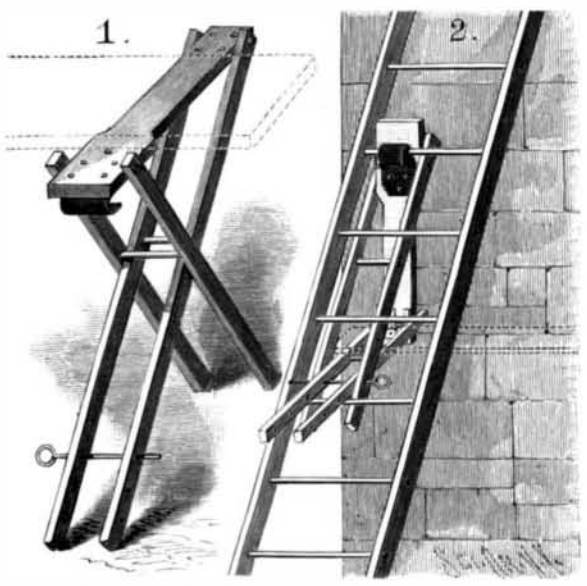
AN IMPROVED TRESTLE.

A device adapted for use in a number of different connections, as for the support of material on horizontal surfaces, holding scaffolding on ladders or hoisting devices on the ridges or combs of roofs, etc., is shown in the engraving, and has been patented by Samuel S. and William L. Claar, of Bedford, Pa. It is shown in Fig. 1 arranged for a horizontal support and in Fig. 2 supporting scaffolding on an inclined ladder. The body or platform member of the trestle has one end slightly larger than the other, and in each end are



TRESTLE OF S. S. AND W. L. CLAAR.

journaled legs rigidly connected by cross bars. The legs on the smaller end are adapted to swing between those on the larger end of the body, and the free ends of the legs have transversely aligned openings to receive a pin. On the under side of the larger end of the platform section is a plate receiving the journal pin of one of the pairs of legs, and the outer edge of the plate is turned to form a hook flange and adapted to engage the rungs of a ladder. These trestles may be folded into compact form for transportation.

THE WINTON MOTOR CARRIAGE.

After the recent unsuccessful motor carriage competition in England, it is satisfactory to note that several firms in the United States are now really in a position to make and deliver motor carriages. For a long time it was impossible to buy a motor carriage at any price, but, happily, this day has now passed. The horseless carriage which we illustrate is made by the Winton Motor Carriage Company, of Cleveland, O. On September 1, 1896, Mr. Winton, the president and master mechanic of the company, completed his first motor carriage. It has been in constant use since that time in all kinds of weather and over all sorts of roads. On Decoration Day he ran the carriage over a mile on a circular track in 1:48, thus breaking all records. On June 12 the carriage was given a road test of sixty miles, from Cleveland to Elyria and return, and proved its perfect utility for every purpose to which a horse and wagon could be put. The day was warm and the roads were undergoing repairs, so that for a distance of six miles the carriage had to travel through a bed of sand. The trip was made without a hitch, carrying four passengers, and consumed only six gallons of gasoline. Five miles of the route were covered in sixteen minutes, and the running time for the sixty miles was five hours.

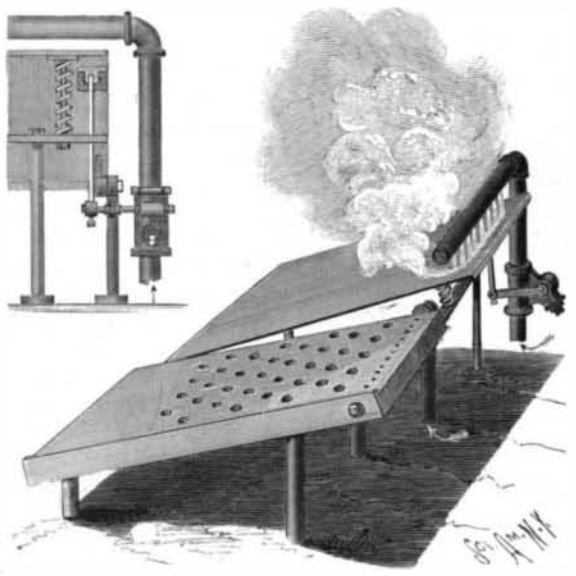
As will be seen by reference to our engraving, the Winton motor carriage resembles an ordinary trap with seats back to back. The carriage is wide enough to seat six persons comfortably. The motor and driving mechanism is bestowed in the body of the vehicle, and are self-lubricating. The ten horse power motor of the hydrocarbon type is almost noiseless, odorless, and free from vibration. The fuel is gasoline, seven gallons being carried on the carriage. A patent feeder converts it to a fixed gas before entering the cylinder without the aid of a carburetor. It is very economical, and costs less than a cent per mile over ordinary roads and through the streets. Among the special features of the motor are the igniter and the pneumatic governor, which places the machine under perfect control. By pressing a button the speed can be increased and held anywhere from zero up to the maximum power of the motor. The carriage is operated by a lever, which at will engages, releases and reverses, or applies the brake. The steering gear is simple and easily handled. The rear wheels are thirty-six inches in diameter, the front wheels are thirty inches in diameter. They are provided with nickel spokes and three inch pneumatic tires. Ball bearings are used throughout, thus securing the greatest possible freedom from friction and wear. The body is supported by easy riding springs. It is handsomely finished in polished natural wood. The trimmings are nickel and the cushions and the dashboard are of leather. As will be seen by the engraving, the motor carriage is much handsomer than vehicles of this kind are apt to be. The weight of the entire machine is 1,800 pounds.

Dedication of the Yerkes Observatory.

The formal dedication of the Yerkes Observatory will take place October 1, 1897. It is hoped that European men of science who purpose to attend the Toronto meeting of the British Association for the Advancement of Science, in August, will be there to take part in the formal inauguration of the Yerkes Observatory. A series of informal conferences on astronomical and astrophysical subjects will be held in connection with the dedicatory exercises. A cordial invitation is extended by the director of the observatory to all men of science who may be willing to honor the observatory by their presence on this occasion.

REMOVING SCALE FROM METAL PLATES.

To facilitate the removal of scale from steel plates or sheets, and particularly for operating upon plates for saw blades, the apparatus shown in the accompanying illustration has been patented by Thomas H. Desmond, of Middletown, N. Y. Extending transversely near the upper edge of a fixed inclined table is a water delivery pipe having perforations extending through the top of



DESMOND'S SCALE REMOVING APPARATUS.

the table, the pipe being connected with any desired source of supply, and the upper surface of the table being corrugated or having concavities or cups. At the side of the fixed table is a swinging table, hinged at one end and its opposite end supported by springs, and extending over the upper end of this table is a steam spraying pipe, having a slit or series of perforations in its lower side, the spraying pipe being connected with a supply pipe controlled by a valve actuated by the swinging of the table, as indicated in the small figure. As the hot plate is held and moved about by tongs on the fixed table, water is constantly running over the table under the plate, the water in the concavities affording a suction to prevent the plate from jumping too much. After the scale has thus been loosened and partly removed, the plate is similarly handled on the swinging table, where the weight of the plate depresses the springs and lowers the upper end of the table, a movement which opens the valve and causes the discharge of steam upon the plate, to blow off the scale and entirely clean the plate. Upon removing the plate, the table returns to its normal position and closes the valve.

THE WINTON MOTOR CARRIAGE.