(No Model.)

W. F. KEARNS.

PARTITION FRAME.

No. 603,402. Patented May 3, 1898.

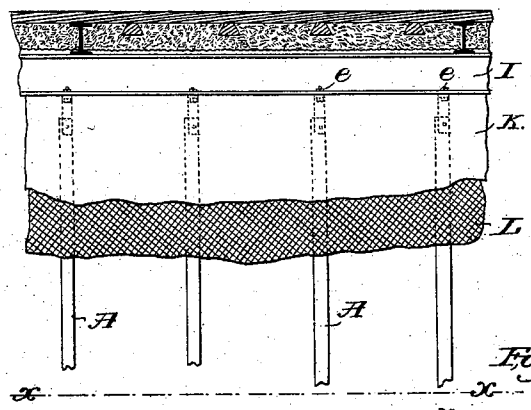


Fig. 1.

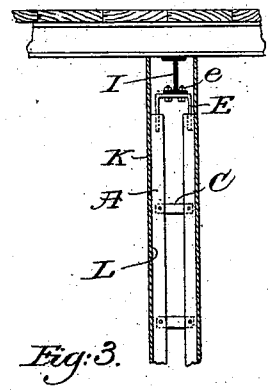
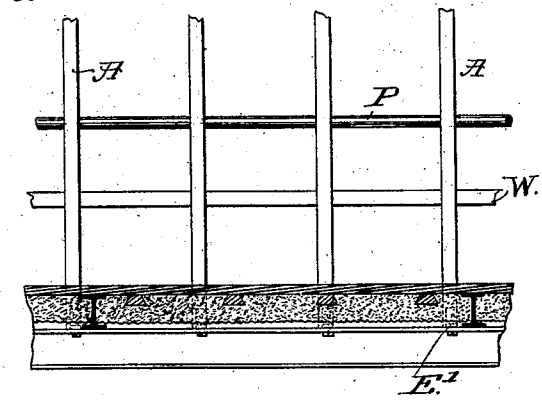
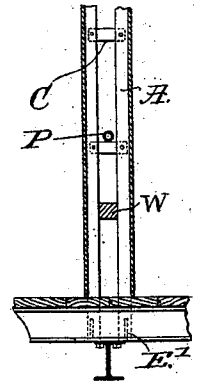


Fig. 3.





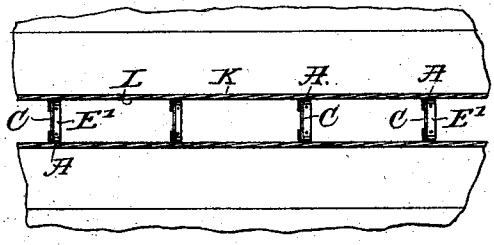


Fig. 2.

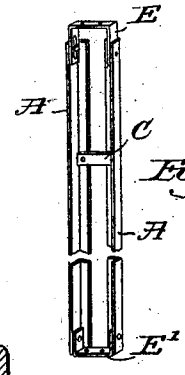
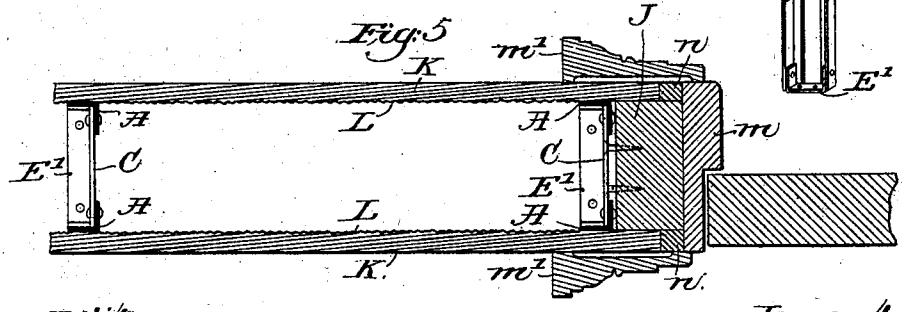


Fig. 4.

Fig. 5



Witnesses.
Eleanor F. Groll.
Grace M. Shay.

Inventor:
William F. Kearns
by Lange & Roberts.
Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM F. KEARNS, OF BOSTON, MASSACHUSETTS.

PARTITION-FRAME.

SPECIFICATION forming part of Letters Patent No. 603,402, dated May 3, 1898.

Application filed October 29, 1897. Serial No. 656,754. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. KEARNS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Partition-Frame, of which the following is a specification.

The object of the within-described invention is to provide a framework for hollow fireproof partitions, which framework shall be easy to manufacture and set up in place, shall lend itself readily to the attachment of all usual fixtures which exist in and about a house-partition, and shall serve as a firm though light support for the metallic lathing now in demand for fireproof work.

The partition-frame herein described is especially adapted to the lighter forms of fireproof construction, such as are found in apartment-houses and hotels.

The framework consists of a new and improved upright adapted to be used in place of wooden joists or heavy channel or angle irons.

In the drawings, which are referred to for clearness in description, Figure 1 represents a side view of a partition-frame constructed of several such improved uprights. Fig. 2 is a plan view of the structure shown in Fig. 1 across the broken section *x x*. Fig. 3 is an end view of the partition shown in Fig. 1, disclosing one of the uprights. Fig. 4 is a perspective drawing of one of the uprights shown in Figs. 1 to 3. Fig. 5 is a detail showing in plan view the manner in which sundry fixtures may be secured to the improved frame.

Each upright consists of side pieces A, which are preferably strips of angle or channel iron which combine lightness with strength. The side pieces A are separated and secured together by cross-pieces C, which may be very simply and cheaply constructed of band-iron. These cross-pieces C are riveted or otherwise securely fastened to the side pieces and should, as a matter of good construction, be cut square, so as to abut against the flanges of the angle-iron side strips A. By making the side pieces C fit snugly in this manner the entire upright will be stiff and resist what may be called a "parallel-rule" movement.

The length of the cross-pieces C will be determined by the thickness of the partition to be erected. It is desirable to have all such building materials as the uprights in question come to the builder's hand as nearly as possible complete, so that the workmen employed need waste no time in fitting them in place. If such materials are furnished of a fixed length, unavoidable variations in the frame of the building will make some uprights too short and others too long, although the building plans are closely followed. Then of course alteration and fitting would be called for and the time required for putting up the partition be indefinitely lengthened. In order to avoid such difficulty, the improved upright for partition-frames is provided with an adjustable end piece which shall have a range of movement or adjustment sufficiently great to correct all probable variations in the space to be filled.

At one end of the upright—the upper end by obvious preference—there is provided a strap E, whose legs are spaced just wide enough apart to fit between the flanges of the side strips A. The strap E is made adjustable on the side strips, preferably by a slot-and-pin connection, the pin in each case consisting of a screw-bolt provided with a nut for binding the parts together.

The plan contemplated by which a builder's requisition for improved upright partition-frames can be satisfactorily filled is as follows: If the space calls for a ten-foot frame, the side strips A will be cut a little short of this length—say half an inch. No probable variation in the space between floor-beams will exceed this. The end straps E are made ready to fit the uprights and have sufficient play to enable them to take up the half-inch space or more if occasion require. Tapped screw-holes are then bored in the floor-beams I and the straps E secured with screws or bolts E E therein. The lower strap E′, which binds the side strips at the bottom, can be suitably secured to the floor or floor-beam.

When a suitable number of uprights are in position, the partition-frame made thereby is seen to possess marked and improved advantages. Gas, steam, or water pipes or wire-conduits can be quickly secured in place, resting on the cross-pieces C, as shown at P, Figs. 1

and 3. The necessary wooden frames for attaching base-boards, &c., can be placed within the frame, as at W. When the attachment of wire-cloth or other metallic lathing is called for, the small size of the side strips A and the open construction of the frame will enable one man to fish the binding-wires through the lathing and around the frame where two have been employed. A partition twelve inches thick will not be appreciably more costly than one four inches thick, the extra length of cross-pieces C and straps E E′ being the only change required in enlarging the frame. The quickness and ease with which such a frame can be set up and its thorough convenience for further building operations, in addition to its combined lightness and strength, commend it to the building contractor.

Fig. 5 illustrates the manner in which woodwork can be secured to the partition-frame with little labor and perfect security. A joist J, which is to serve as a door-casing, is secured by screws passing through the cross-bars C of an end frame. This joist serves for a base whereon the corner-pieces *n n* are fastened and to which the door-jamb *m* and moldings *m′ m′* are secured.

The strap E is shown as a single U-shaped piece spanning the width of the frame. If at any place the floor or floor-beam should present an irregular surface, the strap E can be cut in two in the middle, so that one leg can be moved higher than the other. In wide partitions the strap E may be made in two pieces, each independent of the other.

The metallic lathing L and plastering K are shown in Figs. 1, 2, 3, and 5. The floors, concrete arching, &c., are illustrated in the drawings, but not lettered, as they are exhibited merely to indicate the manner in which the improved partition-frame is to be set up.

What I claim, and desire to secure by Letters Patent, is as follows:

A partition-frame comprising in its construction parallel angle-iron side strips separated and connected by cross-pieces and a U-shaped strap with slot-and-pin connection with the side strips constituting an adjustable end piece, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM F. KEARNS.

Witnesses:
A. B. PUTNAM,
JAS. A. CUMMINGS.