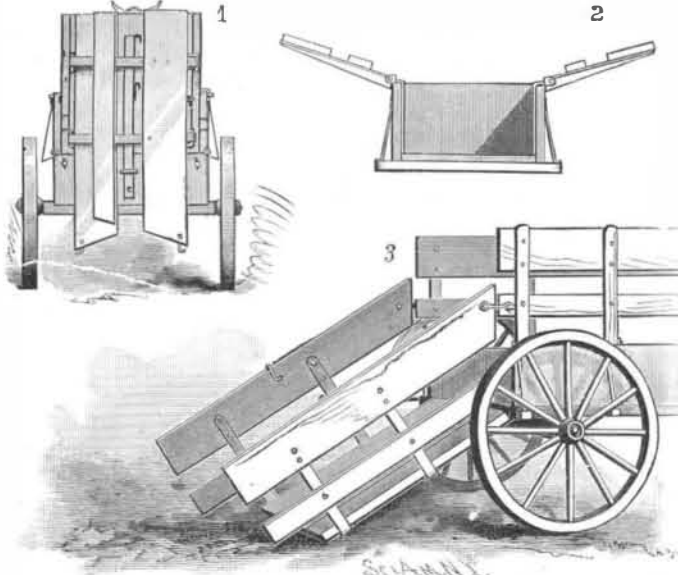


IMPROVED WAGON RACK.

The accompanying engraving represents a rack that can be readily transformed for use as a stock rack or as a hay rack as may be required. To the sides of an ordinary farm wagon are hinged arms provided with boards to form the sides of the rack. The hinges are so formed that when the rack sides are raised to a vertical position, they will be directly above the side boards of the wagon. The inner ends of the arms are beveled to rest against the wagon side boards when the rack sides have been lowered to position to form a hay rack, as shown in Fig. 2. To the forward end of the bottom of the wagon is attached a tapered ladder. When the rack is to be used for transporting hogs or other stock, the sides are turned up to a vertical posi-

**EDWARDS' IMPROVED WAGON RACK.**

tion, and are locked by hooks to supplementary gates attached to the forward and rear end gates by cleats passing through staples. Held to the rear gate by a staple and bolt is a bar, Fig. 1, at the free end of which are hooks, which serve to retain the pole that passes over a load of hay from the ladder in front. To the cleats of the rear supplementary gate are hinged straps connected by boards forming sides to the gate. Fig. 3 shows the gates and their sides arranged as a chute for loading and unloading stock. When not used as a chute, the side boards of the gate are folded up against the gates, as shown in the rear elevation, Fig. 1.

This invention has been patented by Mr. T. V. Edwards, of Monmouth, Illinois.

IMPROVED STOVE.

The stove herewith illustrated may be placed in an arch in a partition of a building, and arranged to heat

**BIRNBAUM'S IMPROVED STOVE.**

two rooms. The stove is rectangular in form, with an arched top to receive the stovepipe connected with the flue. The side and top walls are made double, forming air spaces for the protection of the partition in which the stove is placed. The air spaces are provided with damper openings near their lower ends, and also with openings discharging into the stove top near the flue opening.

The back of the stove is offset to increase the interior, and is closed tightly, so that neither ashes, smoke, nor gas can escape from that side. The front is provided with two pairs of doors. The two lower ones inclose the fire and grate, and the upper ones inclose the combustion chamber. Below the line of the cross bar upon which the lower doors close is the ash pit, above which are two bars whose ends extend downwardly at right angles, and are received in sockets formed on opposite sides of the stove. When the stove contains a wood fire, the wood rests upon these bars; and when

coal is used, a basket grate is supported by the bars. The bars are apertured to receive ornamental upright braces, which hold the grate in position. The ash pit extends beyond the front of the stove, and is provided with a removable plate, having openings which may be closed by a damper. The stove is placed on a brick foundation, and the front of the ash pit is made hollow for containing air, to prevent it from becoming overheated. A casing, similar in form to the projecting portion of the ash pit, is fitted to the back of the stove, to improve its appearance and serve as a foot rest.

The stove is placed in a partition having a flue for carrying away the products of combustion. In the flue is placed a short length of stovepipe, provided with a cross bar, by which it may be moved up and down in the flue. In the flattened top of the stove is a groove surrounding the smoke discharge opening, for receiving the edge of the pipe. The pipe being pushed up in the flue by means of the cross bar, the stove may be put in place and the pipe pulled into the groove by reaching up through the stove and grasping the cross bar. The fire is controlled by the damper in the ash pit cover when the doors are closed, and may be further controlled by opening or closing the doors.

This invention has been patented by Mrs. M. E. Birnbaum, of Santa Barbara, Cal.

Metallic Book Covers.

Another application has been found for metal, which is now being substituted for cardboard in bookbinding. This novelty is known as the "British Pellisfort" binding, and it consists in the use of thin sheet metal for covers. The metal is specially prepared, and the cover may be bent and straightened again without perceptible damage. It may, in fact, be safely subjected to such treatment as would

destroy ordinary covers. The metal is, of course, covered with the leather usually employed in bookbinding, and the finished book presents no difference in appearance except in the greater thinness of the cover. It is well adapted for Bibles, church services, and other similar publications.

DECISIONS RELATING TO PATENTS.

U. S. Circuit Court.—District of Massachusetts.
ROYER et al. vs. COUPE.—PATENT MACHINE FOR TREATING HIDES.

Carpenter, J. :

Action at law for the infringement of letters patent No. 77,920, issued to the plaintiffs, Herman Royer and Louis Royer, May 12, 1868, for a machine for treating hides.

In action for infringement of letters patent No. 77,920, issued to Herman and Louis Royer, May 12, 1868, for a machine for treating hides, plaintiffs' machine softened the hide by fastening it to a vertical shaft revolving in a crib, in which the hide was revolved under the pressure of a weight in the upper part of the crib, through which the shaft passed. Defendant's machine softened hides in the same way, except that his shaft was horizontal, and the pressure on the hides was applied through the head of the crib by screws. *Held* an infringement, the principle and method of the plaintiffs being used in the design of the defendant.

If a patent is issued to two persons as inventors, when in fact it was invented by only one, the patent is void.

Where an improvement is made and patented in a patented machine, the first patentee cannot use the improved machine without the consent of the second, and the second cannot use his machine without the consent of the first.

If the first patentee's machine is not operative and the second patentee's is operative, the first patentee must be confined to his own particular application of his principle, and there is no infringement by the second patentee.

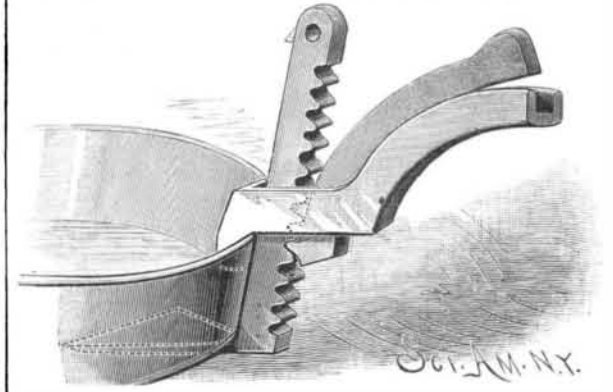
In determining the question whether a patent is operative, the workings, not of a machine made as a literal copy of the drawings of the patent, but of one made with the mechanical devices which will tend to make a machine practical and operative, and which are within the duty of the mechanic, are to be considered.

The value of an invention to the party using it is competent evidence on the question of damages for the infringement of a patent.

WHAT will remove grease spots from clothing in the best manner, is a frequent inquiry. There is probably nothing better than equal parts of strong ammonia water, ether, and alcohol. Pass a piece of blotting paper under the grease spot, moisten a sponge first with water to render it "greedy," then with the mixture, and rub with it the spot. In a moment it is dissolved, saponified, and absorbed by the sponge and blotter.

IMPROVED PAN LIFTER.

This lifter is composed of three parts—the standard, grasping lever, and binding lever. The standard is serrated at its rear edge, and is formed with a foot, indicated by the dotted lines in the drawing. The grasping lever has a hook at its forward end, and is mortised to pass freely over the standard, and also to receive the binding lever, which is pivoted in the mortise in such position that its lower end will engage with

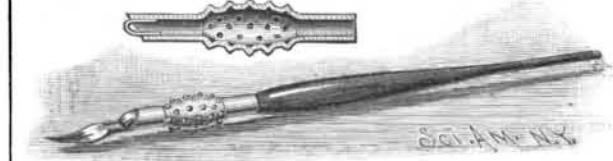
**GERMOND'S IMPROVED PAN LIFTER.**

the teeth of the standard. To apply the lifter, the foot is shoved under the bottom of the pan and the levers are lowered until the hook is fairly over the edge of the pan. The handle portions of the levers are then grasped and brought together. This movement first draws the hook against the edge of the pan, which is grasped between the hook and standard, and then the lower end of the binding lever engages with the teeth of the standard, and firmly locks the device to the pan. The upper surface of the grasping lever is, by preference, channeled to receive the other when the two are brought together. This simple and convenient device may be applied to any pan, whether it have a wide or a narrow rim.

This invention has been patented by Mr. Gilbert A. Germond, whose address is Station R, New York City.

IMPROVED PEN HOLDER TIP.

The middle portion of this tip is of greater exterior diameter than either of the ends, into one of which the

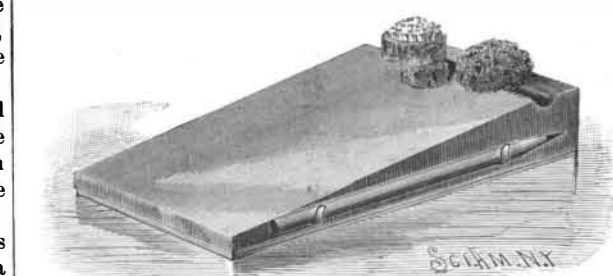
**HEWITT'S IMPROVED PEN HOLDER TIP.**

handle fits, while the other is formed to receive and carry the pen. The enlarged middle portion is in the form of a gradual swell, as shown in the accompanying figures. This shape is most favorable to the placing of the thumb and finger on it, and insures a much firmer grasp than when the middle and end parts are of like diameter. The enlarged part also prevents the pen end of the tip from coming in contact with and inking the surface on which the holder may be placed, and it is formed with numerous teats or protuberances, which further facilitate the grip or hold upon it, and by permitting the air to circulate between the tip and fingers prevent heating when the tip is in use.

This invention has been patented by Mr. Hezekiah Hewitt, of Birmingham, England.

COMBINED TABLET, PAPER WEIGHT, AND BLOTTER.

The block forming the body of the tablet is made of a piece of slate having an inclined surface smoothed

**WILLIAMS' COMBINED TABLET, PAPER WEIGHT, AND BLOTTER.**

and prepared for writing. In the thick end are three cavities, one for a roll of pins, one for a dry and one for a moistened sponge. Hooks project from the side of the tablet, for supporting a pencil. The damp sponge is for moistening the fingers for handling bills and papers, and the other is for use in erasing marks from the slate, it being moistened by being applied to the wet sponge. One or more sheets of blotting paper are secured to the under surface of the tablet. This tablet is designed to be used upon desks in the counting room for the purpose of making temporary memoranda and for supporting a sponge and a quantity of pins in convenient position for use.

This invention has been patented by Mr. John M. Williams, of Hazleton, Pa.