This invention relates to gripping and holding tongs of the type having pivotally connected levers with handles on one of the ends thereof and material gripping elements on the opposite ends, and in particular levers having coacting pairs of spaced friction gripping elements in forks on one of the ends thereof with handles positioned perpendicular to the levers on the opposite ends and with crossed sections of the levers pivotally connected and provided with a ratchet for locking the friction gripping elements in holding engagement with opposite surfaces of sheet material and the like.

A further object of this invention is to provide a tool that is particularly adapted for carrying and positioning wall surfacing materials such as sheet rock, plywood, and the like.

In surfacing buildings with wall boards, such as sheet rock, plywood and the like, the material is supplied in comparatively large panels, such as four by eight or ten feet, the panels are difficult to handle, and they are not only difficult to carry from one position to another, but it is also difficult to set them up in position against the studding for nailing.

In gripping such materials, and particularly sheet rock and plaster board with conventional tools the surfaces of the panels are marred or scratched, and sometimes broken, and as such surfaces are intended to constitute plaster the damaged surfaces must be refinished.

With these thoughts in mind this invention contemplates a gripping tool for sheet material in which the material is engaged at a plurality of points in which the gripping elements are resilient whereby the possibility of damaging surfaces of material gripped thereby is reduced to a minimum.

The object of this invention is, therefore, to provide a pair of gripping tongs particularly adapted for holding sheet material in which the gripping force is applied at a plurality of points so that the load at each point is not sufficient to mar or break the material.

Another object of the invention is to provide gripping tongs for handling sheet material in which the gripping elements are locked in the gripping positions with a ratchet whereby the sheet material may be carried without danger of the gripping elements releasing the material.

Another important object of the invention is to provide a finger release for a ratchet of gripping tongs for sheet material whereby the release may be actuated by the same hand with which the tongs are held.

Another object of the invention is to provide an improved tool for handling sheet material and particularly wall surfacing materials in which the gripping elements of the tool are adapted to be adjusted for materials of different thicknesses.

A still further object of the invention is to provide an improved sheet material carrying and handling tool which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies sheet material carrying tongs having a pair of levers with crossed sections in which the levers are pivotally connected with forks having spaced arms on the levers at one end of the forks and handles on the opposite ends, and in which a latch bar with finger releasing means extended therefrom is extended from one lever to the other for retaining friction gripping elements of the arms of the forks in gripping relation with sheet material positioned between the forks.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

Figure 1 is a side elevational view of the improved sheet rock carrying tool looking toward the side on which the latch is positioned with part of the latch cover plate, and also part of one of the forks broken away to illustrate the latch and mounting of one of the resilient elements, respectively.

Figure 2 is an edge view of the tool.

Figure 3 is an end view of the tool looking upwardly toward the lower end with the parts as shown in Figure 1.

Figure 4 is a cross section through the levers and latch bar, being taken on line 4—4 of Figure 1.

While one embodiment of the invention is referred to in the above-referred to drawings, it is to be understood that they are merely for the purpose of illustration and that various changes in construction may be resorted to in the course of manufacture in order that the invention may be utilized to the best advantage according to circumstances which may arise, without in any way departing from the spirit and intention of the device, which is to be limited only in accordance with the appended claims. And while there is stated the primary field of utility of the invention it remains obvious that it may be employed in any other capacity wherein it may be found applicable.

In the accompanying drawings, and in the following specification, the same reference characters are used to designate the same parts and elements throughout and in which the numeral 17 refers to the invention in its entirety, with the tongs including levers 10 and 12 and with the lever 10 having a fork 14 on one end and a handle 16 on the other, and the lever 12 a fork 18 on one end and a handle 20 on the other.

The lever 10 also includes an intermediate section 22 that extends diagonally across the tool from the lever to the fork, and the lever 12 includes a similar section 24 that crosses the section 22 of the lever 10, and that is pivotally connected to the section 22 with a pin or rivet 26.

The lever 10 is also provided with ears 28 and 30 between which a latch bar 32 extends and the latch bar is pivotally mounted in the ears with a pin 24. As illustrated in Figure 1, the latch bar, which is provided with teeth 36, extends across one side of the lever 12 and is held by a cover plate 38 which is secured to the lever with fasteners 40 and 42, and which is provided with a slot 44 through which the latch bar extends. The teeth 36 of the latch bar are retained in engagement with teeth 46 of the cover plate by a spring 48, one end of which is attached to the latch bar with a fastener 50, and the opposite end of which is attached to the fastener 42.

The latch bar is released from the teeth 46 by a finger or trip lever 52 pivotally mounted by a pin 54 between ears 56 on the lever 10, and connected by a wire or cord 58 to the latch bar at the point 60. The wire extends through an eye 62 on the lever 10 and with the parts as shown in Figure 1, the latch bar is moved away from the teeth 46 as the upper end of the lever is pressed inwardly against the lever by the thumb or fingers of a hand on the handle 16. Upon release of the lever 52 the spring.
48 draws the teeth of the latch bar into engagement with the teeth 46 of the cover plate.

The under surfaces of the handles 16 and 20 are provided with notches 64 and lugs 66 to facilitate gripping the tongs by hand. It will be understood, however, that the handles may be of any other suitable shape or design.

The fork 14 of the lever 10 is provided with spaced arms 68 and 70, and the arms are formed with hubs 72 and 74, respectively, in which knobs 76 of resilient material are positioned, and as shown in Figure 1, the knobs are secured in cup-shaped washers 78 which are carried on the ends of threaded studs 80. The studs are threaded in sockets 82 which extend through the hubs 72 and 74.

The fork 18 is provided with similar arms and the arms of the fork 18 are provided with knobs that are positioned to coact with the knobs of the fork 14.

With the parts assembled as shown and described the tongs are placed over an edge of a sheet of material with one fork on each side of the sheet and as the handles are drawn together the coacting knobs 76 are brought against the surfaces of the sheet of material with the latch bar sliding through the cover plate whereby the teeth of the latch bar engage the teeth of the cover plate locking the handles of the tongs with the knobs, which may be made of rubber, or other resilient material, in gripping relation with the sheet of material. By this means the sheet of material may be carried long distances without danger of the sheet of material slipping from the tongs. The tongs are also adapted for holding the sheet material to facilitate positioning the material as the sheets or panels of material are nailed or otherwise secured to studding and the like.

With the resilient knobs 76 mounted in the forks in this manner the knobs may readily be adjusted to compensate for wear and also for materials of different thicknesses.

The improved sheet material carrying and positioning tongs of this invention, therefore, provide a tool with which sheet materials, such as sheet rock and plaster board, may be carried from one position to another and positioned for nailing without danger of damaging surfaces of the material, and with the trip lever positioned adjacent one of the handles the material may be released from the tongs by the same hand with which the material is carried, thereby freeing the other hand of the operator for other use.

From the foregoing specification it will become apparent that the invention disclosed will adequately accomplish the functions for which it has been designed and in an economical manner and that its simplicity, accuracy and ease of operation are such as to provide a relatively inexpensive device considering what it will accomplish and that it will find an important place in the art to which it appertains when once placed on the market.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Changes in the shape, size, and arrangement of details and parts such as come within the purview of the invention claimed may be resorted to in actual practice, if desired.

Having now described the invention that which is claimed to be new and desired to be procured by Letters Patent, is:

1. In a sheet material carrying tool, the combination which comprises a pair of levers, each having a fork on one end and a handle on the opposite end, means pivotally connecting the levers at a point spaced from the forks and positioned between the forks and handles, each of said forks including a plurality of arms and each of the arms of the forks having knobs of resilient material adjustably mounted therein, the handles on the ends of the levers having finger receiving notches in under surfaces thereof and being positioned perpendicular to the levers and extended from one of the sides thereof, the handles being positioned in planes in which the arms of the forks are positioned, a latch bar pivotally mounted on one of said levers and positioned to coact with latching means on the other lever for retaining said knobs in gripping relation with a sheet of material positioned between the forks of the levers, resilient means for retaining the latch bar in coacting relation with the latching means, and a trip lever pivotally mounted on one of said levers and connected to the latch bar for releasing the latch bar from said latching means.

2. In a sheet material carrying tool, the combination which comprises a pair of levers, each having a fork with a plurality of arms on one end and a handle on the other, means pivotally connecting the levers, resilient knobs adjustably mounted in the arms of said forks, the handles on the ends of the levers having finger receiving notches in under surfaces thereof and being positioned perpendicular to the levers and extended from one of the sides thereof, the handles being positioned in planes in which the arms of the forks are positioned, a latch bar pivotally mounted on one of said levers and positioned to coact with latching means on the other lever for retaining the resilient knobs in gripping relation with a sheet of material positioned between the forks of the levers, means for urging the latch bar into holding engagement with the latching means, and a trip lever pivotally mounted on one of said levers and connected to the latch bar for releasing the latch bar from a cord from said latching means.

3. In a sheet material carrying tool, the combination which comprises a pair of levers, each having a diagonally positioned section in the intermediate part and said levers being positioned with the diagonally disposed sections crossed, a pin extended through the crossed sections of the levers for pivotally connecting the levers, said levers having forks with spaced arms on one of the ends thereof and handles on the opposite ends, and said handles being positioned perpendicular to the levers and extended from one of the sides of the levers, an arcuate latch bar pivotally mounted on one of the levers and positioned to extend across the other lever, a cover plate having teeth therein mounted on the face of the lever across which the latch bar extends and positioned to coact with the latch bar, a spring attached to the latch bar and lever on which the cover plate is mounted for urging teeth therein mounted on the face of the lever across which the latch bar extends and positioned to coact with the latch bar, a spring attached to the latch bar and lever on which the cover plate is mounted for urging teeth therein mounted on the face of the lever across which the latch bar extends and positioned to coact with the latch bar.

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