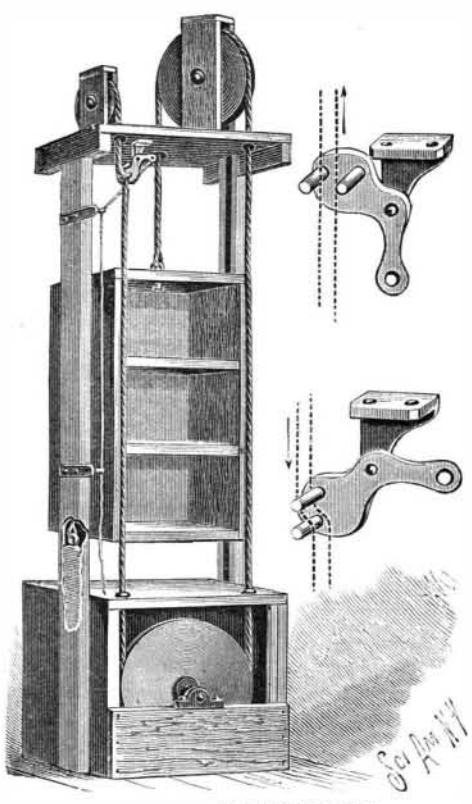
AN IMPROVED DUMBWAITER.

We give an engraving of a dumbwaiter recently patented by Mr. Anton Larsen, of 413 and 415 East Twenty-fourth Street, New York City. This apparatus is superior to others in point of simplicity, positiveness of action, and manageability.

The waiter is adapted to suitable guides, which extend through the several floors, and is suspended by a rope attached to the top of the waiter, passing over a pulley at the top of the waiter shaft, thence downward



LARSEN'S DUMBWAITER.

around a pulley at the lower end of the waiter shaft, thence upward over a pulley at the top of the waiter shaft, thence downward into a tube, where it is attached to a counterbalance weight. The rope, in passing upward to the last named pulley, goes through the brake, which is shown in detail in the two smaller figures.

The brake consists of an angled lever pivoted to an arm extending downward from the cover of the waiter shaft. One arm of the weighted lever is furnished with a pair of studs, which extend on opposite sides of the rope. The other arm of the lever is furnished with an eye, in which is inserted a small rope, by means of which the brake is operated. The arm of the lever which is provided with the studs is heavier than the other arm, and tends to engage the rope, as shown in the lower figure, whenever the lever is released, and when the rope is engaged in this way it is locked, and the waiter is prevented from moving.

This is a very simple but effective device for preventing the waiter from moving accidentally, and as that portion of the rope by which the waiter is operated moves in the same direction as the waiter, the brake will be automatically applied when the waiter descends, unless the angled lever is tilted by the operator by means of the rope. Wooden deadeyes are provided to prevent the rope from making a noise while it passes through the framework.

NEW SOLDERING MACHINE.

The engraving represents a new soldering machine for soldering sheet metal can bodies. This machine is provided with a device for bending in the ends of the can body at the seam, as shown in the detached view, preparatory to passing them through the machine.

The machine has an intermittent feed motion, which takes the can body from the horn at the front of the machine, carries the body forward to the bending dies, where the ends of the body at the seam are curved up as shown. The next forward movement of the body carries it through the fluxing device, which causes the seam to touch the flux, while the flux is prevented from entering the can by the turned-up ends. The next forward movement carries the can body through the soldering device, which closes up the seam with solder. Another movement carries the can body across the wiper, which removes the superfluous solder. The next movement carries the can body between a pair of dies, which straighten the body and restore it to its original form. Another movement carries the can body out of the machine, when it is ready for further manipulation. The several movements of the parts of the machine are effected by an ingenious arrangement of cams and gearing, and the whole is driven by any suitable power.

By means of this improved machine the solder is applied to the seam, and is prevented from entering the inside of the can body during the process of soldering. In this manner the spoiling or poisoning of the contents of the finished can is avoided, and, furthermore, a considerable saving in solder is effected.

Further information regarding this invention may be obtained by addressing the Jensen Can Filling Co., Astoria, Oregon.

DECISIONS RELATING TO PATENTS.

U. S. Circuit Court.—Eastern District of Pennsylvania.

WRIGHT *v.* POSTEL.

BUTLER, *J.:*

Letters patent No. 363,936, granted to Charles A. Wright, for improvement in card-gilding machines, declared invalid, said Wright being held not to be the first inventor.

Where, in a suit for infringement, it appeared that the application on which the patent in suit was granted was filed January, 1887, and that some months previous thereto the defendant had devised and constructed the machine complained of as an infringement, and that in the winter of 1883-84 the plaintiff had described it to his solicitor, and that in 1886 he repeated the description more fully, and that he did not intend at either date to reduce the invention to practice, his only concern being to protect himself in the construction and sale of the machine made under an earlier patent, and did not ever intend to apply for a patent at all unless it should seem necessary as a means for preventing others from making these machines, and that at the time of applying for patent he had not embodied his invention in a machine for practical use, and it further appeared that at the time of his first conversation with the solicitor he was as well prepared to reduce his invention to practice and apply for a patent as he was at the date of the second, and that any competent mechanic accustomed to such work could have constructed the machine from the first description almost, if not quite, as readily as from the second; *held* that the plaintiff has failed in diligence.

It is the duty of inventors to use reasonable diligence in reducing their conceptions to practice and applying for patents when desired, and they cannot neglect it without danger to their rights.

The claims of letters patent No. 290,303, granted to Charles A. Wright, for machine for gilding cards, strictly construed, in view of the state of the art, and confined to the particular character of machine described and manufactured under it, and when thus construed the defendant declared not to infringe.

U. S. Circuit Court.—District of Maine.

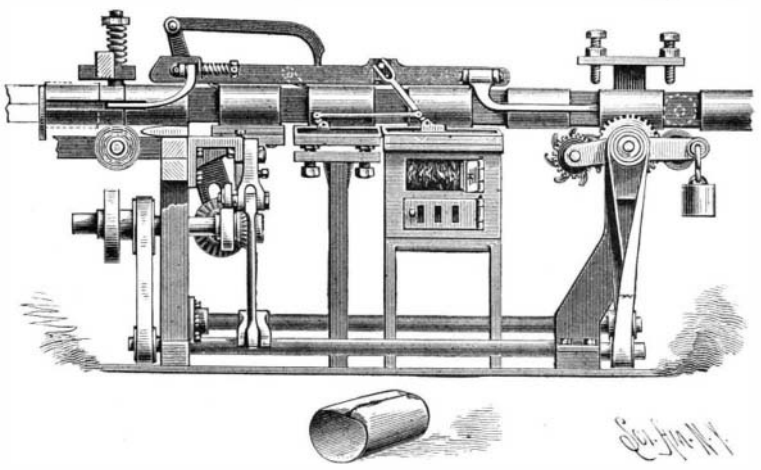
ASHE *v.* MUTUAL LASTING COMPANY *et al.*

COLT, *J.:*

Suit was brought under Revised Statutes of the United States, section 4,915, to determine whether A. or G. and C. were the inventors of a machine for which a patent was granted to G. and C., claiming, "in a tack strip heading machine, the combination of a support for the tack strip, consisting of a disk having peripheral teeth to engage between the shanks of the strip, a clamping jaw, and a header." The evidence showed that A. was the first to suggest the use of a wheel having teeth to engage between the shanks of the strip, but that the wheel was to have a positive movement, which was found to work imperfectly, while in the perfected machine of G. and C. the strip is not fed by the positive movement of the wheel, but the wheel is moved by the strip. *Held*, that A.'s claim to be the inventor of the complete machine is not sustained, and his bill will be dismissed.

American Locomotives in the Holy Land.

United States Consul Henry Gillman, at Jerusalem,



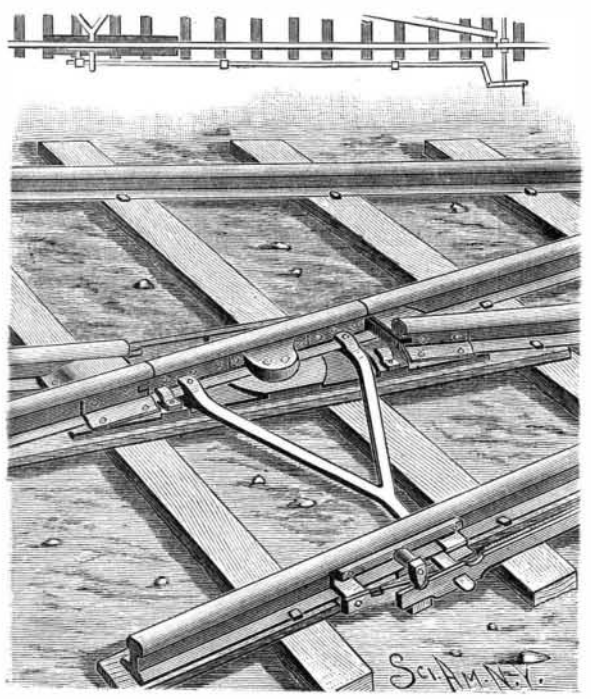
JENSEN'S SOLDERING MACHINE.

reports to the Department of State, under date of September 22, that three American locomotives made in Philadelphia, and intended for the new railway from Jerusalem to Jaffa, have arrived at Jaffa. The consul says it must interest American citizens to know that the first locomotives ever used in this ancient land were made in the new world.

NEW RAILROAD FROG.

The disagreeable jar and the noise produced by the passage of the car wheels over a railroad frog is well known to every one familiar with railroad travel, and the railway officials know only too well the amount of wear and tear caused by the use of the ordinary frog, but until lately no efficient substitute for this frog has been devised.

Mr. James Baird, of Chignecto Mines, Nova Scotia, Canada, has recently invented and patented a railroad frog over which locomotives and cars may pass as smoothly as upon a continuous track. In this invention, which is illustrated by the annexed engraving, at the point of intersection of the inner rails of the two



BAIRD'S IMPROVED RAILROAD FROG.

tracks the rails are removed, and a pivoted track section or frog is placed, to which is attached a forked lever for turning it on its pivot so as to cause it to coincide with either of the track rails.

The forked lever extends underneath the outer rail and is connected with a rod which extends to an angled switch lever, so that the frog is made to move simultaneously with the switch rails. A stop is provided for holding the frog-operating rod in one of the two positions in which it may be placed. The pivoted rail section or frog is supported by a heavy metallic plate resting upon two or more ties, and the ends of the converging rails adjoining the frog are held in proper relation to each other by wedge-shaped distance pieces. The details of the frog and switch operating rods and levers are shown in the smaller view of the engraving.

The Diamond.

The diamond has been so long regarded as a natural crystalline form of carbon that one remembers with surprise that this assumption rests on such slender scientific support as the similarity of atomic weight, and the property of its gaseous combustion product to cause a precipitate in baryta or lime water. As it appeared not incompatible with this knowledge that the diamond and carbon might bear the same relation to each other as nickel and cobalt, Professor Victor Meyer has suggested the further investigation of the subject. In order to obtain a derivative whose preparation entailed no loss of material and yet admitted of easy determination of its physical constants, Herr Krause led the product of combustion in oxygen gas over red-hot copper oxide and then into ammonia water, from which solution he made the neutral sodium salt. This salt was found to correspond to the chemically pure carbonate in its crystalline form, water of crystallization, solubility in water, melting point, and electrical conductive power, so that there can remain no doubt as to the identity of the two substances.

The Phonograph Forestalled.

The sea serpent being dead, and the big gooseberry smashed, what are called forecasts of the phonograph are turning up. One even older than that of Cyrano de Bergerac has been found by Lieut.-Col. A. De Rochas in the April number of the *Courrier Véritable*, a small monthly organ published in 1632. "Captain Vosterlich," it reads, "has returned from a voyage in Australasia. He reports having passed by a strait below that of Magellan; he landed in a country where nature has furnished men with certain sponges which retain sounds as other sponges do liquors. So that when they wish to ask something or confer at a distance they speak into one of the sponges and send it to their friends, who, having received it, press it gently and make the words come out."