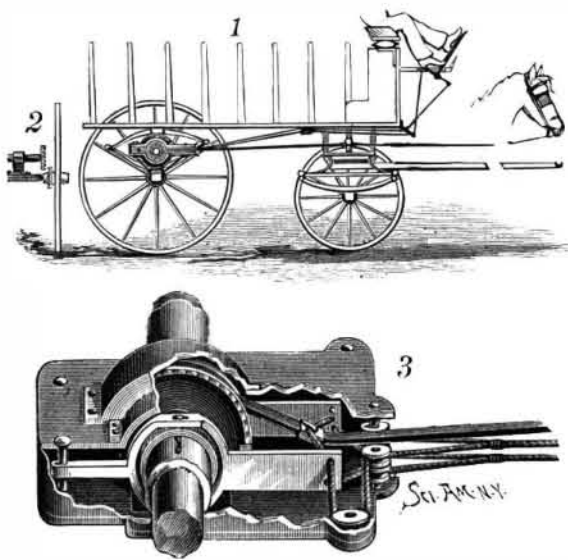


A DEVICE TO STOP RUNAWAY HORSES.

The illustration represents a device, applicable to any kind of a vehicle, for stopping runaway horses, or speedily arresting vicious or frightened animals that are uncontrollable by the ordinary appliances. A revoluble sleeve is mounted in bearings on the rear axle, with which the sleeve is in alignment, and centrally on the axle is mounted a sheet metal casing, a view of which, partly broken away, is shown in Fig. 3. The sleeve is extended through the side walls of the casing, and a pulley is centrally secured thereon, with radial flanges having ratchet teeth on their edges. Within the sleeve two shafts are made to fit revolubly, their inner ends nearly touching each other, while the outer end of each has a gear wheel with laterally projecting teeth, held near to but not in connection with a similar toothed wheel on the inner end of each hub of the axle, as shown in Fig. 2. In connection with a hub on each sleeve on either side of the central pulley is placed a laterally apertured lever, these levers having a rocking engagement with standing bolts near the rear end of the casing, and being connected at their forward ends with cords leading to a rocking lever pivotally supported on the foot board, as shown in Fig. 1. These side levers within the casing are so arranged, in connection with the sleeve and the two shafts within it, that the vibrations of the lever on the foot board by the driver will throw the gear wheels on the outer end of each shaft into connection with the similar wheels on the wheel hubs, and also cause the central pulley to revolve rearwardly. A substantial band, preferably of leather, is secured around the central pulley, and extends forwardly, its extremity having lateral straps attached to it and also to the bits of the horses, so that the revolution of the pulley in a direction away from the horses will shorten the band and pull the heads of the horses downward and rearward in a forcible manner, throwing the horses upon their haunches and



ZALUD'S HORSE ARRESTER.

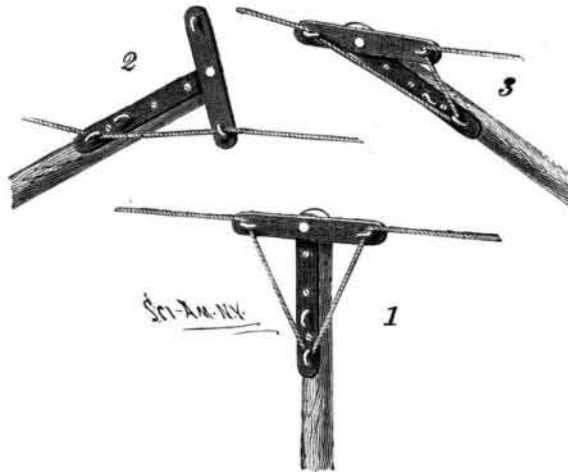
quickly arresting their forward movement. Provision is also made for automatically locking the central pulley, so that the tension on the horses will not be removed if they back up, when it is desired to retain a team of fractious horses with their heads trammelled, this pressure being readily removed by the driver pressing with his foot on the treadle. The device is applicable to one-horse as well as two-horse vehicles. This invention has been patented by Mr. Albert Zalud, No. 150 Bunker Street, Chicago, Ill.

Ancient Egyptian Glue and Veneering.

Among the many occupations of the carpenter, that of veneering is noticed in the sculptures of Thebes, as early as the time of the third Thothmes, whom I suppose to be the Pharaoh of the Exodus, and the application of a piece of rare wood of a red color to a yellow plank of sycamore, or other ordinary kind, is clearly pointed out. And in order to show that the yellow wood is of inferior quality, the workman is represented to have fixed his adz carelessly in a block of the same color while engaged in applying them together. Near him are some of his tools, with a box or small chest, made of inlaid and veneered wood, of various hues, and in the same part of the shop are two other men, one of whom is employed in grinding something with a stone on a slab, and the other in spreading glue with a brush. It might, perhaps, be conjectured that varnish was intended to be here represented, but the appearance of the pot on the fire, the piece of glue with its concave fracture, and the workman before mentioned applying the two pieces of wood together, satisfactorily decide the question, and attest the invention of glue 3,800 years ago.—*J. G. Wilkinson.*

NOVEL CLOTHES LINE SUPPORT.

A very simple and effective device for supporting and tightening a clothes line is shown in three positions in the engraving. Fig. 1 shows the prop and stretcher in engagement with the line. Fig. 2 shows the first step



MCCLAUGHRY'S CLOTHES LINE PROP AND STRETCHER.

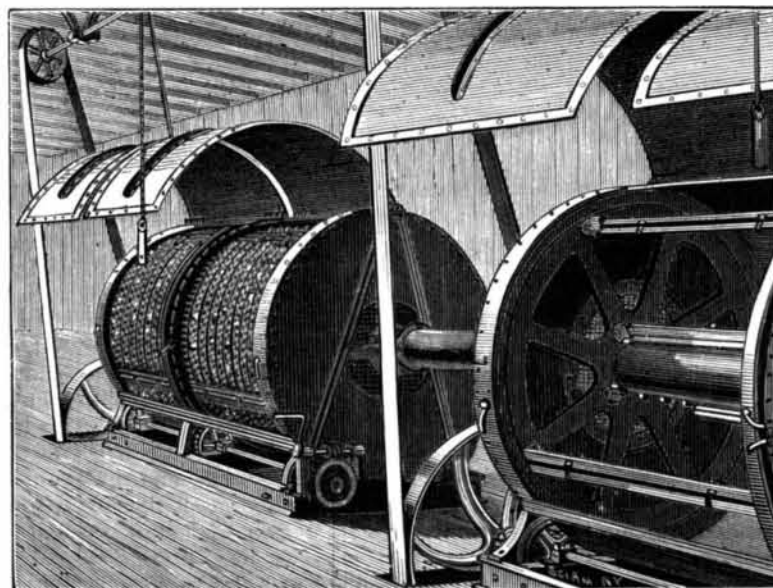
in the application of the device to the line, and Fig. 3 illustrates the second step in the operation.

To the prop pole at one end is attached an oblong metallic plate furnished with one or two hooks curved toward the opposite end of the pole. To the outer extremity of the plate is pivoted a bar having at opposite ends curved hooks which project inwardly toward the center of the bar.

The manner of applying the prop to the line is illustrated by Fig. 3. One of the hooks on the fixed plate is brought into engagement with the line, then one of the hooks on the pivoted bar is passed under the line as shown. Then the other hook on the pivoted bar is brought into engagement with the line as shown in Fig. 3. Finally the pole is straightened up, giving the line the desired amount of tension, at the same time supporting it so as to prevent undue sagging. A patent for this invention was recently granted to Mr. C. C. McClaughry, of Joliet, Ill.

A DRYING APPARATUS FOR FISH, ETC.

Our illustration represents a drying apparatus in which a blast of heated air is employed in connection with revolving reticulated wire frames or baskets carrying the material to be dried, the particular construction shown being used in drying fish, but the apparatus being also adapted for drying tea, wool, fruit, etc. It is a patented invention of Mr. Edward Robinson, of St. Johns, Newfoundland. The material to be dried is operated upon within a stationary cylinder or cylinder casing, in which is a central tube, through which heated air is forced by a pressure blower or fan, the tube having downwardly opening nozzles, through which the heated air passes to the interior of the cylinder. The fish are held in a series of wire net wheels or disks, arranged parallel with one another throughout the length of the cylinder, each of these disks being constructed to form a hollow wire-work box or basket. As shown in the engraving, radial divisions are made in these disks, each division occupying one-fourth of the transverse area of the cylinder. These divisions or sections are attached to longitudinal T-irons extending the whole length of the cylinder, the baskets in sets of four, thus making a species of wheels, any number of which, at suitable distances apart, are arranged in the cylinder. These wheels are connected by the T-irons with circular open-work frames or heads, one being in the middle of the series and another at each end, and together constituting a revolving frame. Doors or lids are provided for the insertion and removal of the reticulated boxes or baskets from the cylinders, our illustration showing the lids of these cylinders raised as

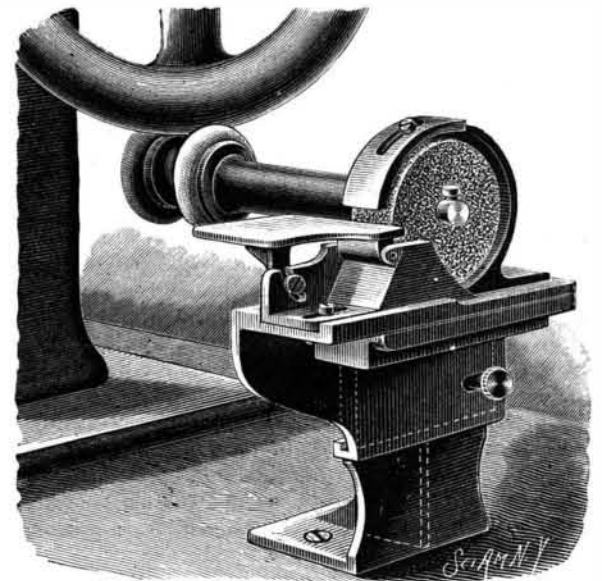


ROBINSON'S APPARATUS FOR DRYING FISH AND OTHER ARTICLES.

for the purpose of filling and discharging fish, one of the cylinders being filled with fish frames ready for work. Instead of being stationary, the cylinder itself may, if desired, be made to revolve and rotate the basket-like disks. The frame of circular heads and T-irons, which is the carrier of the disks or receptacles, may be supported on rollers beneath the circular heads, or in any other suitable manner, rotary motion being then imparted by any convenient arrangement of gearing. For the drying of tea the skeleton frames require to be of finer texture or mesh, with means for maintaining the tea in motion, while for drying wool the frames should be of large capacity, with various other modifications in detail for different articles.

AN IMPROVED GRINDING DEVICE.

The illustration represents a convenient attachment which may be readily placed to receive motion and power from a sewing machine for the sharpening of scissors, sewing machine needles, and similar light articles. It has been patented by Mr. John S. Pyper, of Au Sable Chasm, N. Y. The attachment as shown is secured on the sewing machine table, but with a slight variation, that is provided for in the patent, may be clamped on the hand or balance wheel guard plate. The upright portion of the bracket stand screwed to the table has a horizontal flanged guide plate integral with its upper outer face, the flanges of this guide plate interlocking with hooked flanges on a sliding bed plate with an integral platen, carrying the grinding mechanism. The bed plate is adjustably secured to the guide plate by a set screw bolt, whereby the relative position of the parts on it may be adjusted with regard to the rim of a sewing machine balance wheel. Upon the bed plate is a wheel case, one side of which is open, and from the other side an integral sleeve projects horizontally, the bore of the sleeve being adapted to afford revoluble support to a shaft, on one end of which,



PYPER'S GRINDING ATTACHMENT FOR SEWING MACHINES.

within the wheel case, is a grinding wheel, while on its other end are friction wheels. The friction wheels are duplicate, being integral radial enlargements on a hub, and having their peripheral edges grooved for the reception of elastic bands, whereby they will readily engage the peripheral surface of a balance wheel rim. Upon the upper surface of the platen are parallel guide ribs, between which a dust guard and rest plate support is adjustably located, the plate being slotted to permit the frame to be moved toward or from the wheel face and adjustably secured where desired by a screw bolt. The platen is also apertured below the forward face of the grinding wheel for the escape of dust into a drawer supported in position to slide on the under side of the platen, there being also a dust guard above to direct the products of attrition to the drawer. Upon an upright longitudinal bracket flange is supported the rest or rocking table, whereon the scissor blades are held and brought into contact with the revolving face of the wheel. This table may be given any desired degree of inclination, so that the blades may have their edges properly beveled when supported on the table and brought into contact with the moving face of the grinding wheel. To shield the hands of the operator from accidental contact with the face of the revolving grinding wheel, an adjustable guard plate is attached to the rim of the wheel case, whereby only a small portion of the surface of the grinding wheel need be exposed.

JAPAN'S literary welfare is looked after by 475 newspapers, magazines, etc. Tokio alone boasts of sixteen daily newspapers. It is imperative that each officer of the government should subscribe to the government organ "Kwampo."