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van der Lely et al.

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[45] **Aug. 13, 1974**

[54] **MACHINES FOR DISPLACING BUILDING SECTIONS**

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[52] **U.S. Cl.** **214/392,** 214/394

[51] **Int. Cl.** **B60p 3/00**

[58] **Field of Search** ..... 214/392, 394, 650–654, 214/1 S, 1 SW, 1 H

[56] **References Cited**

UNITED STATES PATENTS

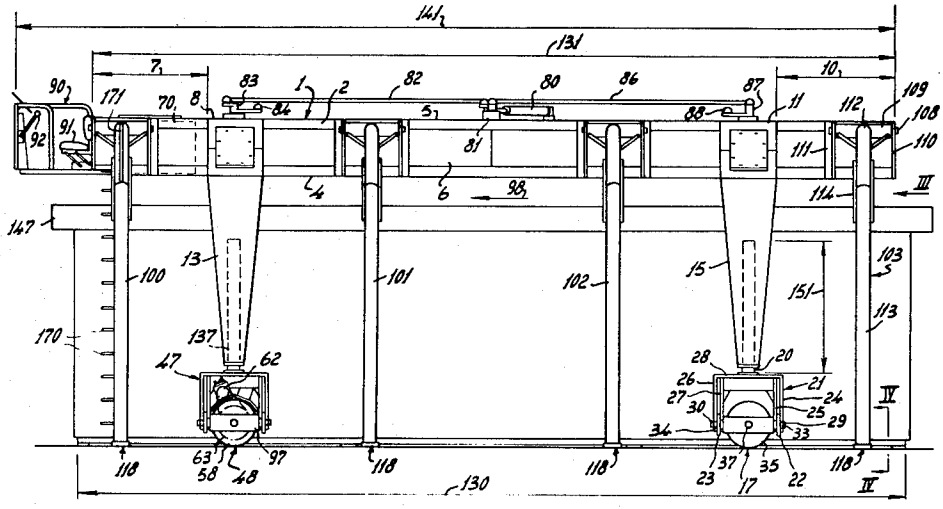
2,941,675	6/1960	Noble et al.	214/650 SG
3,019,926	2/1962	Christenson	214/392
3,034,675	5/1962	Quayle	214/730
3,322,454	5/1967	Mindrum	214/650 SG
3,381,833	5/1968	Gordon	214/392
3,396,861	8/1968	Houlton	214/392
3,541,598	11/1970	Dousset	214/392

Primary Examiner—Robert G. Sheridan
Assistant Examiner—R. B. Johnson
Attorney, Agent, or Firm—Mason, Mason & Albright

[57] **ABSTRACT**

A machine for displacing building sections of parallelepiped configuration intended for construction of prefabricated buildings which has a main girder and four extensible legs adapted to straddle a section with the girder above the section. Four carrying arms each having generally the configuration of an inverted "L" depend from each side of the girder, are pivotedly connected to the girder, and through hydraulic cylinders are selectively movable relative thereto. At the base of each arm is a strip extending inwardly having responsive means for signalling when the strip is properly engaged under a section. Each leg has a group of steerable ground wheels with the forward groups being powered by hydraulic motors, the steering, motive and carrying functions of the machine also being part of a hydraulic system and controlled from a driver's platform in the forward part of the machine, signals from the responsive means on each strip being displayed at the driver's platform.

46 Claims, 7 Drawing Figures



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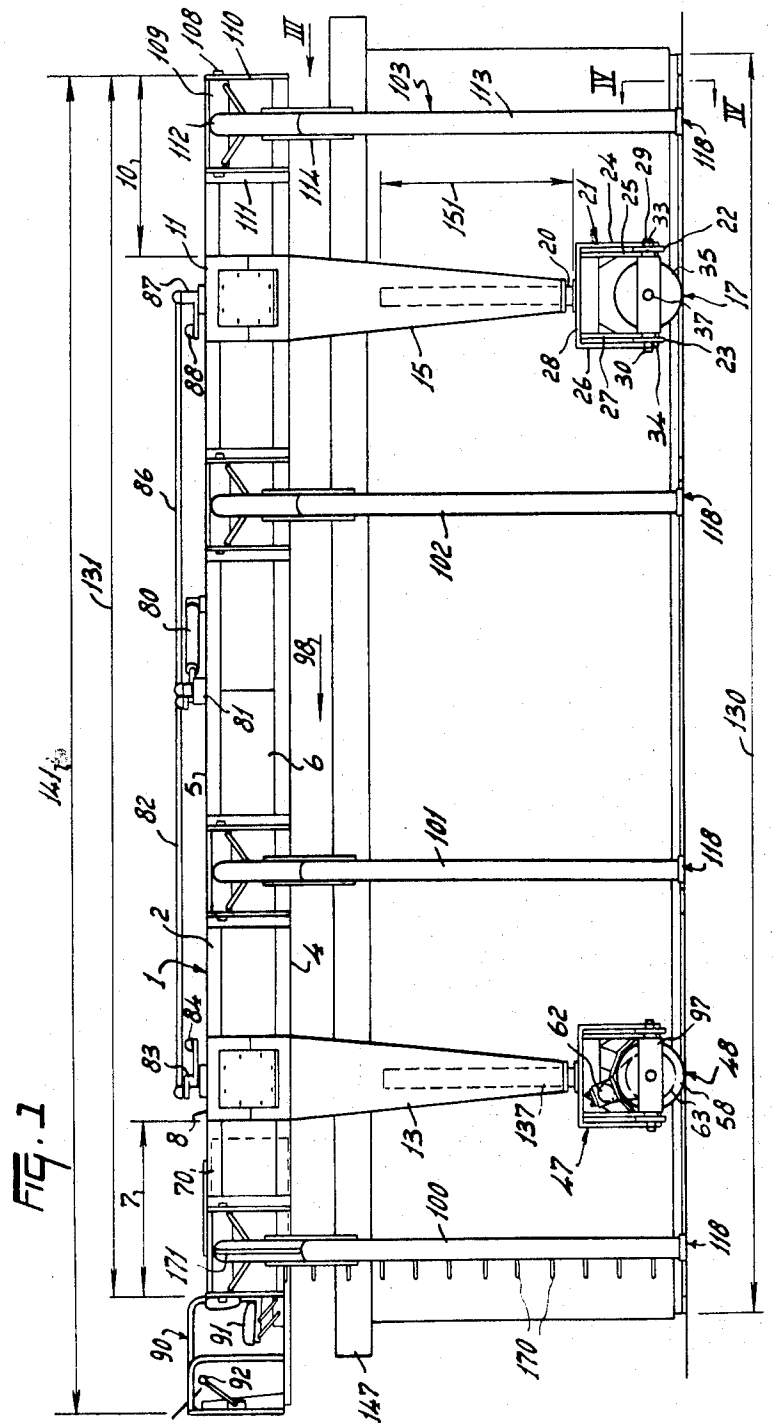

FIG. 1

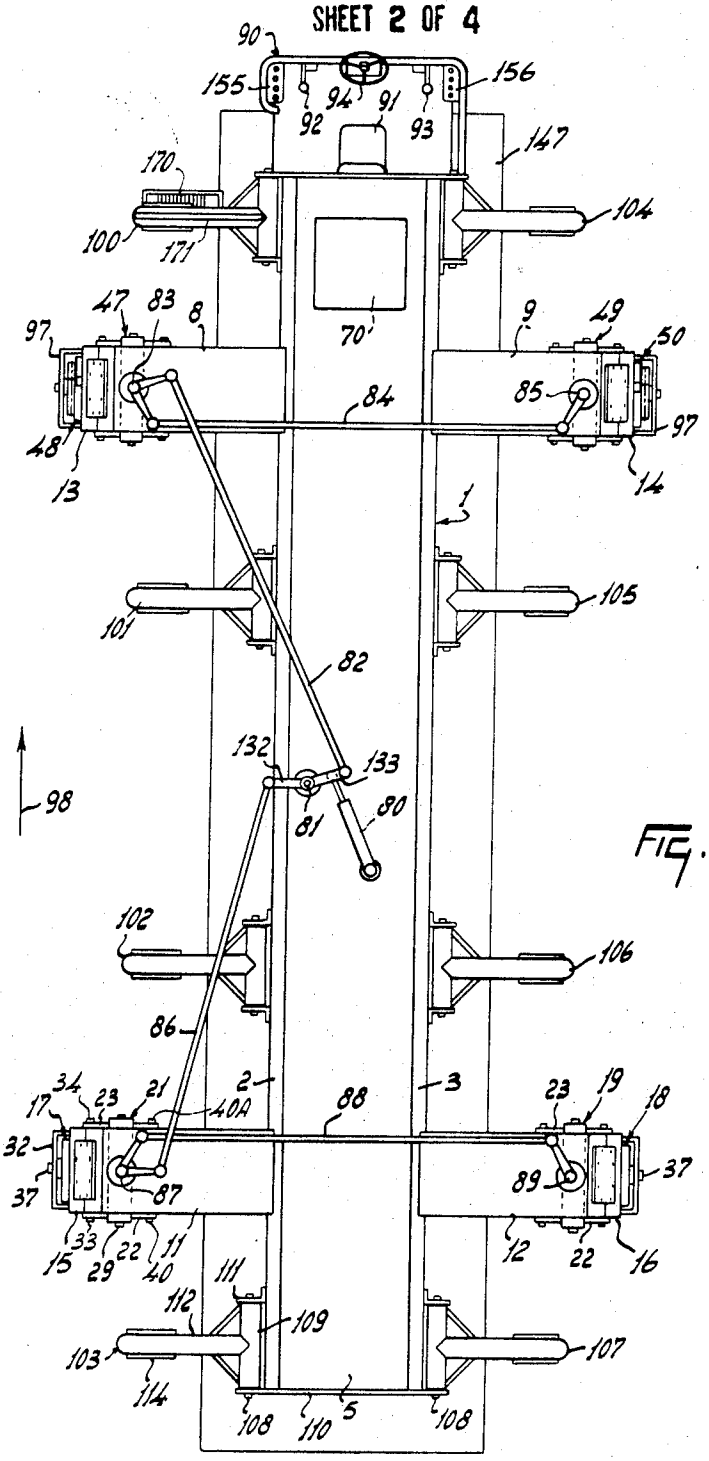
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FIG. 2

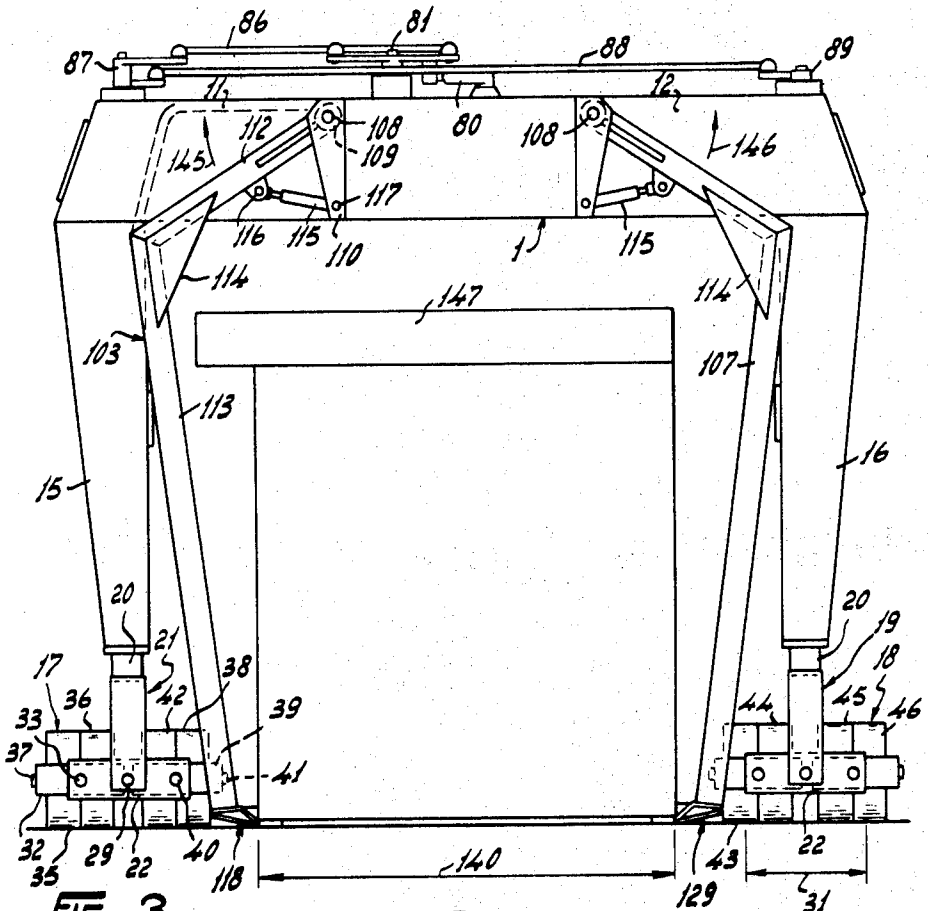
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FIG. 3

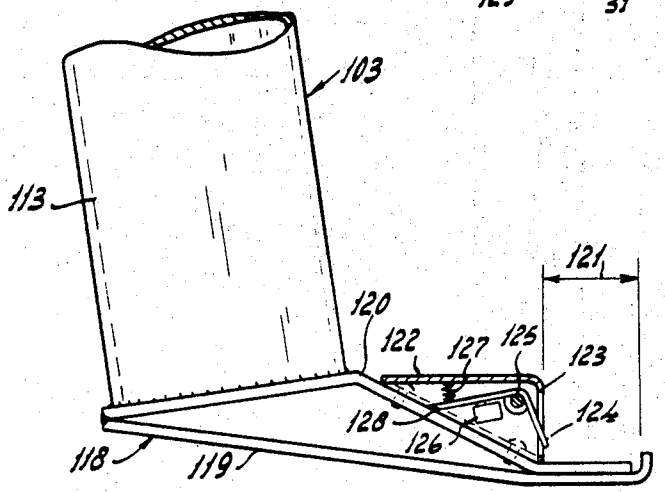
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FIG. 4

FIG. 5

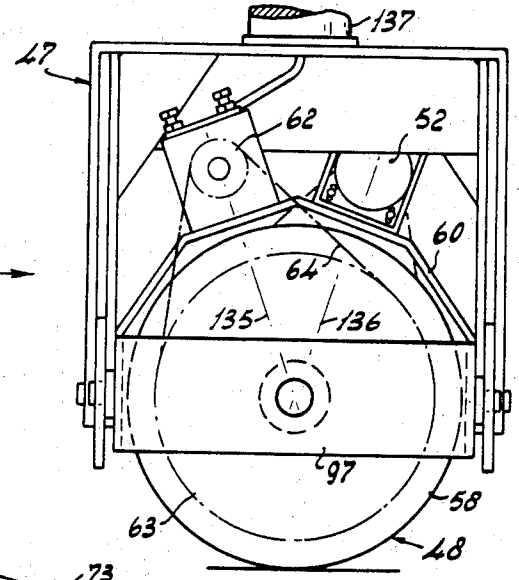


FIG. 6

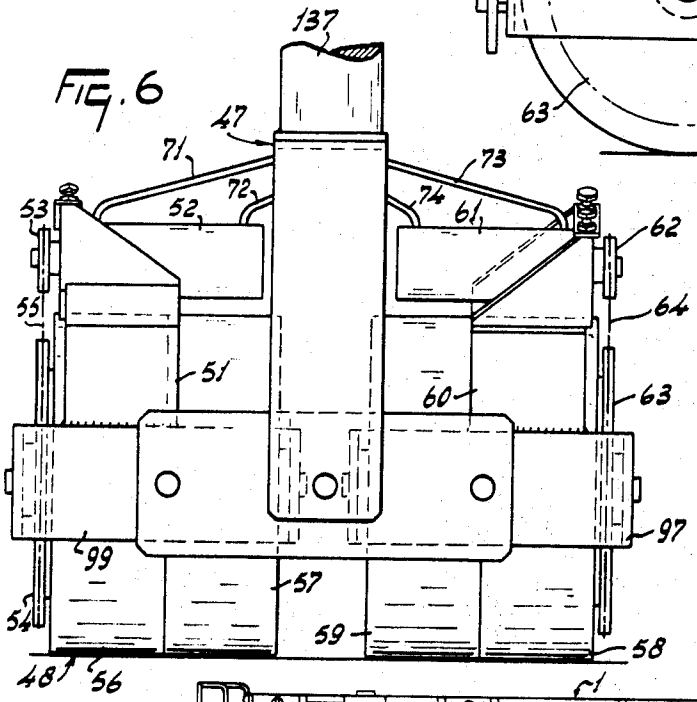
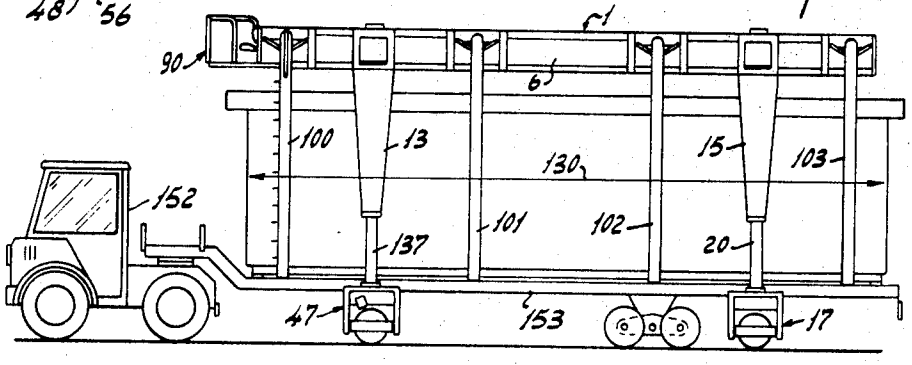


FIG. 7



MACHINES FOR DISPLACING BUILDING SECTIONS

SUMMARY OF THE INVENTION

This invention relates to a machine for displacing space-bounding building sections.

According to the present invention there is provided a machine for displacing space-bounding building sections, the machine comprising a frame provided with carrying arms by which a building section can be lifted, and means by which the carrying arms can be displaced in a direction of height with respect to the ground supporting the machine.

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of a machine for displacing space-bounding building sections,

FIG. 2 is a plan view of the machine of FIG. 1,

FIG. 3 is an end view of the machine of FIG. 1, taken in the direction of arrow III in FIG. 1,

FIG. 4 is a view of the base of a carrying arm of the machine taken on the line IV—IV in FIG. 1,

FIG. 5 is a side view on a large scale of a group of ground wheels of the machine,

FIG. 6 is a view of the group of ground wheels of FIG. 5 taken in the direction of arrow VI in FIG. 5,

FIG. 7 is a side view illustrating how the machine of FIGS. 1 to 6 can be utilized to load a transport vehicle.

DESCRIPTION OF THE PREFERED EMBODIMENT

The machine shown in FIGS. 1 to 6 has a main girder 1, extending in the direction of length of the machine. This main girder 1 is fabricated from corner beams 2, 3, 4 and a further beam not visible, extending in the direction of length of the girder, a sheet upon side 5, and sheet sidewalls 6. At a distance indicated by dimension 7 inwards from one end of the main girder 1 transverse beams 8 and 9 extend at right angles from the girder on either side thereof. At a distance indicated by dimension 10 inwards from the other end of the main girder 1 similar transverse beams 11 and 12 also extend at right angles from the main girder 1 on either side thereof. The dimensions 7 and 10 are equal, each amounting to about one seventh of the over-all length 131 of the main girder 1. The main girder 1 and the transverse beams 8, 9, 11 and 12 are horizontal and constitute the top part of the machine.

The free end portions of the transverse beams 8, 9, 11 and 12 mount, on their lower faces, the upper ends of supporting legs 13, 14, 15 and 16, to each of which a vertical shaft 20 (legs 15 and 16) or 137 (legs 13 and 14) is journalled, each of which in turn mounts a ground wheel group formed by four ground wheels. To this end, and referring to the leg 15 which has a ground wheel group 17, at its lower end of shaft 20 carries an inverted U-shaped bracket 21, the web 28 of which is secured to the shaft 20 and the two limbs of which are designated 24 and 26. At the lower ends of the limbs 24 and 26 rocking arms 22 and 23 pivot about horizontal stub shafts 29 and 30. The mounting of the rocking arms 22 and 23 is reinforced by stiffening arms 25 and 27, extending parallel to the limbs 24 and 26, the rocking arm 22 being pivotal between the lower ends of the limb 24 and the arm 25 and the rocking arm 23 being pivotal between the lower ends of the limb 26 and the arm 27. The corresponding free ends of the rocking arms 22 and 23 carry stub shafts 33 and 34, and 40, 40A, which respectively pivotally support brackets 32 and 39 extending in the intended direction of travel of the machine. The brackets 32 and 39 respectively embrace pairs of ground wheels 35, 36, and 38, 42, respectively mounted on, for rotation in common, horizontal axles 37 and 41, these axles being respectively journalled in the brackets 32 and 39. The ground wheels 35, 36 and 38, 42 thus form two pairs of ground wheels, which form together the ground wheel group 17 on the vertical shaft 20 of the supporting leg 15. Like the leg 15 the shaft 20 of the leg 16 carries an inverted U-shaped bracket 19 having a ground wheel group 18 formed by four ground wheels 43, 44, 45 and 46. The ground wheel group 18 is arranged in the same manner as the ground wheel group 17 so that further description may be omitted.

By means of the shaft 137 the leg 13 is provided with a bracket 47, similar to the bracket 21. The bracket 47 carries a ground wheel group 48 of four ground wheels in the same manner as the ground wheels 35, 36, 38 and 42 on the bracket 21. Similarly the supporting arm 14 is provided with a bracket 49 having a group of ground wheels 50. The construction of this ground wheel group is similar to that of the ground wheel group 17 and it will therefore not be described in detail.

Thus the machine has four ground wheel groups, two of which 48 and 50 are located at the front with respect to the intended direction of forward movement 98 of the machine, and the remaining two of which 17 and 18 constitute the rearmost ground wheel groups of the machine. The foremost ground wheel groups 48 and 50 are coupled with a prime mover and constitute driven ground wheels. Thus, referring to FIGS. 5 and 6, the ground wheel group 48 comprises one pair of coupled ground wheels 56 and 57 and one pair of coupled ground wheels 58 and 59. The ground wheels 56 and 57 are mounted in a bracket 99, similar to the bracket 32 in FIG. 3. The ground wheels 58 and 59 are mounted in a bracket 97, similar to the bracket 39 of FIG. 3. The bracket 99 is provided with a support hood 51 which extends around the wheels 56 and 57 and is connected with the two opposite limbs of the bracket 99. The support hood 51 carries a hydraulic motor 52, which is linked by means of a chain sprocket 53 and a chain 55 to a chain sprocket 54 which is coupled with the pair of ground wheels 56 and 57. The bracket 97 has a support hood 60 which extends around the wheels 58 and 59 between the front and rear limbs of the bracket 97. The support hood 60 carries a hydraulic motor 61 having a chain sprocket 62 which is linked by a chain 64 to a chain sprocket 63 which is coupled with the pair of ground wheels 58 and 59. The motors 52 and 61, as will be apparent from the side view of FIG. 5, are arranged relatively on the sides of a *V* with respect to the rotational axis of the ground wheels, located on radial lines 135 and 136. At the front of the machine the main girder 1 carries a pump 70 which constitutes the prime mover for the hydraulic system of the machine and which drives the hydraulic motors 52 and 61 through ducts 71 and 72, 73 and 74 respec-

tively. The ground wheel group **50,** like the ground wheel group **48,** is similarly driven. Preferably all the ground wheels have solid tires.

On the top of the machine a steering cylinder **80** of a hydraulic steering mechanism is mounted for controlling the four ground wheel groups **17, 18, 48** and **50** at the lower ends of the supporting legs **15, 16, 13** and **14.** The steering cylinder **80** is a hydraulic device also fed from the hydraulic system of the machine and is coupled with arms **132** and **133** pivotable about a common shaft **81,** the arm **133** being coupled through a coupling rod **82** with a vertical shaft **83.** The shaft **83** is located perpendicularly above the vertical support shaft **137** of the ground wheel group **48** and is connected therewith for turning the shaft **137** about its longitudinal center line. The shaft **83** is also coupled through a steering rod **84** with a vertical shaft **85** which is in line with and connected to the vertical shaft supporting the ground wheel group **50** for turning this last-mentioned shaft about its longitudinal center. The steering cylinder **80** is connected via the arm **132** and a coupling rod **86** with a vertical shaft **87** connected through a further steering rod **88** with a vertical shaft **89.** The shafts **87** and **89** are respectively coupled with the vertical shafts **20** of the ground wheel groups **17** and **18.**

At the front of the machine a control-platform **90** is provided with a driver's seat **91** and a steering wheel **94** hydraulically connected with the steering cylinder **80.** From the control-platform **90** a control-member **92** is coupled with the driving motors of the ground wheel groups **48** and **50.**

The machine has eight carrying arms **100** to **107** pivoted to the main girder **1** with four carrying arms disposed equi-spaced apart on each side of the girder **1.** The arm **100** is provided with a stair **170** and a railing **172** to be able to reach the control-platform **90.** The foremost and rearmost carrying arms are fastened to the front and the rear ends respectively of the main girder **1.** As will be described more fully for one carrying arm **103,** the carrying arms are secured to the main girder **1** so as to be pivotable about horizontal pivotal shafts **108.** These pivotable shafts **108** are parallel to the main girder **1** and to the direction of movement **98.** The carrying arm **103** has at its root a supporting bearing **109** extending parallel to the main girder **1** and arranged between supports **110** and **111** fastened to the main girder **101.** The carrying arm **103** is cranked so that it provides a substantially horizontal portion **112** and a substantially vertically extending portion **113.** The connection of the portion **112** with the portion **113** is reinforced by a fillet **114.** Between the portion **112** and the supports **110** and **111** on the main girder **1** an actuating mechanism formed by a hydraulic jack **115** is provided, secured to the supports **110** and **111** so as to be pivotable about a shaft **117.** The other end of the jack **115** is secured to the portion **112** of the supporting arm **103** so as to be pivotable about a pivotal shaft **116.** The lower, free, end of the supporting arm **113** is provided with an extension **118.** This extension **118** is formed by two bent strips **119** and **120** shown best in FIG. **4.** The extension **118** is secured by means of the strip **120** to the lower, free, end of the supporting arm **113.** The ends of the strips **119** and **120** remote from the supporting arm **113** are secured to each other and constitute a supporting foot over a length **121.** The strip **120** is provided with a screening hood **122,** a vertical side **123** of which forms a stop. The side **123** has an opening through which a feeler **124** extends so that it projects out of the side **123** above the base of the supporting foot. The feeler **124** is one portion of a cranked rocker arm adapted to move about a pivotal shaft **125** and co-operating with an electric contact **126.** The end **128** of the rocker arm remote from the feeler **124** cooperates with a compression spring **127,** which acts to urge the end **128** of the rocker arm against the strip **120.**

Each of the carrying arms **100** to **107** is connected with the main girder **1** by a hydraulic jack such as the jack **115** and each has a supporting foot as just described at its free end. The jacks **115** are controllable in common from the driver's seat by means of a control-arm **93** so that the carrying arms can be moved to any one of a plurality of positions relative to the machine frame. On either side the driver's platform **90** has a row of signalling lamps of an indicator system, the number of which corresponds with the number of carrying arms. With respect to the direction of movement **98** the driver's platform **90** has on the left-hand side four signalling lamps **155** and on the right-hand side four signalling lamps **156.** The signalling lamps **155** cooperate with the feeler arms **124** of the carrying arms **100** to **103** and the signalling lamps **156** co-operate with the feeler arms **124** of the carrying arms **104** to **107.**

The machine described above is capable of displacing large building sections in a simple manner. The machine is particularly suitable for large, space-bounding building sections to be employed to erect a building, being building sections that are wholley or partly prefabricated and bound spaces so that a section forms part of the space of a building, for example, part of one or more rooms. A section has a floor, walls and a top which may form a ceiling and, for example, a roof. The Figures illustrate how a building section is carried in the machine to be displaced thereby. The width **140** of the section is about 2.50 ms (FIG. **3**). The section has a length **130** of about 11 ms (FIG. **1**), corresponding with the length **141** of the machine.

The building sections can be picked up by the carrying arms of the machine. For this purpose the machine is moved to straddle a building section and the carrying arms are pivoted inwardly so that the supporting feet at the lower, free, ends of the carrying arms are moved to beneath the bottom of the building section so that the supporting feet are located, by the distance **121** (FIG. **4**), beneath the building section. When the supporting feet are thus in place beneath the building sections, the main part of the machine is lifted as a whole by displacing the four ground wheel groups in a direction of height with respect to the carrying arms. The section is thus displaced in a direction of height. For this displacement of the ground wheel groups the shafts of the ground wheel groups, such as the shaft **20,** are shifted in a direction of height with respect to the supporting arms **15.** This displacement of the shafts with respect to the supporting arms is performed by hydraulic motors (not shown) disposed in the supporting arms, connected by transmission means with the shafts of the ground wheel groups, and fed from the hydraulic system **70.** Owing to this displacement of the ground wheel groups with respect to the supporting arms, the whole machine frame is lifted so that the arms with the building section bearing on the supporting feet of the arms are moved upwards. Although in this form the

whole frame of the machine is moved upwards or downwards for the vertical displacement of a building section, it is possible, as an alternative, to mount the carrying arms on the frame, for example, on the main girder **1**, so as to be displaceable in a direction of height with respect thereto. When the building section is elevated to a sufficient extent from the ground, the machine can be displaced as a whole in a horizontal direction by driving the ground wheel groups **48** and **50** by means of the hydraulic motors associated therewith. In this way building sections can be transported by the machine to, for example, a storeroom.

The machine is also particularly suitable for loading or unloading the building sections on or off a transport vehicle, either from or to a storeroom, or directly from their place of manufacture onto a transport vehicle. FIG. **7** illustrates how a building section can be placed by the machine on a transport vehicle **152.** In order to arrange the building section on the transport vehicle, the ground wheel groups are displaced in a direction of height with respect to the supporting arms over such a distance that the lower face of the building section is at a higher level than the top face of the loading platform **153** of the transport vehicle. The transport vehicle is parked so that the machine can ride in its direction of length over the loading platform **153** of the transport vehicle so that the building section as a whole is moved to above the loading platform **153.** Then the ground wheel groups are displaced relatively to the carrying arms so that the frame of the machine with the carrying arms and the building section held by the arms moves downwards until the building section bears on the loading platform **153,** as shown in FIG. **7.** The arms are then moved to withdraw the supporting feet from below the building section, the carrying arms **100** to **103** being pivoted in the direction of the arrow **145** (FIG. **3**) about the pivotal shafts **108** and the carrying arms **104** to **107** being pivoted in the direction of the arrow **146** about their pivotal shafts. These movements of the carrying arms are effected by actuation of the hydraulic jacks **115.**

When the supporting feet have been removed from beneath the section, the transport vehicle with the section located thereon can be driven from beneath the machine or the machine can be driven away from the transport vehicle. For picking up a section the supporting feet can be inserted beneath the section by actuating the hydraulic cylinders **115** so that the carrying arms located on opposite sides of the main girder **1** approach each other. The feelers **124** initiate signals observable at the driver's seat when the supporting feet have completely covered the distance **121** beneath the building section, since when the carrying arms reach the positions which the building section touches the stops **123,** the feelers **124** are moved around their pivotal shafts against the pressure of their springs **127** to switch the electric contact **126** so that the signalling lamps **155** and **156** near the driver's seat are illuminated. The feelers **124** together with the signalling lamps constitute an indicator system for informing the driver of correct engagement of the supporting feet with the section. The movement of the carrying arms about their pivotal shafts is then stopped by the driver. The feelers may, as an alternative, be coupled so that they automatically stop the movement of the carrying arms when the stops **123** come into contact with the section. At the driver's seat it can thus be checked that the supporting feet are located in a correct manner beneath the building section and the building section is satisfactorily supported on the feet of the carrying arms. A displacement of the supporting feet relative to the building section such that the distance **121** is not fully employed is immediately perceivable since the feelers **124** are then no longer in contact with the section and the signalling lamps **155** or **156** near the driver's seat will go out.

The carrying arms hold the building section on its bottom face for displacement. The load produced by the section, particularly if it is to be used for part of a story, is approximately equal to the load exerted at its place in the building. This is advantageous to the manufacture of the sections, since in this case no special precautions have to be taken for transport by the machine. By arranging the main girder of the machine at the top, a section can be engaged effectively from the main girder on either side by the carrying arms. The motors and other gear can be advantageously supported by the main girder. By arranging the main girder centrally extending in the direction of length of the machine a satisfactory distribution of load in the machine is obtained. Owing to the shape of the carrying arms by which the upper portion **112** is substantially horizontal and the remaining portion **113** can be arranged at a small angle to the perpendicular, so as to be inclined downwards towards the center of the machine (see FIG. **3**), the distance between the upper parts of the portion **113** of the carrying arms **100** to **103** and the carrying arms **104** to **107** is greater above the lower free ends of the carrying arms than between the lower free ends. This facilitates picking up a section, because a section may be wider at the top, for example, owing to a projecting roof edge, than at the bottom, as is shown at **147** in FIG. **3.** From the platform at the front high up in the machine the driver can satisfactorily supervise operation of the machine. The height of the main girder above the ground is adjustable so that a section of height of about 3 ms can be lifted and placed on a transport vehicle. The distance over which the main part of the machine can be displaced in a direction of height can be chosen to some extent by means of the length **151** (FIG. **1**) of the supporting shafts of the ground wheel groups.

While various features of the machine that have been described, and that are illustrated in the drawings, will be set forth in the following claims as inventive features, it is to be noted that the invention is not necessarily limited to these features and that is encompasses all of the features that have been described and illustrated both individually and in various combinations.

What we claim is:

1. A machine for displacing space-bounding building sections of parallelepiped configuration intended as part of a prefabricated building, the machine comprising a frame which is adapted to be movably supported on and extend above a horizontal supporting surface, a plurality of carrying arms provided on said frame, said carrying arms including engagement means by which a said building section can be received and supported, and lift means provided on said frame by which said carrying arms can be displaced in a direction of height with respect to the surface supporting the machine, an operator's controls included in said machine, said engagement means including sensor means adapted to determine whether each engagement means is correctly positioned relative to a building section re-

ceived by the machine, and signal means associated with the sensor means to signal the operator of the position of said engagement means.

2. A machine as claimed in claim 1, having a driver's seat and said controls near the driver's seat for actuating the carrying arms and said engagement means.

3. A machine as claimed in claim 1, wherein the engagement means comprise extensions adapted to be inserted beneath a building section to be displaced, on which extensions the section can bear at least partly.

4. A machine as claimed in claim 3, wherein each extension is rigidly secured to the free end of its associated carrying arm.

5. A machine as claimed in claim 4, and comprising a stop associated with one of the extensions for determining that this extension is correctly positioned relatively to a building section for lifting this building section.

6. A machine as claimed in claim 5, said sensor comprising a feeler associated with one of the extensions for sensing correct positioning of the extension relative to a building sections and transferring a relevant signal.

7. A machine as claimed in claim 6, wherein the feeler is located near the stop.

8. A machine as claimed in claim 7, including a driver's seat wherein the feeler is connected to an indicator system located near the driver's seat.

9. A machine as claimed in claim 7 wherein the feeler is part of an electric indicator system.

10. A machine as claimed in claim 1, wherein the carrying arms are movable arranged on said frame of the machine.

11. A machine as claimed in claim 10, wherein at least one of the carrying arms is pivotally secured to the machine frame near the top of the machine.

12. A machine as claimed in claim 11, wherein the pivotal axis of said one of the carrying arms extends substantially in the direction of length of the machine.

13. A machine as claimed in claim 12, wherein said one of the carrying arms is selectively hydraulically movable and fixable in any one of a plurality of positions relative to the frame.

14. A machine as claimed in claim 13, wherein a hydraulically operated jack is arranged between said one of the carrying arms and the frame near the pivotal axis of this carrying arm.

15. A machine as claimed in claim 14, wherein said one of the carrying arms comprises a portion pivoted to the frame that can adopt a substantially horizontal position and thus is connected with a mainly downwardly extending portion.

16. A machine as claimed in claim 10, wherein the frame is provided with a plurality of ground wheels.

17. A machine as claimed in claim 10, wherein the frame is provided with groups of ground wheels.

18. A machine as claimed in claim 10, wherein the frame comprises a main girder located on the top of the machine and extending in the direction of length of the machine.

19. A machine as claimed in claim 18 including ground wheels, wherein on either side of the main girder transverse beams are provided, on which said ground wheels are mounted.

20. A machine as claimed in claim 19, wherein on either side of the main girder two transverse beams are provided, on the lower faces of which the ground wheels are coupled.

21. A machine as claimed in any one of claims 18, wherein each of the transverse beams is provided at its free end with a downwardly orientated supporting arm, the lower end of wbich is provided with one of the ground wheels.

22. A machine as claimed in claim 21, wherein each supporting arm extends substantially vertically and each transverse beam extends substantially horizontally.

23. A machine as claimed in claim 22, wherein near one end of the machine two transverse beams extend transversely of the main girder, and wherein near the other end of the machine also two transverse beams are arranged on opposite sides of the main girder at right angles to the main girder.

24. A machine as claimed in claim 23, wherein on either side of the main girder two or more supporting arms are provided, each supporting arm having an extension and the extensions of opposite arms facing each other.

25. A machine as claimed in claim 24, wherein the supporting arms are pivotally secured to the main girder.

26. A machine as claimed in claim 25, wherein at least two of said ground wheels of the machine are steerable ground wheels.

27. A machine as claimed in claim 26, wherein the steerable ground wheels are adapted to turn about vertical axes.

28. A machine as claimed in claim 27, wherein all ground wheels of the machine are steerable.

29. A machine as claimed in claim 28, wherein the machine is supported from four ground wheel groups, each having at least two of said ground wheels.

30. A machine as claimed in claim 29, wherein at least one ground wheel of a ground wheel group is pivotally arranged on a rocking arm and is pivotable about a horizontal axis extending substantially in the intended direction of operative travel of the machine, this rocking arm being pivotally mounted on a support connected with the frame.

31. A machine as claimed in claim 30, wherein the support is mounted on one of the carrying arms of the machine by means of an upright supporting shaft.

32. A machine as claimed in claim 31, wherein the upright supporting shaft is a shaft about which the steerable wheels are adapted to turn.

33. A machine as claimed in claim 26, wherein the steerable wheels are governed hydraulically.

34. A machine as claimed in claim 33, wherein the ground wheels are provided with solid tires.

35. A machine as claimed in claim 34, wherein at least two of the ground wheels are driven wheels.

36. A machine as claimed in claim 35, wherein the means by which the carrying arms can be displaced in a direction of height are arranged near the ground wheels so that the ground wheels can be displaced in a direction of height with respect to the machine frame and be selectively fixed in any one of a plurality of positions relative to the frame.

37. A machine as claimed in claim 36, wherein driving motors for said ground wheels are arranged near the wheels and are displaceable with the wheels in a direction of height with respect to the machine frame.

38. A machine as claimed in claim 37, wherein the driven wheels are located at the front of the machine with respect to the intended direction of operative travel of the machine.

39. A machine as claimed in claim 38, including a hydraulic pump wherein the driving members for the wheels are formed by hydraulic motors fed from said pump in the machine.

40. A machine as claimed in claim 39, wherein the hydraulic motors are connected on supporting hoods covering the wheels.

41. A machine as claimed in claim 39, wherein above the wheels of a group of said ground wheels two hydraulic motors are arranged, each of which is coupled with one wheel, the wheels so coupled with the motors being relatively independently rotatable about their axles.

42. A machine as claimed in claim 41, wherein viewed from the side the two hydraulic motors on the ground wheel group are arranged in the shape of a *V* with respect to the axles of the ground wheels with which they are coupled.

43. A machine as claimed in claim 8, including a main girder on said frame wherein the driver's seat is arranged near one end of the machine on said main girder.

44. A machine as claimed in claim 43, wherein on each longitudinal side of the main girder four carrying arms are arranged.

45. A machine as claimed in claim 44, wherein the lift means which are provided by which the carrying arms can be displaced in a direction of height are hydraulical means.

46. A machine for displacing building sections of parallelepiped configuration intended as part of a prefabricated building, the machine comprising:

a frame including a longitudinal girder;

four legs extending from said girder for supporting same, two of said legs proximate the forward portion of said girder and the other two proximate the after portion of said girder, ground engaging wheels mounted at the base of each said leg;

a plurality of carrying arms hingedly connected to said girder and at least two of said arms depending on both sides thereof for carrying a building section, said legs and said arms adapted to straddle the section, said arms having generally the configuration of an inverted "L," means for moving each arm relative to said girder connected thereto;

engagement means connected to the base of each said arm adapted to engage the section for lifting same;

responsive means included in each engagement means for signalling when it properly engages the section; and

lift means associated with said girders for causing same to move vertically relative said ground engaging wheels whereby said carrying arms depending from said girder are enabled to be raised and lowered together and selectively to engage the section by movement caused by said means for moving each arm with said responsive means signalling the machine's operator when each arm's engagement means is in proper engagement for lifting the section.

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