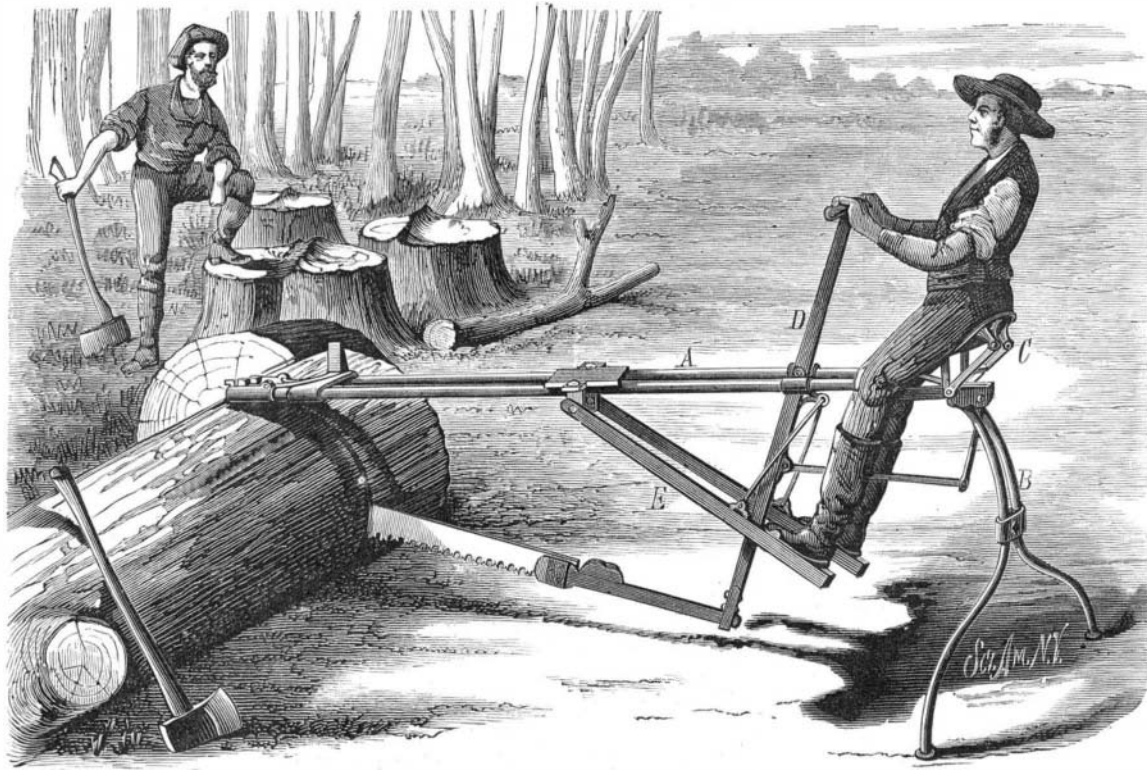


A NEW DRAG SAWING MACHINE.

The accompanying engraving represents an improved drag sawing machine, the invention of Mr. William W. Giles, of Chicago, Ill. The first machine devised by this inventor on the same general principle was the subject of an application for a patent in 1862. We are informed that the recently patented improvements have rendered the machine a marked success. It is so clearly shown in the engraving that but little explanation will be required.

The main frame of the machine is about eight feet long, and the front end rests upon the log being sawed. A wedge is fastened with a hinge to the main frame, and when the log pinches the saw the wedge is turned over and driven into the saw kerf. The seat upon which the operator sits is capable of sufficient motion to allow the machinery to work. The operator, by pressure of the feet upon the treadles, E, throws the saw forward; this movement is also supplemented by pulling the main lever, D, with the hands. By this means the saw is propelled with great force, as the most of the weight of the body and the strength of the arms are employed in doing the work. When the operator pushes the lever, D, before him, he transfers his weight from the treadles to the seat, and the latter will be pressed down; in fact, the operator may put more than his weight upon the seat in this way, and when the power is applied thus the saw is drawn backward. In using this machine the weight of the operator and the muscles of his arms and legs are all brought into action. The saw has a three-foot stroke, and is capable of doing considerable execution.

The manufacture of this machine is conducted at 741 W. Lake street, and the office is at room 20, No. 149 Clark street, Chicago, Ill.



GILES' DRAG SAWING MACHINE.

The windlass and the basket, D, afford a means of escape for invalids and children, and the ladder itself affords ample means of escape to such as are able-bodied, while at the same time it is convenient and efficient as a fireman's ladder. This invention is patented in this country and in Europe. The New York office is in the Coal and Iron Exchange Building.

base with a plate for driving the blade by pressure of the operator's foot, and the handle for holding the stake while it is being driven. The rope is attached to the handle, and the handle fitted to revolve to prevent winding.

An improvement in oil press plates has been patented by Mr. George W. Campbell, of West New Brighton, N. Y. The object of this invention is to prevent the rapid destruction of the bag or wrapper that contains the ground seed while being pressed, and to avoid the use of the ordinary mats, so as to lessen the expense. The invention consists in providing the ordinary corrugated oil press plates with projections and indentations or short grooves.

An improvement in bridge walls for furnaces has been patented by Mr. John Mailer, of Pacheco, Cal. The inventor places a movable bridge wall in a boiler furnace to contract the area of outlet from the fire surface to the boiler flues.

Mr. Henry Morrison, of Pittsburg, Pa., has patented an improved device for holding ribbon-gold while teeth are being filled, to facilitate the operation, lessen the time required, the labor of the operator, and the exhaustion of the patient. It consists in one or more spools mounted upon rods, connected together by ball-and-socket joints, and provided with a clamp for holding the device in position in the mouth.

Mrs. Henry Dormitzer, of New York city, has recently patented improvements on the window cleaning chair for which letters patent Nos. 200,441, 206,935, and 206,936 were granted to the same inventor, February 19 and Aug. 13, 1878. The object of the present invention is to simplify the adjustment of the chair and to make it more reliable and complete. This device, although very simple, cannot be described without engravings.

Mr. Benjamin N. Shelley, of Anderson, Ind., has invented a combined implement for domestic and other

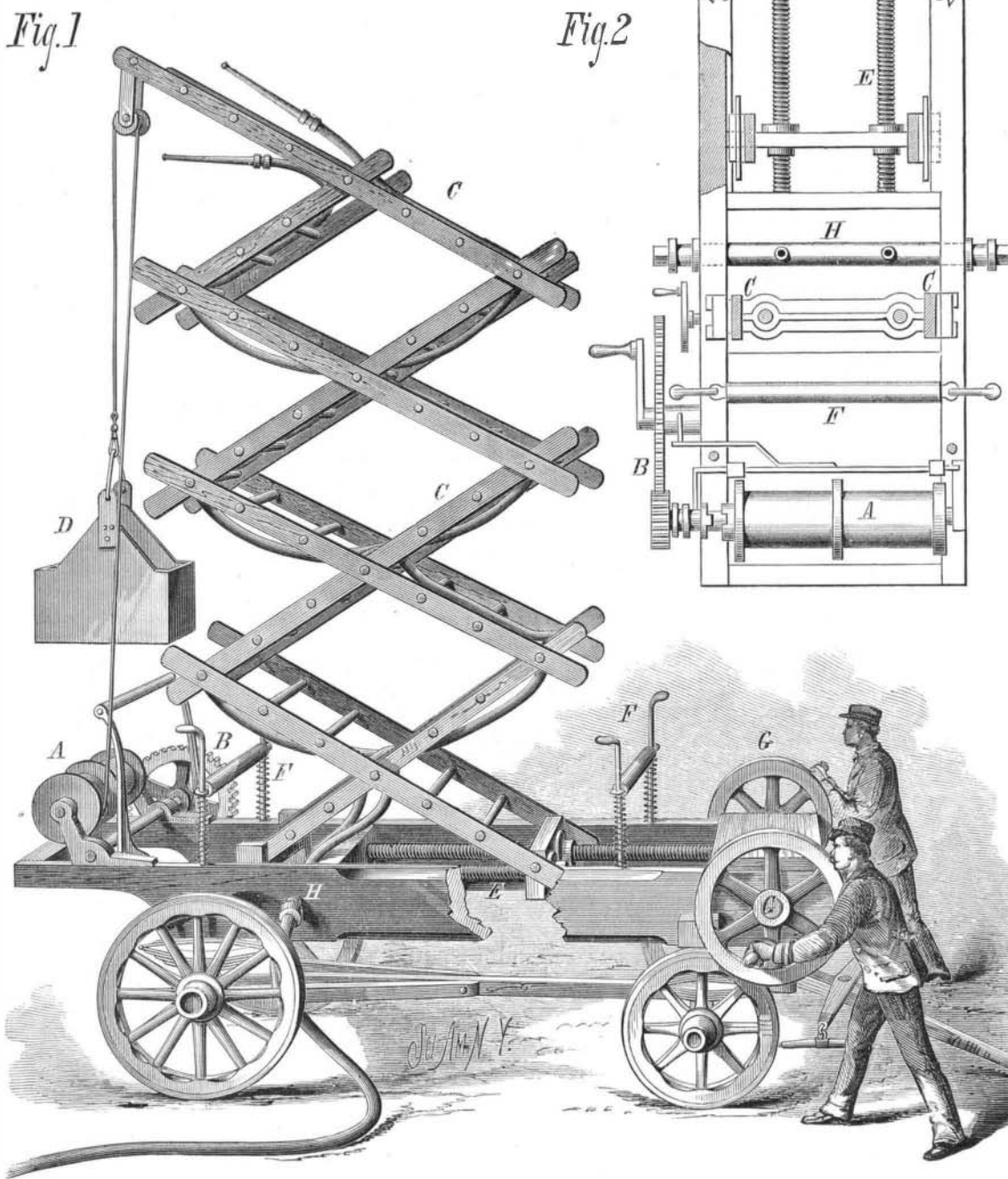
MISCELLANEOUS INVENTIONS.

An improved fountain brush has been patented by Mr. Martin J. Sunderlin, of Watkins, N. Y. This apparatus is designed for washing and cleansing horses, mules, and cattle, and articles such as wagons, carriages, etc., and also for washing and shampooing the human head and body. The invention consists in a brush having combined with it a sponge, and having a water distributing chamber, a flexible tube for supplying water, and a stopcock for controlling the supply, these parts being arranged so that the water is conducted to the distributing chamber in the brush, and passes to the sponge, from whence it passes in a uniform and continuous supply to the object to be cleansed.

Mr. Benjamin F. Fuchs, of Tiger Mill, Texas, has invented an improved washing machine having several novel features which cannot be described without an engraving.

Mr. Benjamin B. Blewett, of New York city, has invented an improved picket stake for picketing or tethering horses and cattle. It can be readily entered into the ground or removed therefrom without requiring the use of a mallet or other implement to drive it. It consists in a picket stake having the pin that enters the ground made as a blade, semicircular in cross section, and tapering lengthwise, and fitted at the

base with a plate for driving the blade by pressure of the operator's foot, and the handle for holding the stake while it is being driven. The rope is attached to the handle, and the handle fitted to revolve to prevent winding.



WINTERS' FIRE ESCAPE LADDER.

A NEW FIRE ESCAPE.

The fire escape ladder shown in the accompanying engraving is the invention of Mr. Joseph R. Winters, of Chambersburg, Pa. It is designed to be used both as a fire escape and a support for fire hose.

The main frame is mounted upon wheels and supports two screws, E, and the lazytongs, B. The screws, E, are provided with miter wheels, which are driven by miter wheels on a shaft at the end of the main frame. On the ends of this shaft there are fly wheels, G, provided with cranks set diametrically opposite each other. A bar pivoted to two of the lower levers of the lazytongs carries nuts which travel on the screws, E, as they are turned by the mechanism already described. The other pair of the lower levers of the lazytongs rests upon a support that is adjustable vertically by two screws which are turned by the gearing seen below the main frame. This adjustment alters the level of the base of the ladder, and consequently varies its inclination.

Hose, C, suitable for fire purposes, extends from the fixed pipe, H, to the top of the ladder, and is provided with nozzles. One of the upper pairs of arms is longer than the other, and reaches over to receive the pulley that supports the rope from the windlass, A. This rope carries a box or basket, D, used for lowering goods or persons.

The truck carrying the