Cures for Clashing Doors

by Gordon Tully

Good work in any art — painting a portrait, removing a gall bladder, or designing a house — requires a mastery of the details. One planning detail often given short shrift is dealing with door swings. Here are a few observations and tricks which might help you with this technical planning detail.

Basic Dimensions

When you calculate the sweep of a door swing, remember that the hinge causes the door to stand out from the opening between 5/8 and 1 1/4 inches more than its width, depending on the size of the butts. Also, the latch sticks out another half-inch or so.

If you want a door to lay back against a wall, the face of the door needs to be in the plane of the wall. This problem arises with most brands of swinging terrace doors when you use 2x6 studs. The normal solution is to hinge the swinging leaf at the center of a pair, so it folds back against the inactive leaf. When you have a three-panel door, only the center leaf can be active, which seems perverse: all this glass and so little air!

Pella, for one, solves this problem in their more expensive line by adding an extension jamb *outside* the door frame, so the inside of the frame aligns with the inside face of the wall. Combined with swinging screen doors, this allows the two outer leaves of a three-panel door to be active and lay back against the wall, out of the way. (You can also hinge the center panel if you don't mind it sticking out from the wall).

Except in very tight situations and in closets, I usually set one side of the rough opening of a door exactly 3 inches from the face of a perpendicular wall. The 3 inches is made up by a double stud, a desirable feature to keep the frame rigid. A 3 1/2-inch casing just fits, and the door can stand parallel to the wall when open without the doorknob hitting the wall.

A 32-inch door at the end of a hallway, with a double stud on each side, creates a net inside hallway dimension of 39 1/2 inches — not a bad minimum. The overused alternative is to set only one 2x stud on each side, creating a 36 1/2-inch hallway and allowing only a 2-inch casing.

Planning to Avoid Clashes

This is a common problem, especially at closets. The first line of defense is to arrange doors so the swings don't overlap. As this is nearly impossible in most houses, the next step is to keep the first 90 degrees of the swings from overlapping (see Figure 1). Even then, if one door is left open beyond a 90 degree swing, the other can bang it. This problem can be prevented by the use of spring-loaded overhead door holders, such as the Sargent 590 (concealed) or 690 (recessed) series.

All builders' hardware manufacturers make these gizmos, which are commonly used in office buildings to keep doors from clashing. They look like little door closers, and are designed for 1 3/4-inch-thick doors, although the surface-mounted ones can be specially ordered for 1 3/8-inch doors. They can be mounted to stop the door anywhere from 85 to 110 degrees.

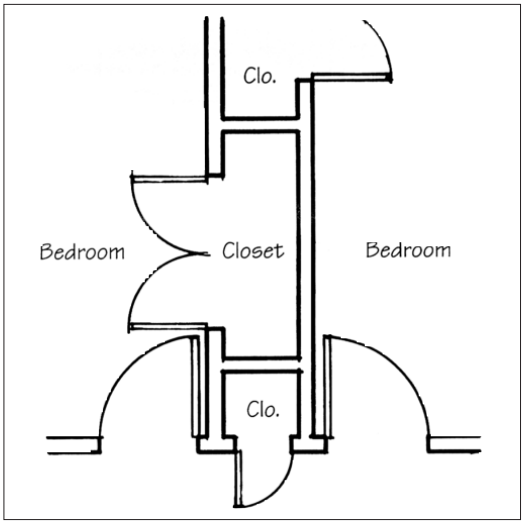

Figure 1. *Where you can't completely prevent doors from clashing, the next best thing is to keep them from hitting in their first 90 degrees of swing. In this example, overhead door holders can prevent the closet doors from blocking or invading the swing of the passage doors.*

Bifold Options

Bifold doors are commonly used to avoid clashes. And because they don't require casings, bifolds also save lots of money compared with swing doors. I generally avoid bifolds, however, because you can't cover up the hardware at the top of the door, as you can with a pocket door. Also, most bifold hardware doesn't work very well and allows the doors to warp.

An alternative I like is to use ordinary butt hinges along with a high-grade pocket door track and wheeled door hangers.

Using such hardware, I have successfully hinged doors in a double bifold arrangement to solve a common problem: how to close off a wide opening with many small doors. An example is a laundry center built along a narrow hallway (Figure 2, next page). All the doors must collect at the ends to leave the space open, and the leaves must be narrow to leave an adequate passageway. In this example, four doors hinge to the right, and four to the left, to cover an 8-foot opening.

If you don't mind a little shake and rattle, an alternative solution is the wooden accordion folding door. Pella makes one, and there are others.

Sometimes it is useful to hinge one door panel off another with both sets of hinge butts on the same side of the door. This allows you to create a fully sealed door that folds back on itself — folding out of the way in half the width. This arrangement is not suitable for a frequently used door, however.

Sliding By

Bypassing sliding closet doors have the obvious disadvantage of obscuring more than half the opening, but they are a great solution to tight floorplanning problems where it is impossible to keep swinging doors from clashing. I use relatively wide doors, up to 36 inches. The disadvantage of moving a heavy door is outweighed by the advantage of a large opening.

Pocket doors usually don't work in closets. (If you have room for the pockets, why not use two fixed doors or two bypassing sliders, and avoid the pocket?) But I use pocket

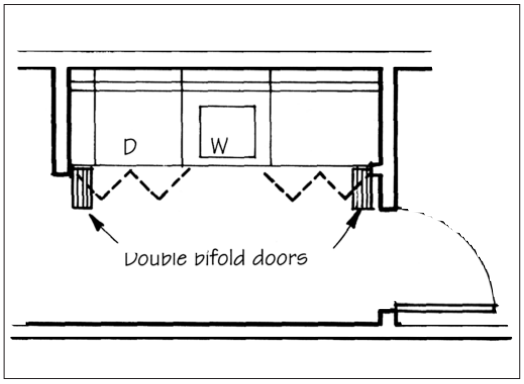

Figure 2. *A common problem is how to close off a large opening, such as this laundry. Double bifolds can work if high-quality sliding-door hardware, good hinges, and full-thickness doors are used.*

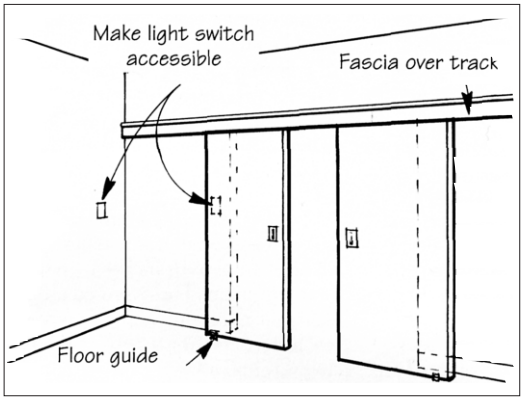

Figure 3. *Wherever possible, hang sliding doors on the surface, like barn doors, with the hardware behind a removable casing. This forever solves the problem of doors jamming up inside a pocket.*

doors frequently for room doors that don't have to be acoustically tight, and are not used very often — for example, at kitchens and seldom-closed parlors.

Always use the best hardware available, with three- or four-wheeled hangers, and make the casing on one side removable to allow access. Whenever possible, I don't even use a pocket: Instead, I set the door to one side of the wall like a barn door, favoring the "fancier" space. Then just case in the track and the results can look quite fine (Figure 3).

If you use a true pocket, remember to set the pocket on the side of the door opposite where you want the room light switch, because the sidewall of a pocket is too thin to receive the switchbox. If you use double pocket doors, the light switch will have to be on a side wall, or you will have to use a low-voltage switch and relay.

Also remember that the opening is twice as wide as you think, and usually will require a substantial header, especially in a bearing wall. In a heavily loaded bearing wall, I use thicker studs with the pocket off center. This leaves a bearing wall on one side of the pocket and avoids the long header. (You can also use this solution to make room for a light switch next to the door).

ADA Requirements

These are complicated, and so far do not apply to most houses. But if you are trying to make a house accessible to a disabled person, you would do well to follow some of the ADA guidelines, many of which relate to door swings.

In principle, there has to be room — 18 to 36 inches — next to the latch on the pull side of the door, allowing a person in a wheelchair to move in close to the handle and then to get out of the way when the door swings in. Also, there needs to be room out of the door's path to park a wheelchair, so the door can close. ■

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