SPOUT.