

June 29, 1943.

M. W. KRUEGER
SIDE WALL STACK FRAME

2,323,055

Filed Nov. 13, 1941

2 Sheets-Sheet 1

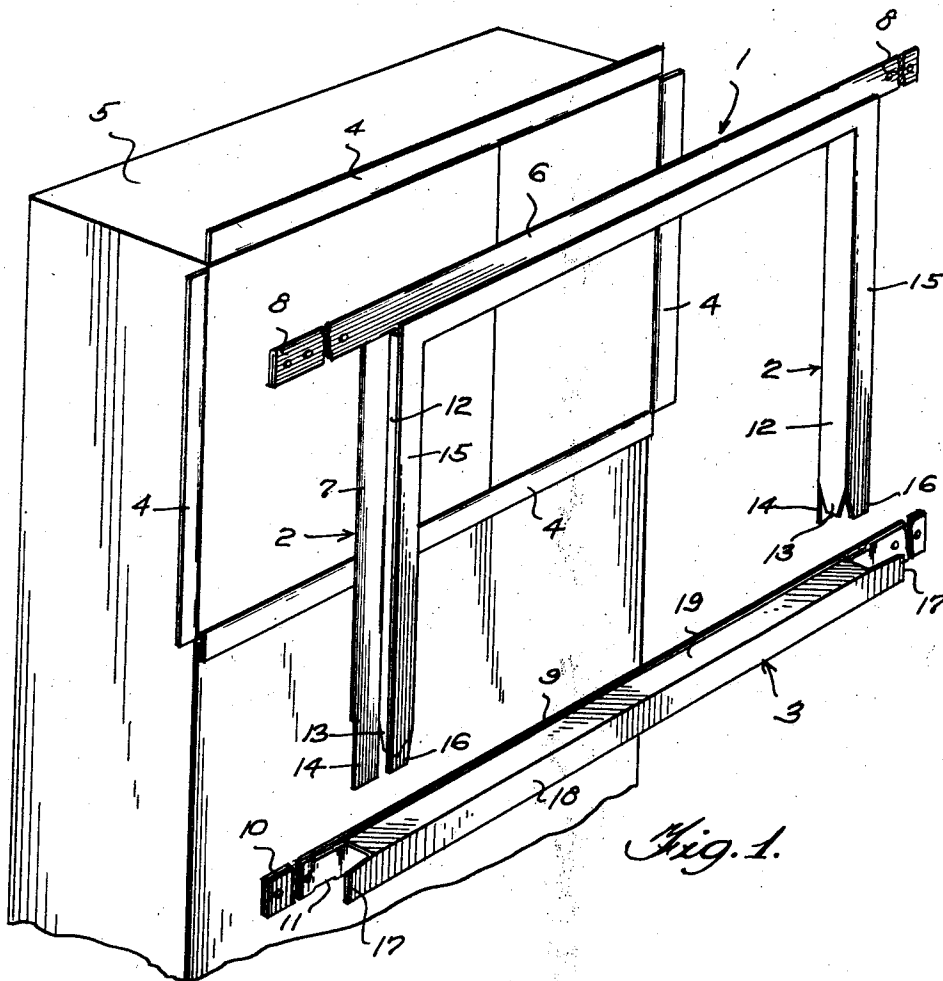


Fig. 1.

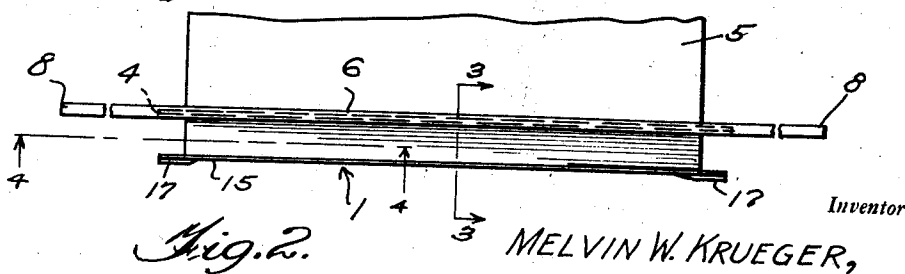


Fig. 2.

MELVIN W. KRUEGER,

By

Clarence A. O'Brien

Attorney

June 29, 1943.

M. W. KRUEGER
SIDE WALL STACK FRAME

2,323,055

Filed Nov. 13, 1941

2 Sheets-Sheet 2

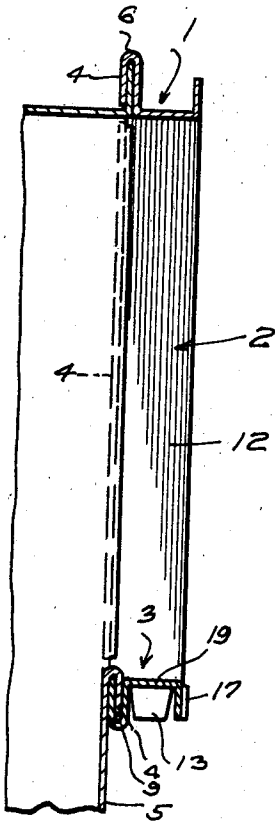


Fig. 3.

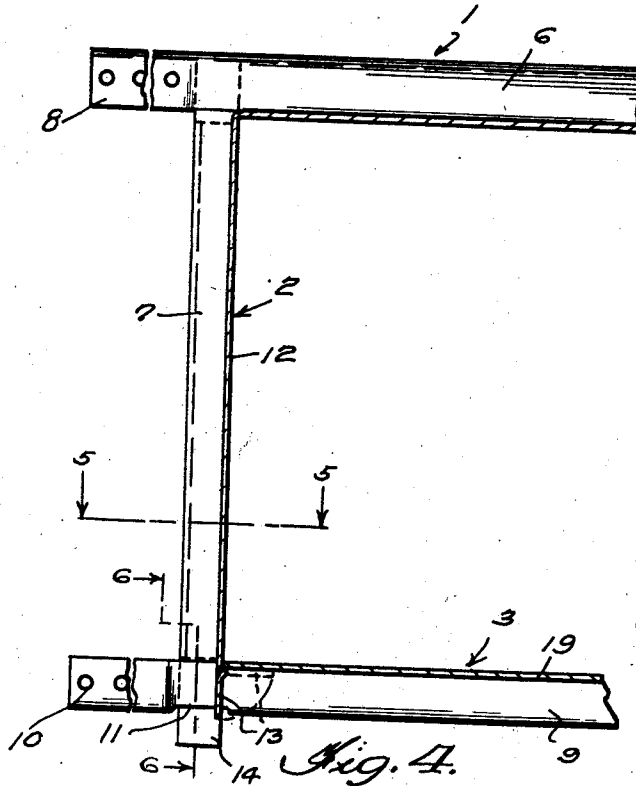


Fig. 4.

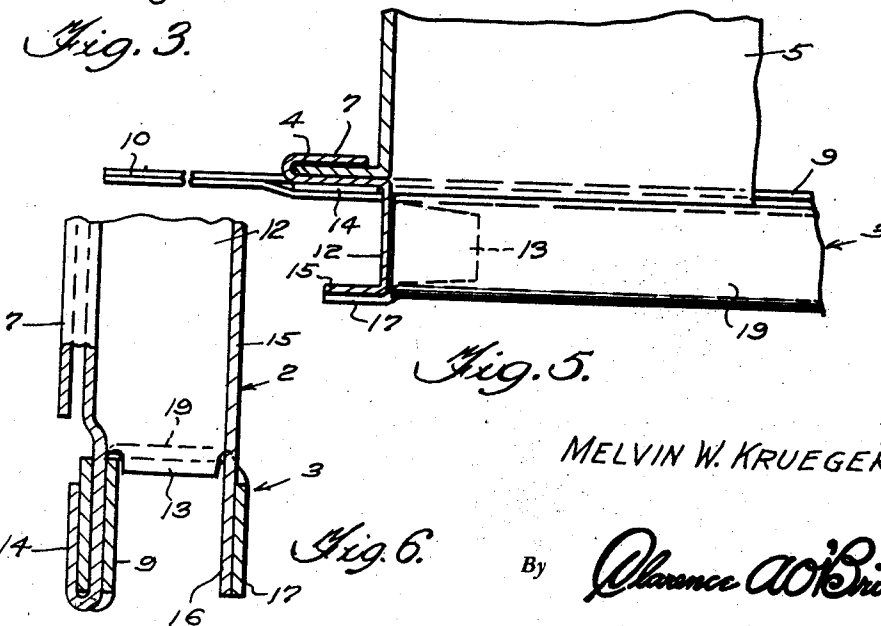


Fig. 5.

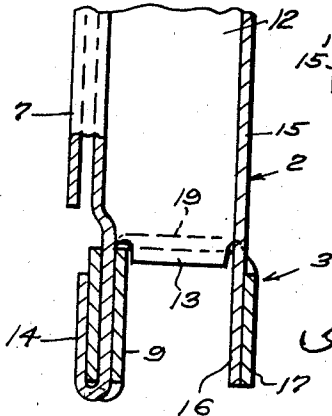


Fig. 6.

Inventor

MELVIN W. KRUEGER,

By

Clarence A. O'Brien

Attorney

UNITED STATES PATENT OFFICE

2,323,055

SIDE WALL STACK FRAME

Melvin W. Krueger, Madison, Wis.

Application November 13, 1941, Serial No. 419,000

2 Claims. (Cl. 98—114)

The present invention relates to new and useful improvements in side wall stack frames for use particularly in connection with air conduits in houses and other buildings and has for one of its important objects to provide, in a manner as hereinafter set forth, a device of this character embodying a novel construction and arrangement whereby the frame may be expeditiously and firmly secured to the stack head.

Another very important object of the invention is to provide a frame of the aforementioned character which may be attached to the stack head without the necessity of using screws, bolts, nuts, etc.

Other objects of the invention are to provide a side wall stack frame of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein—

Figure 1 is a perspective view of a stack head and a frame therefor constructed in accordance with the present invention, the lower bar of said frame being shown separated therefrom.

Figure 2 is a top plan view, showing the frame in position on the stack head.

Figure 3 is a vertical sectional view, taken substantially on the line 3—3 of Figure 2.

Figure 4 is a fragmentary view in vertical longitudinal section through one end portion of the frame, taken substantially on the line 4—4 of Figure 2.

Figure 5 is a view in horizontal section, taken substantially on the line 5—5 of Figure 4, showing a portion of the stack head.

Figure 6 is a fragmentary view in vertical section through one corner portion of the frame, taken substantially on the line 6—6 of Figure 4.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises an upper bar 1 having permanently fixed thereto and depending therefrom a pair of side bars 2, said bars 1 and 2 being of any suitable metal. Mounted on the side bars 2 is a removable lower bar 3. These are channel bars.

The bars 1, 2 and 3 constituting the frame are adapted to be mounted on the flanges 4 of a

stack head 5. Toward this end the inner flange 6 of the bar 1 and the inner flanges 7 of the bars 2 are substantially U-shaped in cross section for the reception of the upper and side flanges 4. The end portions of the flange 6 project beyond the side flanges 2 for providing attaching arms 8 for the frame.

The inner flange 9 of the bar 3 is also substantially U-shaped in cross section for the reception of the lowermost flange 4. The end portions of the flange 9 project beyond the ends of the bar 3 for providing attaching arms 10. Adjacent the ends of the bar 3, the bight portions of the arms 10 have formed therein longitudinal slots or openings 11, the purpose of which will presently be set forth.

Depending from the lower ends of the webs 12 of the side bars 2 are integral bendable tongues 13. Bendable tongues 14 depend from the lower ends of the flanges 7 of the side bars 2. Depending from the lower ends of the outer flanges 15 of the side bars 2 are integral tongues 16. Tongues 17 on the ends of the outer flange 18 of the bar 3 project beyond the ends of the web 19 of said bar.

It is thought that the manner in which the frame is mounted on the stack head 5 will be readily apparent from a consideration of the foregoing. Briefly, the flanges 7 of the side bars 2 are slipped downwardly on the side flanges 4 from the upper ends thereof and the uppermost flange 4 is engaged in the flange 6 of the upper bar 1. The bar 3 is then slipped upwardly on the tongues 14 of the side bars 2 in a manner to engage the lower flange 4 of the stack head in the flange 9 of said bar 3. When this operation is performed, the tongues 14 pass downwardly through the substantially U-shaped flange 9 and emerge therefrom through the slots 11. The tongues 13 extend downwardly immediately adjacent the ends of the web 19 of the bar 3 and the tongues 17 overlap the tongues 16. Then, as shown to advantage in Figure 6 of the drawings, the tongues 14 are bent upwardly and clinched on the flange 9 and the tongues 13 are bent inwardly and upwardly beneath the web 19 of the bar 3. The arms 8 and 10 are then nailed to the adjacent studding for firmly securing the frame in position in the wall or other structure.

It is believed that the many advantages of a side wall stack frame constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrating and described, it is to be understood that changes in the details of

construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A side wall stack frame comprising upper, lower and side bars substantially channel-shaped in cross section, said bars including flanges of substantially U-shaped cross section for the reception of flanges on a stack head, the bight portion of the substantially U-shaped flange on the lower bar having slots therein, bendable tongues on the side bars engageable in the slots and adapted to be clinched on the U-shaped flange of the lower bar, and additional bendable tongues

on the web portions of the side bars engageable beneath the web portion of said lower bar.

2. A side wall stack frame comprising an upper bar and a pair of side bars depending therefrom, a removable lower channel bar including a back flange of substantially U-shaped cross section extending in the plane of the frame and comprising longitudinally projecting end portions having slots in their bight portions, and bendable tongues on the side bars insertable through the slots for securing the lower bar to said side bars.

MELVIN W. KRUEGER.