A. W. ALTORFER.

DRIVING MECHANISM AND SUPPORT THEREFOR.

APPLICATION FILED SEPT. 26, 1910.

1,047,119.

Patented Dec. 10, 1912.

2 SHEETS—SHEET 1.

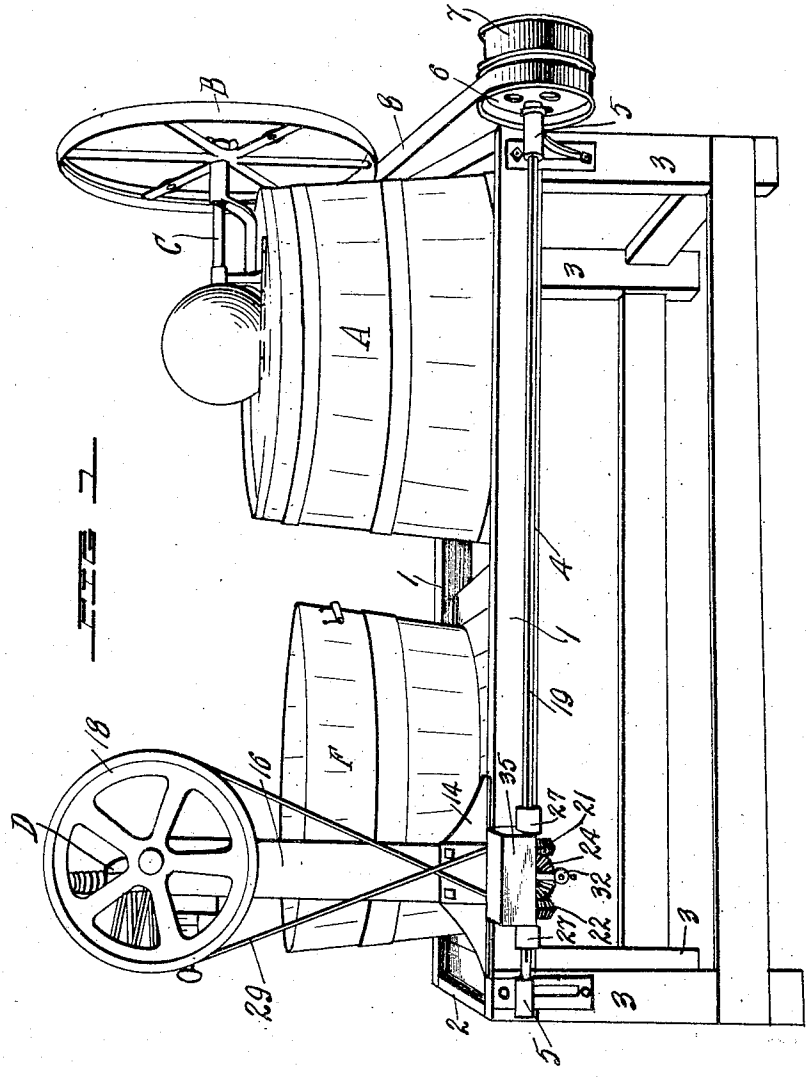

FIG. 1.

Witnesses
Robert Plews
E. N. Bradley

Inventor
Alpheus W. Altorfer
By Chas. A. LaPorte
Atty

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2 SHEETS—SHEET 2.

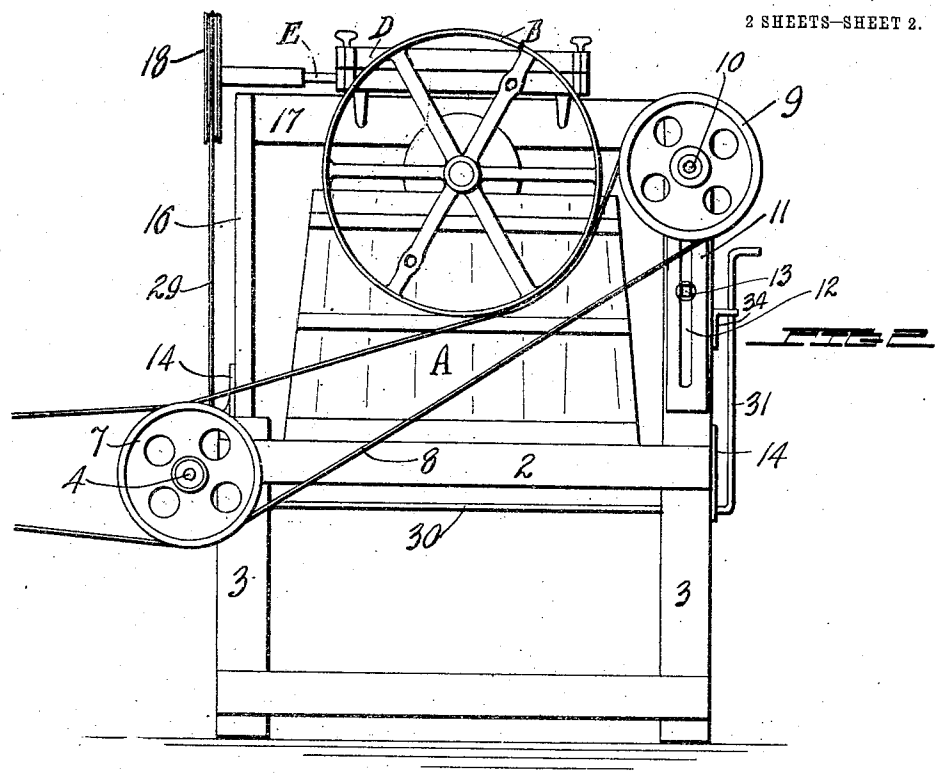

FIG 2

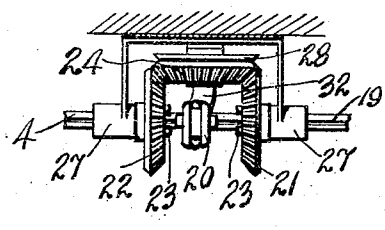

FIG 3

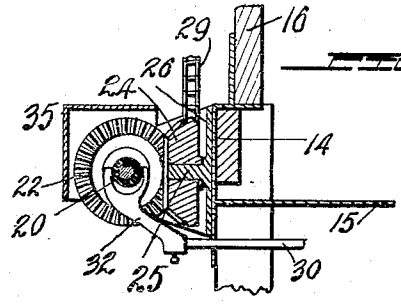

FIG 4

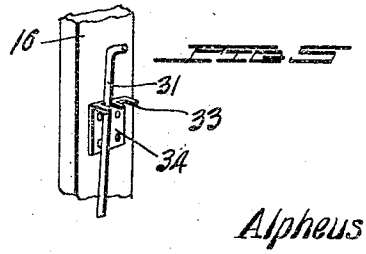

FIG 5

Witnesses
Robert Plows
E. N. Bradley

Inventor
Alpheus W. Altorfer
By Chas. F. LaPorte
Atty

UNITED STATES PATENT OFFICE.

ALPHEUS W. ALTORFER, OF ROANOKE, ILLINOIS, ASSIGNOR TO POWER WASHING MACHINE CO., OF PEORIA, ILLINOIS, A CORPORATION OF ILLINOIS.

DRIVING MECHANISM AND SUPPORT THEREFOR.

1,047,119. Specification of Letters Patent. Patented Dec. 10, 1912.

Application filed September 26, 1910. Serial No. 583,818.

To all whom it may concern:

Be it known that I, ALPHEUS W. ALTORFER, a citizen of the United States, residing at Roanoke, in the county of Woodford and State of Illinois, have invented certain new and useful Improvements in Driving Mechanism and Supports Therefor, of which the following is a specification.

This invention has reference to a combined driving mechanism for a wringer and a washing machine, and has for its object to provide an apparatus capable of containing or supporting, both a wringer and a washing machine, and having a power mechanism for driving a washing machine independently of or simultaneously with the wringer.

The invention has for a further object to provide an apparatus of the character described, having power mechanism for driving a washing machine and a wringer: said mechanism including clutch devices, whereby the wringer may be intermittently connected with the power, and reversed at the will of the operator for driving the wringer in opposite directions.

A further object of the invention, is to provide an apparatus supporting a movable frame to which may be attached a wringer; power devices; means for intermittently connecting the power with the wringer in different positions and for driving said wringer in different directions, and power devices for operating a washing machine.

The entire apparatus is so constructed that a washing machine may be supported on the same and the wringer moved into proximity thereto, whereby the clothes may be put into the wringer direct from the washing machine and when wrung deposited in a tub which may also be supported on said apparatus.

A further object of this invention is the provision of a main frame adapted to support a washing machine, having a supplemental frame adapted to support a wringer mechanism and movable on said main frame, said supplemental frame being mounted on supporting members or runners which slide on said main frame and having a lower member connecting said supporting members or runners, and clutch devices movable with said supplemental frame for operatively connecting said wringer mechanism to the main shaft.

That the invention may be more fully understood, reference is had to the accompanying drawings, in which:—

Figure 1 is a perspective view of my machine; Fig. 2 is an end elevation looking at the right hand end of Fig. 1; Fig. 3 is a plan of the reversible drive for the wringer; Fig. 4 is a cross section showing a part of the main frame, wringer supporting frame, reversible drive and housing or covering for said drive, and Fig. 5 is a detail in perspective showing the locking means for the clutch throwing rod.

Like numerals of reference indicate corresponding parts throughout the figures.

In the drawings the numeral 1 designates the machine support or main frame preferably rectangular in form and having the longitudinal side members 1, the end members 2 and the end supporting members or legs 3.

Extending longitudinally of the frame, and preferably located adjacent to and upon the outside of one of the side members 1, is a driving shaft 4 which is journaled in suitable bearings 5 attached or secured, preferably to the legs at the ends of the frame. On one end of this shaft are carried pulleys 6 and 7. The latter is the driving pulley for the shaft 4 and said pulley may receive its power in any suitable manner and from any suitable source of power, and while I have shown said pulley 7 as a single pulley, it is of course understood that it may comprise a fast and loose member on the shaft, with means for shifting the belt or other driving means. The pulley 6 is used for transmitting power from the shaft 4 to the power mechanism of a washing machine, in a manner which I shall now explain.

A washing machine, which I have designated A, and which may be of any approved construction, so long as it has a driving wheel B carried on an operating shaft C, may be seated within the frame of the apparatus, in manner shown, or supported directly on the frame of said apparatus.

To operate the wheel B of the machine, a belt S is employed, driven by pulley 6.

and said belt travels cross-wise of the apparatus and around an idler pulley 9 carried by a short shaft 10 journaled in a bearing of a bracket 11. This bracket is slotted as at 12 and adjustably held in position by a bolt 13. By adjusting the bracket 11 up or down the frictional engagement of belt 8 on the pulley 9 may be increased or decreased.

In connection with said apparatus, I provide a supplemental frame for supporting a wringer mechanism, which supplemental frame is so mounted as to be movable on said main frame to position said wringer at various positions relative to the washing machine supported on one end of said main frame. This supplemental frame is preferably slidable on the main frame and comprises spaced uprights or standards and a head or top piece connected thereto on which the wringer mechanism is mounted. These uprights or standards are preferably positioned on opposite sides of said main frame and are supported on supporting members or runners which are slidable on said side members 2 of the main frame. Suitable driving mechanism is provided for said wringer including clutch devices slidable with said supplemental frame on said shaft 4 and which may be clutched thereto at any position of said supplemental frame. These runners are connected by a brace member which preferably extends beneath said side members and supports the actuating means for said clutch devices. A detailed description of this construction follows.

Slidable longitudinally on the upper edges of the side members 1 of the main frame are the oppositely disposed supporting members or runners 14, which are connected by the brace, bar or plate 15, extending down alongside the side members 1 and then transversely across the main frame beneath the side members. These supporting members or runners 14 are provided with supporting portions for a supplemental frame, which supporting portions take the form of sockets 14′ having the vertical wall 14″ to which the supplemental frame is attached. The latter comprises the spaced uprights or standards 16 and the head or top piece 17, these members constituting the support for the wringer D, of any well known or approved construction, which may be attached or clamped thereto in any suitable manner. To one of the rolls of said wringer is connected shaft E which carries a pulley 18 or other suitable driving member which is operated through the following connections.

The shaft 4 is preferably provided for a portion of its length with a groove or key-way 19, see Figs. 1 and 3, and carried on the shaft and having a key fitting said key-way is a slidable clutch member 20; also slidably carried, but loose on said shaft, are a pair of oppositely disposed driving gear wheels 21 and 22 having clutch faces 23, adapted to have a clutch engagement with the clutch member 20. The gear wheels 21 and 22 mesh with and are adapted to drive a gear wheel 24 carried on a stud 25 connected with a bracket 26 supported and carried by one of the brackets 14. The runner 26 is provided with spaced bearings 27 between which the gear wheels 21 and 22 are carried and through which passes the shaft 4, said bracket being slidable with said gears 21 and 22 on the shaft 4. The gear wheel 24 has attached thereto or formed integrally therewith a driving wheel 28, which may be a sheave wheel as shown in Fig. 3, or a sprocket wheel as shown in Fig. 4 constituting the driving member. The driving wheel 28 drives a flexible driving connection 29, which may be a belt or a sprocket chain and said flexible driving connection 29 is carried around and operates the wheel 18 on the wringer shaft E. When sliding the supplemental frame the bracket 26 will move with it and shove the gear wheels 21 and 22 along on shaft 4.

The gearing, including members 21, 22, 24 and 28, is covered by a housing 35 suitably attached to bracket 26 which will protect a person from having his clothes caught in the gears.

30 designates a rocking rod or operating bar which extends transversely of and beneath the frame pieces 1 and has a bearing in the runners 14. One end of the operating bar is provided with a crank 31 to enable an operator to rock the operating bar, while attached to its opposite end is a clutch throwing member or finger 32 having suitable connection with the clutch 20. It is obvious, that by rocking the operating rod 30 in either direction that the clutch member 20 will be caused to alternately engage the gear wheels 21 and 22 which will rotate the gear wheel 24 in opposite directions. This action is very desirable in a machine of this character for the reason that clothes will get caught in the wringer and it is necessary to reverse the operation to untangle the same. The crank 31 may be locked in adjusted positions by causing it to engage in notches 33 of a plate or member 34 attached to one of the uprights 16, see Figs. 2 and 5.

With a washing machine contained in or supported on the frame of the apparatus, as shown in Fig. 1, the wringer mechanism with the wringer frame may be moved to a position adjacent the washing machine, so that clothes may be taken from the washing machine and passed through the wringer. If so, then a tub, designated as F, containing rinse water, may be supported on the opposite end of the frame, to receive the clothes, then the wringer and supplemental frame

may be moved to the extreme left end of the apparatus and the clothes again passed through the wringer and deposited in a basket or other suitable receptacle. The supplemental frame being an open frame, it is readily seen that it may be passed over the tub F. With the mechanism arranged as shown, the wringer may be operated at will in several different positions on the apparatus, and simultaneously with or independently of the washing machine.

What I claim is:—

1. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards positioned on opposite sides of said main frame, a head piece connected to said uprights or standards and extending transversely across said main frame, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means being so constructed that the driving member may be operated in opposite directions from said shaft, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main frame, and the driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

2. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards positioned on opposite sides of said main frame, a head piece connected to said uprights or standards and extending transversely across said main frame, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including reversible clutch connections whereby the driving member may be operated in opposite directions from said shaft, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main frame, and the driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

3. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards positioned on opposite sides of said main frame, a head piece connected to said uprights or standards and extending transversely across said main frame, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including reversible clutch connections whereby the driving member may be operated in opposite directions from said shaft, a lever arrangement for controlling said clutch connections, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main frame, and the driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

4. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards, a head piece connected to said uprights or standards, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including reversible clutch connections whereby the driving member may be operated in opposite directions from said shaft, a lever arrangement for controlling said clutch connections, means for locking said lever arrangement to hold said clutch connections in position, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main

frame, and the driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

5. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards, a head piece connected to said uprights or standards, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including spaced bevel gears loosely slidable on said shaft, said driving member being driven from said spaced gears, means for clutching either of said spaced gears to said shaft, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main frame, and the driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

6. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards, a head piece connected to said uprights or standards, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including spaced bevel gears loosely slidable on said shaft, said driving member being driven from said spaced gears, a clutch member interposed between said spaced gears and slidably keyed to said shaft, said clutch member being adapted to clutch either of said spaced gears to said shaft, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main frame, said driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

7. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards, a head piece connected to said uprights or standards, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including spaced bevel gears loosely slidable on said shaft, said driving member being driven from said spaced gears, a clutch member interposed between said spaced gears and slidably keyed to said shaft, said clutch member being adapted to clutch either of said spaced gears to said shaft, a lever arrangement to operate said clutch member, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main frame, said driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

8. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards, a head piece connected to said uprights or standards, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including spaced bevel gears loosely slidable on said shaft, said driving member being driven from said spaced gears, a clutch member interposed between said spaced gears and slidably keyed to said shaft, said clutch member being adapted to clutch either of said spaced gears to said shaft, a lever arrangement to operate said clutch member, means for locking said lever arrangement to hold said clutch member in position, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position

the driving mechanism on the supplemental frame in different positions relative to said main frame support, said driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection.

9. In a machine of the character described, in combination, a main frame, a supplemental frame mounted on said main frame, said supplemental frame including spaced uprights or standards, a head piece connected to said uprights or standards, a shaft journaled on said main frame and adapted to be driven from a suitable source of power, a driving mechanism at the head end of said supplemental frame, a driving member at the base of said supplemental frame, a permanent driving connection between said driving mechanism and said driving member, means for connecting said driving member with said shaft, said means including spaced bevel gears loosely slidable on said shaft, said driving member being driven from said spaced gears, a clutch member interposed between said spaced gears and slidably keyed to said shaft, said clutch member being adapted to clutch either of said spaced gears to said shaft, a lever arrangement to operate said clutch member, said supplemental frame being so mounted on said main frame that the supplemental frame may be moved to position the driving mechanism on the supplemental frame in different positions relative to said main frame, said driving connections between the driving mechanism and said driving member being so arranged that the movement of the supplemental frame will not disturb the permanent relation of said driving connection, said spaced gears, clutch member and lever arrangement being movable with said supplemental frame.

10. In a machine of the character described, in combination, a main frame, a shaft journaled on said frame and adapted to be driven from a suitable source of power, a mechanism support, a mechanism on said mechanism support, a driving member adapted to be driven from said shaft, and movable longitudinally therealong, a permanent driving connection between said driving member and said mechanism, reversible clutch devices between said shaft and said driving member for controlling the operation of the mechanism, said clutch devices being movable along said shaft with said driving member, means for controlling said clutch devices, said mechanism support being so mounted on said main frame that it may be moved to position said mechanism in different positions relative to said main frame, and the driving connections between said mechanism and said shaft being so arranged that the movement of the mechanism support will not disturb the permanent relation therebetween.

11. In a machine of the character described, in combination, a main frame, a shaft journaled on said frame and adapted to be driven from a suitable source of power, a mechanism support, a mechanism on said mechanism support, a driving member adapted to be driven from said shaft and movable longitudinally therealong, a permanent driving connection between said driving member and said mechanism, reversible clutch devices between said shaft and said driving member for controlling the operation of the mechanism, said clutch devices being movable along said shaft with said driving member, a lever arrangement to control said reversible clutch devices, said mechanism support being so mounted on said main frame that it may be moved to position said mechanism in different positions relative to said main frame, and the driving connections between said mechanism and said shaft being so arranged that the movement of the mechanism support will not disturb the permanent relation therebetween.

12. In a machine of the character described, in combination, a main frame, a shaft journaled in said frame and adapted to be driven from a suitable source of power, a supplemental frame including spaced uprights or standards and a head or top piece connected thereto, a mechanism mounted on said supplemental frame, a driving member adapted to be operatively connected with said shaft, a permanent connection between said driving member and said mechanism, reversible clutch devices for connecting said driving member to said shaft, means for controlling said clutch devices, said clutch devices and said driving member being movable with said supplemental frame along said main frame.

13. In a device of the character described, in combination, a main frame including longitudinal side members, a shaft, supporting members or runners mounted to slide on said side members, a supplemental frame supported on said supporting members or runners, driving mechanism mounted on the upper portion of said supplemental frame, a pair of gears spaced apart and loosely slidable on said shaft, each of said gears having a clutch face, a clutch member slidably keyed to said shaft and positioned between said gears and having clutch faces corresponding to said clutch faces on said gears, a bracket connected to one of said supporting members or runners and having spaced bearings embracing said gears and also having mounted thereon an additional gear meshing with both of said gears, a permanent connection between said additional

gear and said driving mechanism on said supplemental frame, and means for moving said clutch member into engagement with either of said clutch faces, said means comprising a rod extending transversely of said main frame and having bearings in said supporting members or runners, said rod being provided with an upturned crank portion at one end, and having means for locking said rod in various positions.

14. A machine support or frame including a main frame having longitudinal side members, a supplemental frame comprising spaced uprights or standards and a top or head piece connected thereto, supporting members or runners movable along said side members, said supporting members or runners having vertically extending supporting portions to which said uprights or standards are connected.

15. A machine support or frame including a main frame having longitudinal side members, a supplemental frame comprising spaced uprights or standards and a top or head piece connected thereto, supporting members or runners movable along said side members, said supporting members or runners having vertically extending supporting portions to which said uprights or standards are connected, and having bearing means engaging and adapted to travel upon said side members.

16. A machine support or frame including a main frame having longitudinal side members, a supplemental frame comprising spaced uprights or standards and a top or head piece connected thereto, supporting members or runners movable along said side members, said supporting members or runners having vertically extending supporting portions to which said uprights or standards are connected, one of said supporting members or runners being provided with a pair of spaced and lined bearing sleeves.

17. A machine support or frame, including longitudinal side members, end supporting members, a floor or bottom mounted on said side members, a supplemental frame mounted on said machine support or frame, said supplemental frame including uprights or standards, and a head piece connecting said uprights or standards, supporting members or runners slidable on said side members, and having sockets formed therein, said uprights or standards being seated in said sockets and secured to said supporting members or runners.

18. A machine support or frame, including longitudinal side members, end supporting members, a floor or bottom mounted on said side members, a supplemental frame mounted on said machine support or frame, said supplemental frame including uprights or standards and a head piece connecting said uprights or standards, supporting members or runners, said uprights or standards being mounted thereon, said supporting members or runners being provided with a bearing means in the form of a flange, said flange adapted to rest and move upon said side members.

In testimony whereof I affix my signature, in presence of two witnesses.

ALPHEUS W. ALTORFER.

Witnesses:
S. C. SOUDER,
H. D. HOLLENBACK.