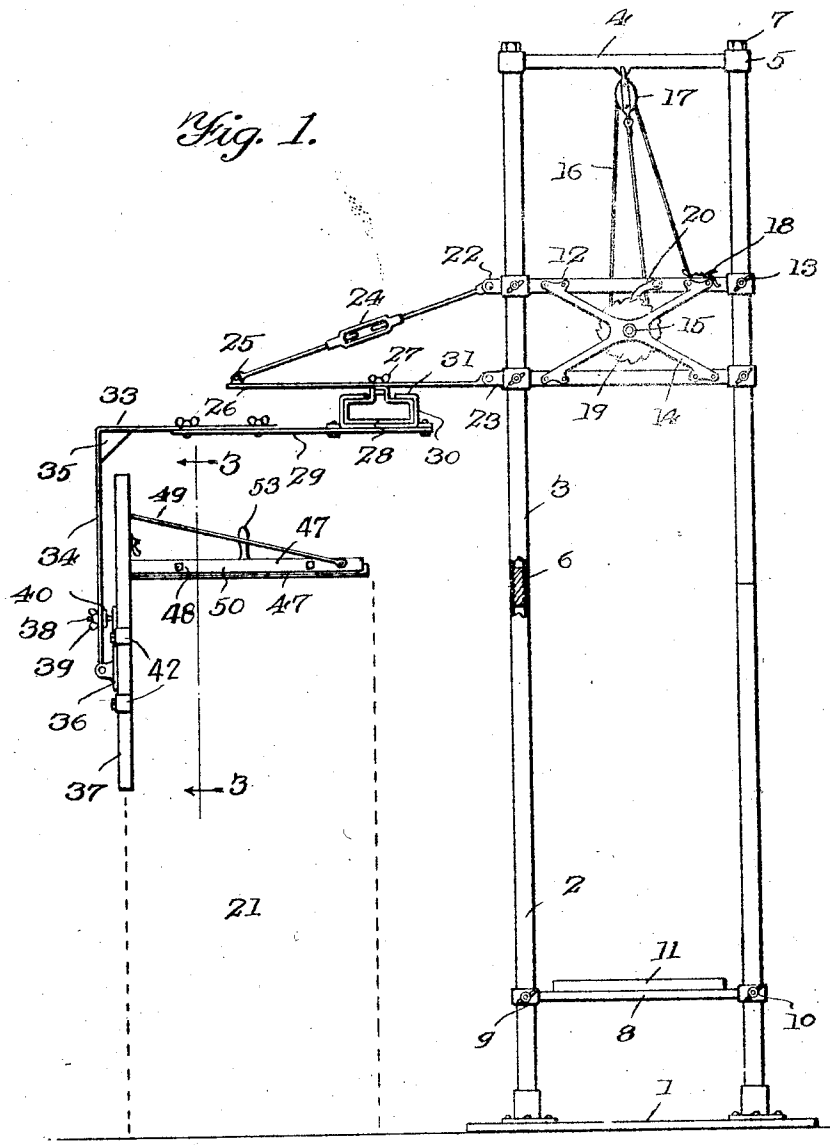
July 14, 1925. 1,545,888

E. R. EVANS

WALL BUILDING MACHINE

Filed June 30, 1924 3 Sheets-Sheet 1

Fig. 1.



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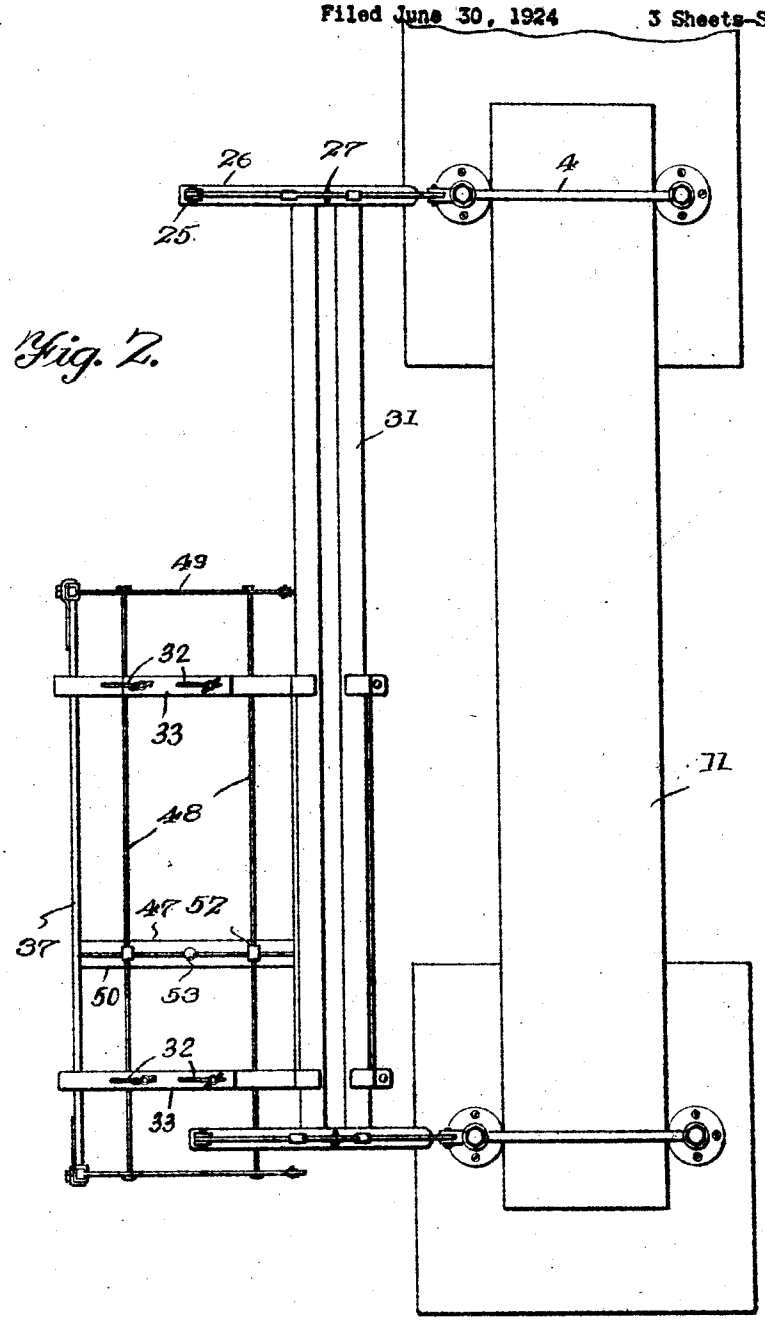


Fig. 2.

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Fig. 3.

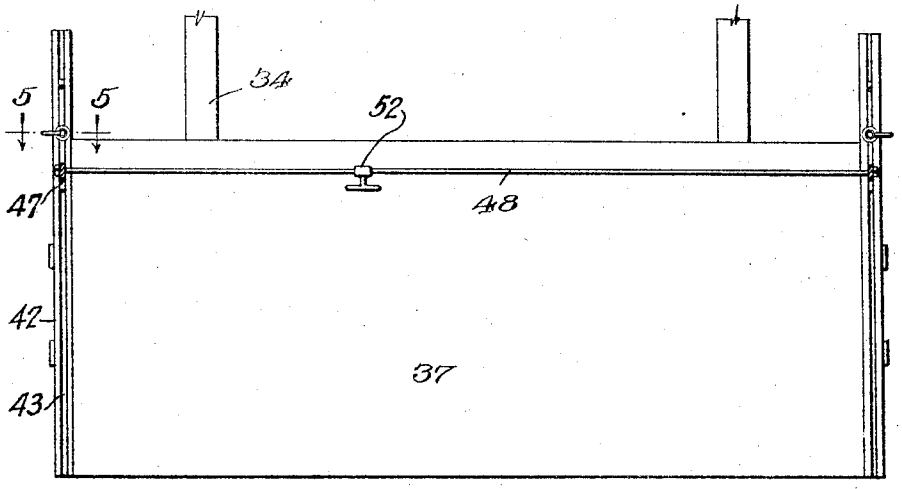


Fig. 4.

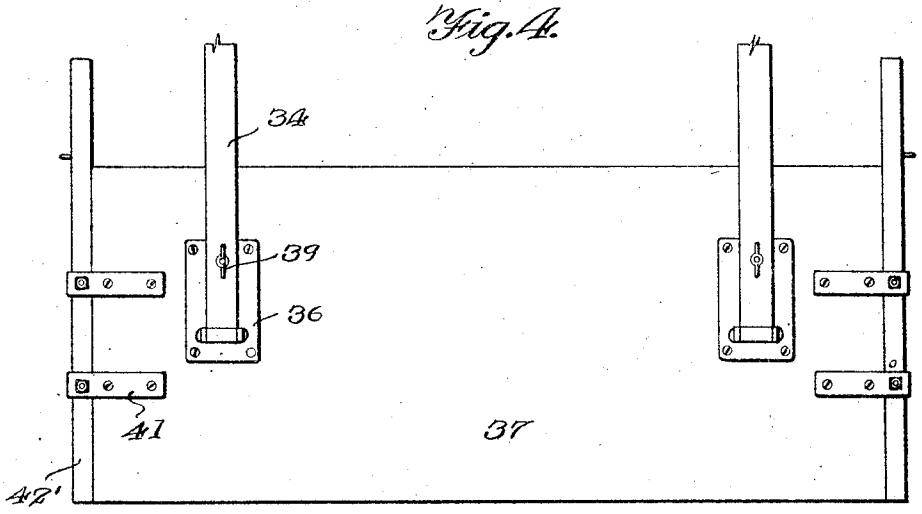
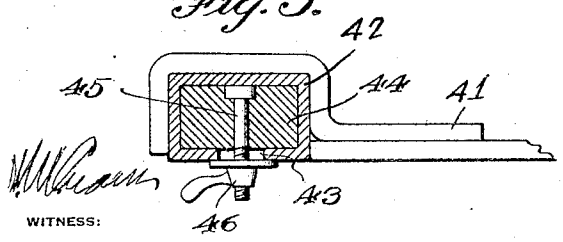


Fig. 5.



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Patented July 14, 1925. 1,545,888

UNITED STATES PATENT OFFICE.

EARLE R. EVANS, OF COTTAGEVILLE, WEST VIRGINIA.

WALL-BUILDING MACHINE.

Application filed June 30, 1924. Serial No. 723,387.

To all whom it may concern:

Be it known that I, EARLE R. EVANS, a citizen of the United States, residing at Cottageville, in the county of Jackson and State of West Virginia, have invented new and useful Improvements in Wall-Building Machines, of which the following is a specification.

My present invention has reference to a device for facilitating the erection of walls of buildings.

In carrying out my invention it is my purpose to erect a scaffold comprising adjustable sections and having a scaffold board or platform thereon, the said scaffold having adjustably secured thereon a carriage having means for supporting thereon a plumb board for contacting engagement with the outer surface of a wall in the course of erection, the said plumb board having associated therewith a right angularly disposed longitudinally movable scraper whereby the mortar between the courses of brick, stone or the like may be properly scraped and measured, and also whereby the top of a concrete wall may be likewise scraped or leveled.

With the above broadly stated objects in view, many others will appear as the nature of the invention is better understood, reference is to be had to the drawings which accompanying and which form part of this application.

In the drawings:—

Figure 1 is an end view of the improvement.

Figure 2 is a top plan view thereof.

Figure 3 is a sectional view on the line 3—3 of Figure 1.

Figure 4 is a view looking toward the outer face of the plumb board.

Figure 5 is a sectional view on the line 5—5 of Figure 3.

As disclosed by the drawings I secure on suitable base plates 1 the lower tubular sections 2 of a scaffold. The sections 2 are arranged in spaced pairs on each base 1 and are designed to have removably secured to the upper ends thereof similar tubular members 3 providing scaffold extensions. Any desired number of such extensions may be employed, and the uppermost extensions are connected together by a bar 4 having socket ends 5 through which pass threaded plugs 6 projecting from the outer ends of all of the sections. The threaded plugs are engaged by nuts 7.

Slidably arranged upon the corner posts of the scaffold are bars 8, each having a socket end 9 through which the said corner posts pass, and each of the sockets is provided with a binding element 10 for holding the bars 8 adjustably secured on the scaffold. The bars 8 are designed to support thereon a scaffold board 11, upon which the operator stands.

Slidably arranged on the corner posts of the scaffold there is a carriage 12, the same preferably comprising upper and lower transverse bars having socket plates carrying binding means 13 for engaging the corner posts of the scaffold. The upper and lower bars at each end of the scaffold are connected together by a spider 14, and journaled in bearings at the center of the spider there is a shaft 15 carrying a drum around which is wound a flexible element or cable 16. The cable 16 has one end secured to a sheave block 17 supported from the upper connecting bar 4, the cable being likewise trained around the pulley in the sheave block and has its free end wrapped around a cleat 18. The free end of the cable is within the reach of the operator on the board or platform 11, and in order to more effectively sustain the carriage adjusted on the platform, I secure on the shaft 15 a ratchet wheel 19 normally engaged by a dog 20 which is pivotally supported in the carriage.

The socket members of the carriage on the posts of the scaffold next to the wall 21 are provided with outstanding ears 22 and 23, and to the upper ear there is pivoted a sectional rod whose ends are engaged by a turn buckle 24. The outer end of this rod is pivoted as at 25 to a bar 26 that has its inner end pivoted to the ears 23.

Secured by removable means 27 approximately central on the under faces of the bars 26 there is a rail 28, preferably hollow and of substantially rectangular formation. Beneath the rail 28 there are plates 29 and to each of said plates there is bolted or otherwise secured guide members 30. Each of the guides is substantially U-shaped in side elevation but has its sides formed within inwardly directed flanges 31 that overlie the top of the rail 28.

The plates 29, adjacent to and at a suit-

able distance inward of their outer ends (which project over the wall 21) carry upstanding bolts engageable by winged nuts, the said bolts passing through elongated openings 32 in the horizontal arm 33 of an angle bracket. The second arm of the angle brackets indicated by the numeral 34 are extended downwardly, and between the arms 33 and 34 there is a suitable brace 35.

The angle brackets have their arms 34 hingedly secured to plates 36 that are screwed on or otherwise effectively secured to the outer face of a plumb board 37. The plates 36 also carry outstanding threaded studs 38 that pass through suitable openings in the arms 34, and the said studs are engaged by outer winged nuts 39 and inner nuts 40.

By an arrangement as above described it will be noted that the plumb board 37 will be sustained in proper vertical position by the adjustment of the nuts 39 and 40 and the turn buckle 24. It will be further noted that the plumb board, through the adjustment of the angle brackets with respect to the plates 29 may be properly positioned against the outer face of the wall 21, and likewise that the plumb board 37 may be moved longitudinally, the length of the scaffold, over the outer face of the wall 21.

Secured on the outer face of the plumb board 37 there are plates 41 whose outer ends are substantially U-shaped, and in these U-shaped ends there are fixed cross sectionally rectangular guides 42. The guides have their inner faces centrally and longitudinally slotted, as at 43. In each of the hollow guides there is a bar 44 carrying bolts 45 whose ends extend through the slots 43. The bolts are engaged by winged nuts 46, whereby the bars 44 are adjustably sustained in the guides. On each of the bars, and projecting through the slot 43 of the guides, below the bolts 45 there is an outstanding right angularly disposed arm 47 and to these arms there are connected spaced rods 48 respectively. Also between the arms 47 and the bars 44 there are rods 49. The brace rods 48 provide guide rails for the scraper. The blade of the scraper is indicated by the numeral 50, the same being centrally formed with an upstanding web 51 provided with sockets 52 which receive therethrough the rods 48. The web is centrally formed with a hand grip 53 so that the same may be moved longitudinally on the rods 48 and thus spread and level the mortar on the top of the wall 21.

With my construction it will be apparent that a wall may be erected more expeditiously and with a less amount of labor than is usually required, and while I believe that the foregoing description, when taken in connection with the drawings will fully set forth the construction, advantages and operation of my improvement, I desire it understood that I am not to be limited to the details of such construction, but may make such departures therefrom which fairly fall within the scope of what I claim.

Having described the invention I claim:—

1. In a wall building apparatus, a scaffold, a plumb board supported thereon vertically and longitudinally adjustable with respect thereto, and a longitudinally movable scraper supported right angularly from the plumb board.

2. In a wall building apparatus, a scaffold, a platform vertically adjustable thereon, a carriage vertically adjustable on said scaffold, means locking the carriage to the scaffold, a plumb board, and means supporting the plumb board from the carriage, and said plumb board being vertically and longitudinally adjustable with respect to the scaffold.

3. In a wall building apparatus, a scaffold, a platform vertically adjustable thereon, a carriage also vertically adjustable on the scaffold, means for raising or lowering the carriage on the scaffold, means for locking the scaffold to the carriage, a plumb board, means carried by the carriage for slidably supporting the plumb board thereon, and a vertically adjustable longitudinally movable right angularly disposed scraper on the plumb board.

4. In a wall building apparatus, a scaffold including corner posts made up of adjustable sections, means connecting the posts, a platform arranged between the posts and adjustably supported thereon, a carriage slidable on the posts, means for vertically adjusting the carriage on the scaffold, means for locking the carriage to the scaffold, a plumb board, means carried by the carriage for supporting the plumb board and for permitting the longitudinal movement thereof, means permitting the adjustment of the supporting means, and a vertically adjustable longitudinally movable scraper supported right angularly from the plumb board.

5. In a wall building apparatus, a scaffold made up of adjustable sections, a platform adjustably supported thereon, binding means between the platform support and the scaffold, a carriage slidable on the platform, a drum journaled in the carriage, means normally holding the drum from turning, a sheave block supported at the top of the scaffold, wound around the drum, passing through the sheave wheel and removably secured to the carriage, binding means between the carriage and the scaffold, pivotally supported means extending from the carriage, adjustable means associated therewith, whereby the said means is sustained angularly with respect to the carriage, a plumb board slidably associated

with said means and longitudinally adjustable with respect thereto, and a vertically adjustable longitudinally movable mortar leveling scraper supported from and arranged right angularly with respect to the plumb board.

6. In a wall building apparatus, a scaffold, a vertically adjustable platform thereon, a carriage on the scaffold, means for vertically adjusting the carriage from the platform, means locking the carriage on the scaffold, bars pivotally secured to and extending from the carriage, an adjustable brace between the bars and the carriage, a rail supported from the bars, plates having guides engaging the rails, angle brackets adjustably connected to the plates, a plumb board to which the vertical arms of the brackets are pivoted, means between the plumb board and the brackets for holding the former swingably adjusted with respect to the latter, hollow guides having inner faces secured to the ends of the plumb board, and bars movable therein, binding means passing through the guides, means adjusting the bars with respect to the guides, a right angular arm connected to each bar, brace means between the arms and bars, spaced rods connecting the arms, and a mortar leveling scraper slidably supported on the bars.

In testimony whereof I affix my signature.

EARLE R. EVANS.