

IMPROVED CLOTHES LINE FASTENER.

We have had washing machines innumerable, sadirons, ironing tables, etc., in endless variety, until we had almost reached the conclusion that there was nothing connected with the laundry but that some ingenious inventor had, of late years, improved upon its construction, and that the end of improvements in this line was near at hand. The present device shows us, however, that, in one respect at least, the laundress's work has not been perfected, namely, in the operation of hanging out the clothes to dry.

The invention illustrated herewith offers a way of doing this easier than any previous plan that has come to our knowledge, and we recommend it to the favorable consideration of our house-keeping readers.

With the tenement houses of large cities, where building space is economized to the utmost, there is very little or no yard in which clothes can be dried. Consequently the roof is utilized, and where its accommodations fall short, as usually is the case, since professional washerwomen, as a rule, dwell in such localities, the expedient adopted is to reeve lines leading from the various windows to through pulleys on adjacent buildings, and to fasten the clothes on these. It is obvious, however, that only one part of the endless rope can be utilized; and that as soon as that is full, the nearest garment enters the further pulley, and so chokes it. Hence just half the double line is empty. The present invention supplies a means by which both parts of the rope can be utilized, by simply substituting, for the block which may constitute the distant pulley of the endless rope, a roller so constructed that the clothes, while attached to the line, can easily pass around it. The shape of this roller is shown at A, Fig. 2, where it is represented as attached to a post by simple devices which allow of its angle being adjusted so as to tauten the rope.

This thus doubles the capacity of the drying accommodations, and may, for this reason, prove a really valuable invention in the localities we have noted.

The lower engraving, Fig. 1, represents more clearly how the device is arranged both to economize room as well as to save labor. The line, instead of being attached rigidly to several posts, passes over the pulleys of the shape shown, on their summits. The arrangement of two pulleys on one post is shown on the right. The line again forms an endless cord; and as the clothes easily pass around all the pulleys, it follows that the laundress can stand still and fasten on one piece at a time, pull the rope along for a short distance, fasten on another, and so on until the line is full, when the first garment, after traveling around all the pulleys, will have returned to its starting point. This saves carrying a basket of heavy clothes, for the circuit of a yard during hot or very cold weather. To render the endless rope easily moved, its bight passes over a horizontal roller at B, which is turned by a belt from the drum, C. This part of the device may, if desired, start from the kitchen window or just inside the same, so that the operator need not go outdoors at all, but, standing in the house, may fill the line without risking injury to health caused by passing suddenly from a warm laundry to the cool outer air. There are various minor details for adjusting the pulleys and tautening the line, which are plainly shown in the engraving, and need no further description.

Patented through the Scientific American Agency, July 18, 1876. For further particulars address the inventor, Mr. George Almont, 604 Grand street, Jersey City, N. J., where the device may be seen in operation.

IMPROVED METAL-PUNCHING MACHINE.

The invention herewith illustrated, besides being of novel mechanical construction, includes a simple and efficient arrangement for putting in and removing interchangeable dies and punches of different sizes. It is sufficiently powerful, we are informed, to punch readily a five-eighth inch hole in plow steel, and it has been practically tested with excellent success during the year which has elapsed since it was patented.

The operation is as follows: At A are the housings, near the top of which a cam lever, B, which forces down the punches, is pivoted. C is the die block, which slides freely in between the housings and is locked by a suitable spring pin. D are guide plates for the punch over the die. A head block, E, serves to connect the punches to the cam lever, the attachment being effected by lugs which engage the lever by its

grooves. The punch is secured in place by sliding the head into a channel above the slotted plate through which the shank hangs, the lower end being in the guide plates, D.

It will be observed that the mechanical power is very advantageously applied, that the punch and die, although easily removable, are tightly held, and that the general construction of the device is strong and durable. Two sizes of the machine are made, weighing respectively 175 and 275 lbs. They are excellently adapted for use in ironing wagons and blacksmiths' ordinary jobbing work.

Patented July 13, 1875, by Mr. Daniel W. Baer. For fur-

filter, and wash the precipitate on the filter with distilled water containing a little sulphureted hydrogen several times, and dry. When dry, remove it as completely from the filter paper as possible, and boil until completely dissolved in strong nitric acid. Then dilute the acid with water, filter from the yellow sulphur that has separated in the operation, add solution of pure soda or potassa (in water) until no further precipitate forms, boil the suspended precipitate with constant stirring until it is of a brownish-black color, then filter it, wash several times with distilled water, and dry. When the oxide of copper thus obtained

is perfectly dry, remove it completely from the filter paper, place it carefully in a previously weighed porcelain crucible, and heat to reduce gradually over a spirit or gas lamp. Then suspend it in the crucible over strong sulphuric acid in a tight glass vessel until cold, when it is ready for weighing. The weight thus obtained, multiplied by 0.79849, will give you the weight of the pure copper contained in the given weight of the alloy. The zinc and nickel, which were contained in the alloy, are to be found in the first filtrate from the first sulphureted hydrogen precipitate. To separate them from each other, add to the solution some pure ammonia until the solution is quite alkaline, and then sulphide of ammonium; heat gently for a short time, filter, wash the precipitate with water containing a little sulphide of ammonium; dry, separate from filter, and heat for some time with aqua regia. When the solution is effected, dilute considerably with water, and add drop by drop a strong solution of pure carbonate of soda, with constant stirring, until evolution of gas ceases (be sure you add sufficient); then boil for a few minutes and allow to subside. When this has taken place, decant the supernatant liquor (through a filter, so as to avoid loss), and wash the precipitate several times with water, decanting, as be-

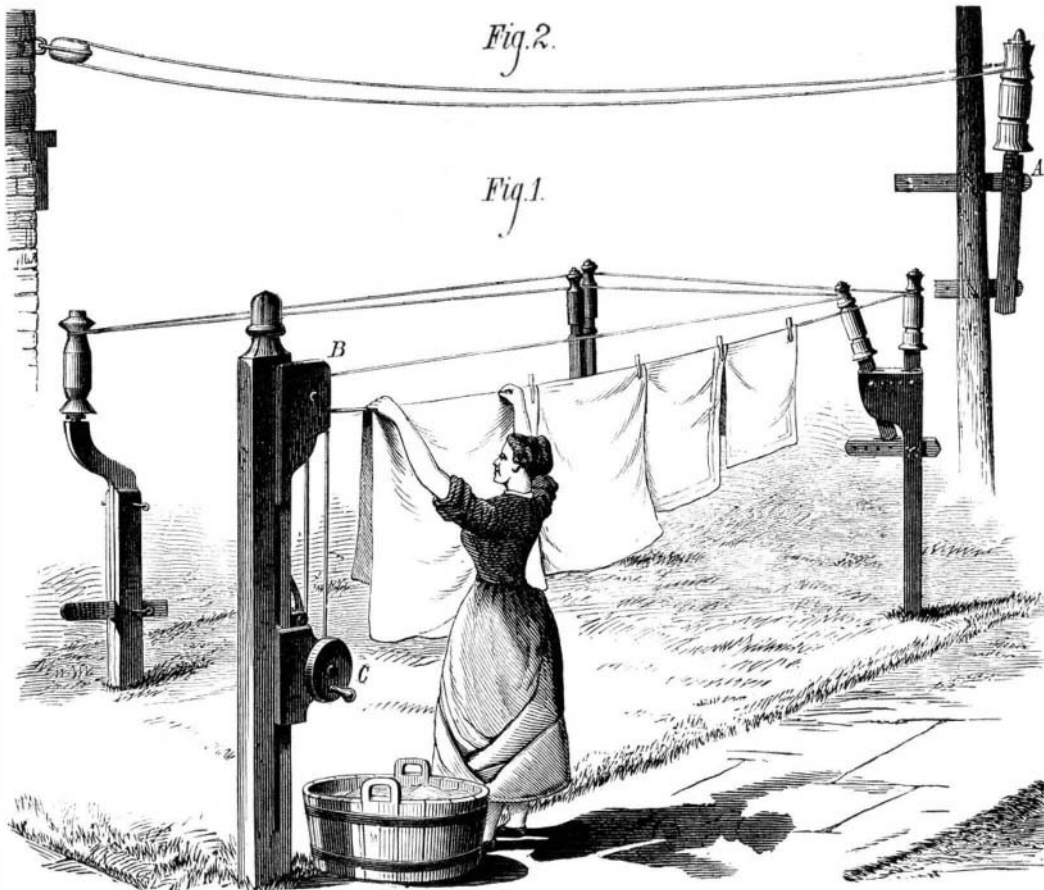
fore, each time; gather the precipitate on to the filter, wash with hot water, and dry perfectly at a temperature of about 212° Fah. When dry, dissolve the precipitate (in an excess of pure acetic acid) by the aid of heat, and to the solution add some strong sulphureted hydrogen water, and allow to stand at a gentle temperature for several hours. By these means the zinc will all be precipitated, and the nickel will remain behind in the solution. To separate the nickel, evaporate the filtrate, from the last zinc precipitation, nearly to dryness in a porcelain vessel, add some nitro-hydrochloric acid (aqua regia), and heat gently until a clear solution is obtained; then mix the solution with pure potassa in excess; heat for some time nearly to boiling, decant three or four times, boiling up at each time; wash the precipitate thoroughly with hot water, and dry perfectly. Then place the precipitate in a porcelain crucible, heat to redness, place the crucible with its contents in a desiccator to cool, and finally weigh. The weight obtained, minus the weight of the crucible, multiplied by 0.78667, equals the amount of nickel contained in the given weight of the alloy. The weight of the copper, plus the weight of the nickel deducted from the given weight of the alloy, equals the amount of zinc it contains.

Mocking Birds at the Centennial.

Two hundred and fifty mocking birds from Texas lately arrived at Agricultural Hall, Philadelphia. These birds were raised by Miss Antoinette Christi, of Denison, Texas, and made the journey in about two weeks. After a ride of five hundred miles to Galveston, they were transferred to a steamer and brought two thousand miles by water, without accident, until the ship encountered a gale off New York, when, as the cages were on deck, over fifty of the birds died from the effects of the sudden change of temperature caused by the storm. All the rest, however, reached here in safety, and evidently in perfect health. Though most of them are young and can be taught any tune desired, there are among the number many trained birds which whistle all the popular airs of the day.

Rubber Shoe Making.

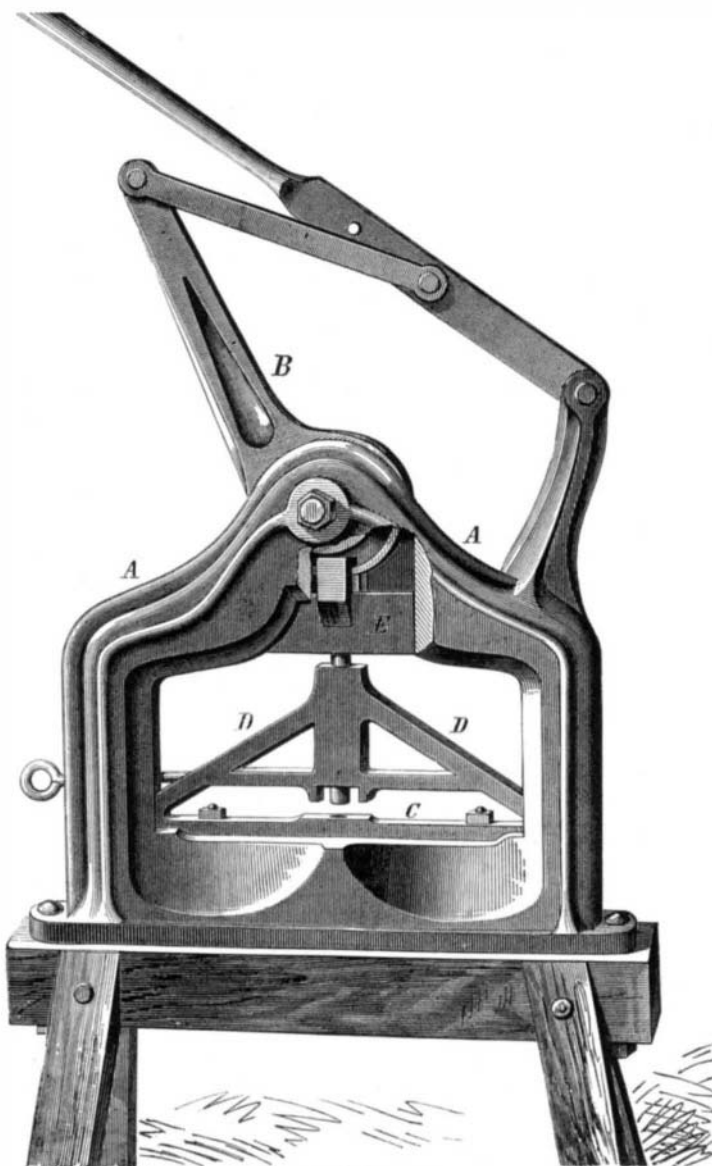
Among the interesting processes shown in the Centennial is the making of india rubber shoes. The operation consists in stretching the flat patterns upon lasts, joining them together at the heels, and pasting on the soles. The shoes are left on the lasts until they take shape. Machinery for purifying the rubber, by passing it between toothed rollers under water, and for rolling it into sheets, is shown in operation.

**ALMONT'S CLOTHES LINE FASTENER.**

ther particulars address Clayton Bush, Sextonville, Richland county, Wis.

To Analyze German Silver.

Take a weighed quantity of the clippings or trimmings of the alloy, and dissolve in a limited quantity of aqua regia (one part nitric and three parts of hydrochloric acid) at a temperature of about 70° Fah. When complete solution is effected, add sulphureted hydrogen water until, after standing for half an hour, the liquid smells distinctly of it; then

**BAER'S METAL-PUNCHING MACHINE.**