United States Patent

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[54] **OUTSIDE DOOR LATCH AND HANDLE ASSEMBLY**
3 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **292/67,** 49/449, 292/114
[51] **Int. Cl.** **E05c 5/00**
[50] **Field of Search** ..... 292/56, 67, 101, 114, 120, 130, 136, 262, DIG. 30, DIG. 46; 49/209, 370, 449, 503; 70/207, 224

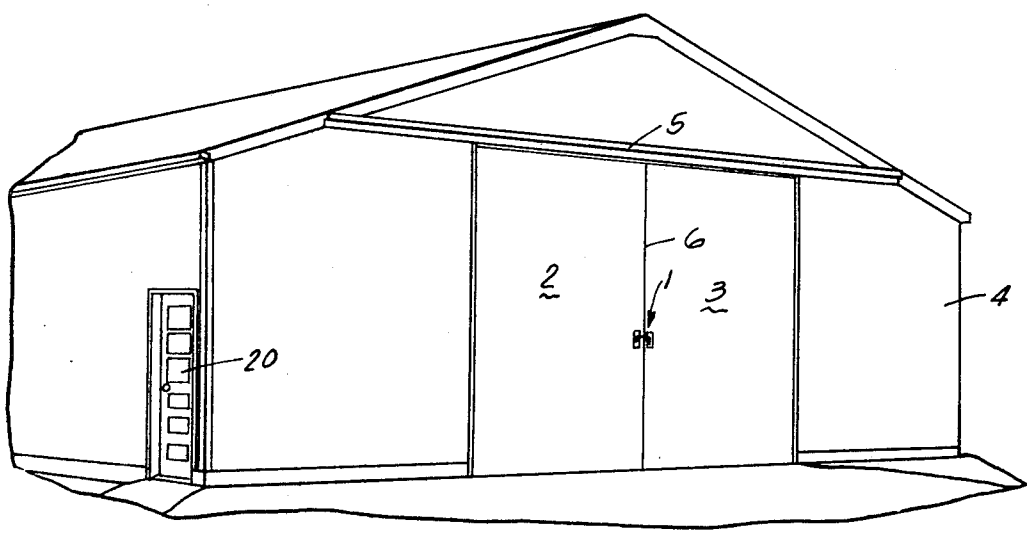
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ABSTRACT: A latch and handle assembly for laterally movable doors on farm, storage, industrial and similar buildings, said assembly including handles and simple quick operable latch means carried thereby, the assembly being mounted on the outside of a pair of doors to maintain the doors closed, especially in inclement weather.



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Fig. 1

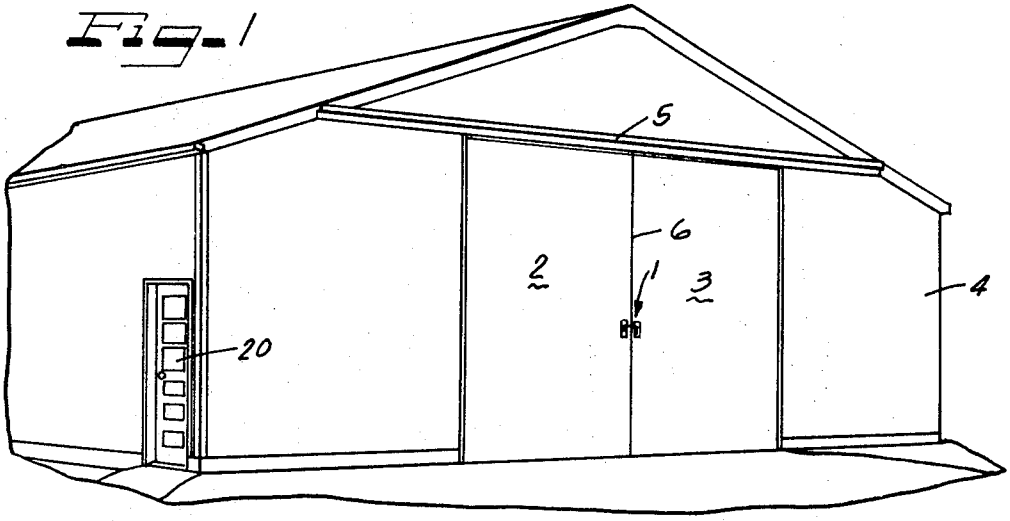


Fig. 2

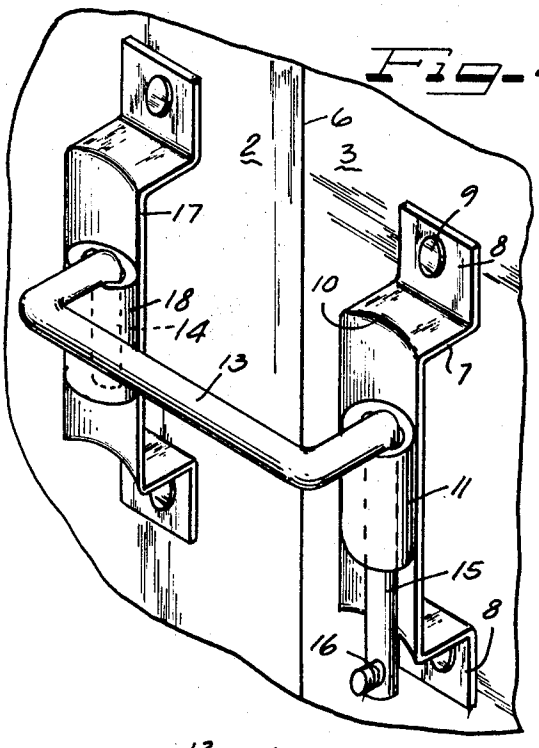
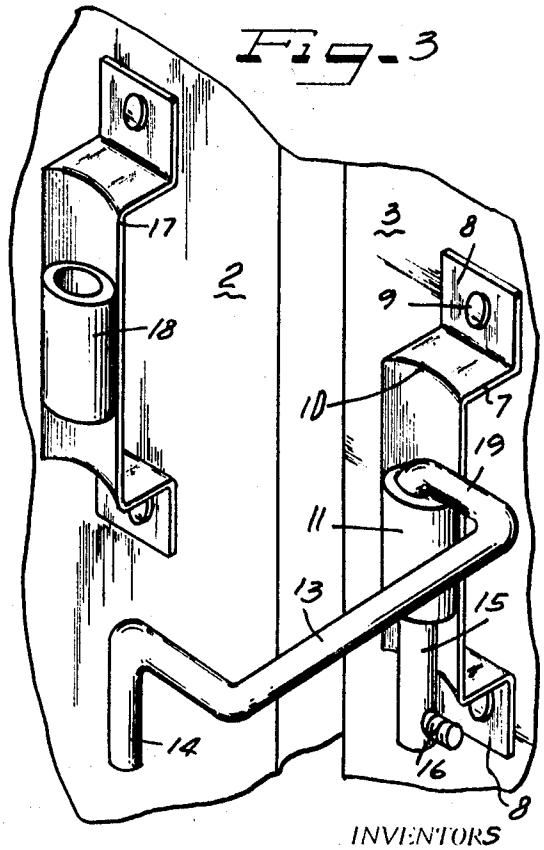


Fig. 3



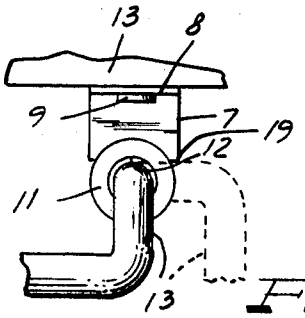


Fig. 4

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OUTSIDE DOOR LATCH AND HANDLE ASSEMBLY

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention pertains to building hardware and more particularly to an assembly of doorpulls and latching means for mounting on the outside of a pair of laterally movable doors conjointly used to close a relatively wide door opening, the assembly being such as to permit ready opening of the doors from the outside and latching them to stay in closed position, particularly in inclement weather and to accommodate frequent entries and exits through the door opening.

2. Description of the Prior Art

Heretofore, with a pair of laterally movable doors used to conjointly open and close a door opening in a farm, storage, industrial or other form of utility building, only a doorpull was placed on the outside of each door adjacent their center closing point. Most frequently if the doors were to be latched in closed position this was accomplished by a lock means disposed above the doorpulls which, in most cases, required the use of a key for their actuation. If latch handles were heretofore used, each of them could only latch to some inside retainer and such was extremely difficult to provide without some form of center structure that would block the door opening to a considerable extent. Insofar as we are aware, there were no means provided for actually securing the doors together in closed position, and yet easily and quickly opened from the outside of the doors to facilitate quick entry whenever needed during working hours, and not requiring the use of a key or any other manipulating implement. Actual separation of the doors during inclement weather or under adverse conditions, unintentionally, could result in considerable damage to the contents of the building.

SUMMARY OF THE INVENTION

The invention overcomes the disadvantages mentioned above in connection with the prior art in the provision of a door handle or pull carrying a pivotal latching element having a free end for engagement in a retainer carried by a pull-handle on a second door in the case of a double door closure or carried by the building frame around the door opening in the case of a single laterally moving door and it is a simple expedient merely to raise and pivot the latch member to disengage the same and merely to pivot the latch member over and drop it into place to engage the same. The invention is highly desirable for use on farm buildings and other utility buildings for the storing of hay, grain, vehicles, or various other articles, and the invention affords an easy and simple way of maintaining the door or doors closed in inclement weather or to keep out farm animals and the like. The assembly is easily operable from outside the doors without the aid of any key or other instrument and provides quick entry to the interior of the building when necessary during working hours. The assembly is simple in construction, economical, highly durable and more than sufficiently strong for its purpose.

Other advantages of the instant invention will be apparent from the disclosures hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary perspective view of a farm building showing a pair of laterally movable doors covering a door opening in one wall thereof equipped with a latch and pull assembly embodying the principles of the instant invention;

FIG. 2 is an enlarged fragmentary perspective view illustrating the latch and pull assembly in closed position;

FIG. 3 is a fragmentary perspective view similar to FIG. 2 but showing the assembly in an open position; and

FIG. 4 is a fragmentary top plan view of that portion of the assembly appearing in the right-hand part of FIGS. 2 and 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

By way of example, for illustrative purposes, the preferred embodiment of the instant invention, generally indicated by numeral **1**, is shown in operative association with the laterally moving doors **2** and **3** closing a door opening in a farm building **4**. The doors are suspended from suitable trolleys operable along an overhead track **5** attached to the outside of the building in a known manner, and as seen in FIG. **1**, the doors are in closed position. Buildings of the type shown are frequently relatively large and may have a door opening approximating 20′ in width by 13 ′ in height. With such an opening a pair of doors are usually utilized over the opening since the doors are, in most instances, manually operated. Where the opening is of such size that one door is sufficient to cover the same, one portion of the assembly would be attached to the building frame and the other portion to the single door, depending upon which direction the door moved toward closing position. The assembly would thus function in identically the same manner to maintain the single door in closed position as it is shown operating with the double doors.

In the illustrated instance, the door **2** moves toward the right to closed position while the door **3** moves toward the left to closed position. Consequently, the assembly **1** is associated with both doors immediately adjacent the closure line **6** where the doors are either in abutment or extremely closely adjacent.

In the illustrated instance, a doorpull or handle **7** is carried by the right-hand door **3**. This pull **7** is of substantially a spread U-shape having vertically turned end portions **8–8** each of which is secured to the door by means of a wood screw, bolt, or equivalent, as indicated at **9**. The front face of the pull **7** is preferably formed with an external concavity as indicated at **10**. This forms a better handgrip as well as facilitating the welding to the front part of the doorpull of a short length of pipe **11** having a vertical bore **12** therethrough which pipe functions as a retainer socket for one end of a latch member to be described.

A latch **13** having the general shape of a spread U with downwardly turned end portions **14** and **15** is floatably and slidably connected to the pull **7** by having the end portion **15** thereof inserted through the retainer socket **11**. This end portion is sufficiently long to extend well below the retainer socket **11** and is maintained connected to that socket by means of a setscrew **16** or in an equivalent manner to prevent the latch from inadvertently being raised out of the socket **11**.

A doorpull **17** of the same construction as the doorpull **7** and carrying a retainer socket **18** of the same construction as the retainer socket **11** welded thereto, is mounted on the door **2** adjacent the closing edge thereof. The making of both doorpulls and retainer sockets of like construction adds to the economy of manufacture.

In operation, the instant invention is extremely simple and effective utilizing the pulls **7** and **17** to close the doors to the position seen in FIGS. **1** and **2**, it is then a simple expedient for the operator to grasp the latch **13**, raise it upwardly to permit the end portion **14** thereof which is deliberately made shorter than the end portion **15** to clear the retainer socket **18** on the pull **17** and then merely drop the latch into the position shown in FIG. **2** with the end portion **14** inside the socket **18**. To release the doors, it is a simple expedient to again elevate the latch and pivot it to the position seen in FIGS. **3** and **4** whereupon the latch will strike the front portion of the pull at the point **19**, and the latch itself may be used as the handle for opening the door **3**. There is no danger of pulling the latch out of both retainer sockets, because of the setscrew **16** on the longer end portion **15** preventing its withdrawal from the socket **11**. It will be noted that there are no parts of the latch and pull assembly to be mislaid and nothing but the hand is required for easy manipulation of the latch either to closed or opened positions. The engagement is positive and the structure is made of metal of more than sufficient strength to hold the heavy doors in closed position. After working hours, the

doors 2 and 3 may be securely locked in closed position by means mounted on the inside thereof, access to the building being by way of a walk door 20, FIG. 1, which may be secured in a known manner. As stated above, if there is only one door either pull 7 or 17 may be attached to the building at the door frame, depending upon which direction the door moves to closed position, and the latch and pull assembly functions in the identical same manner.

Although various minor modifications might be suggested by those versed in the art, it should be understood that we wish to embody within the scope of the patent warranted hereon all such modifications as reasonably and properly come within the scope of our contribution to the art.

The invention We claim is:

1. An outside door latch and handle assembly for track suspended lateral moving doors closing an opening in a building, including:

a pair of identical door handles mounted one on a door and the other on an adjacent part of the building,

identical socket members one being carried on the face of each said handle, and

a door latch having downwardly turned end portions, one of said end portions being rotatably and slidably seated in one socket member and the other end portion being slidably seatable in the other socket member,

all said assembly being on the exterior of the building.

2. The latch and handle assembly of claim 1, wherein each said handle is outwardly concave and inwardly convex to provide an easy and efficient handgrip.

3. The latch and handle assembly of claim 2, wherein

each said socket member is in the form of a section of pipe welded to the outer face of a handle in the concavity thereof and further enhances an easy grip of the handle.