A. J. FILKINS.

CHIMNEY.

APPLICATION FILED MAY 6, 1920.

1,430,068.

Patented Sept. 26, 1922.

Fig. 1.

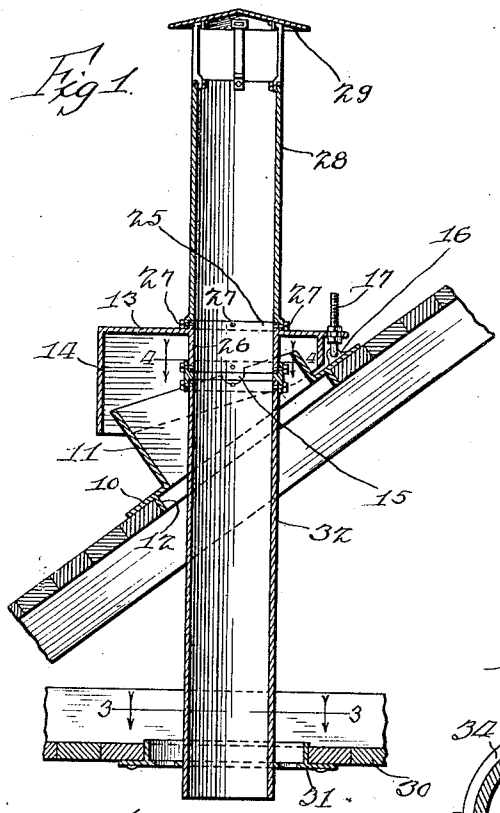


Fig. 3.

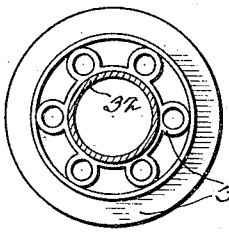


Fig. 4.

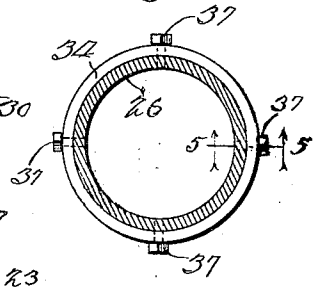


Fig. 2.

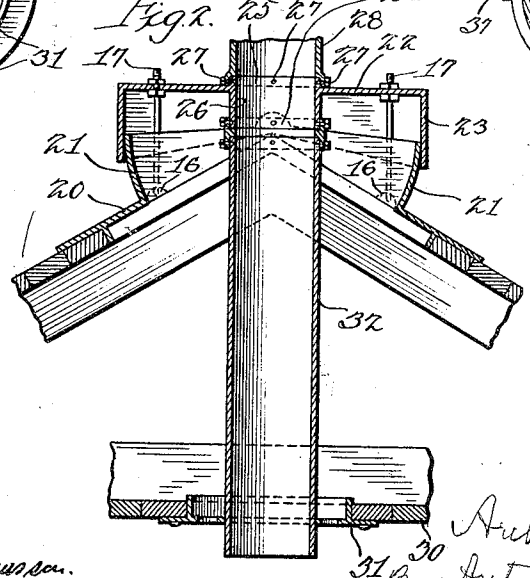
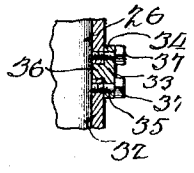


Fig. 5.



Witness:

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UNITED STATES PATENT OFFICE.

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CHIMNEY.

Application filed May 6, 1920. Serial No. 379,233.

To all whom it may concern:

Be it known that I, ARTHUR J. FILKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Chimneys, of which the following is a specification.

The invention relates to an improvement in the class of adjustable chimneys, and my objects are to provide improvements in the structure of an adjustable chimney by which the adjustable chimney of the type shown in U. S. Patent No. 758,510 April 28, 1904, Dickinson, and No. 1,138,726 May 11, 1915, Carney, the primary object of the invention being to so construct the pipe supports for connecting the chimney with the roof in either the slope or ridge types of chimneys, as described in the aforesaid mentioned patents, so that the said pipe supports may be used in any sort of installation of chimney, not only regardless of the character or pitch of the roof, but without alteration, whether the chimney is to be installed in a building in which the chimney is desired to extend downwardly through the roof and below a ceiling or flush with the lower surface of a ceiling of the building there to communicate with the ordinary stove pipe, or whether to be used in an installation where the usual cast iron pipe of the chimney is desired to extend only into and through the chimney support on the roof there to be joined with the ordinary stove pipe from the stove or furnace on the interior of the building. My invention as embodied in my improved chimney support makes unnecessary any duplication in castings for chimney supports thereby effecting certain economies and conveniences in manufacture, distribution and installation of chimneys.

It is a further object of the invention to provide an improved form of pipe connection for securing a downwardly projecting section or extension of cast iron pipe to my improved adjustable chimney support or base.

Other objects of the invention will appear from the following description of the preferred embodiment of the invention, which is also shown in the drawings forming a part of this specification.

In the drawings Fig. 1 is a vertical section through the roof and ceiling portions of a building showing also my improved chimney installed thereon in section.

Fig. 2 is a similar view of the invention applied to a chimney of the ridge type.

Fig. 3 is a top plan view of a ceiling ventilator positioning the lower extended end of the pipe and showing the pipe extension in section.

Figs. 4 and 5 are detail sectional views illustrating my improved pipe connection for securing a cast iron extension on the lower side of the chimney support, and Fig. 5 is a sectional view on line 5—5 of Fig. 4.

When the invention is applied to the slope type of chimney a roof plate 10 is provided, having an upstanding peripheral flange portion 11 and a depending flange 12, adapted to surround peripherally the roof opening, as shown in the prior U. S. patent to Carney, referred to. The chimney support is in the form of a plate 13 having the usual depending flange or skirt 14 adapted to telescope over the upstanding flange 11 of the roof plate and is provided with the usual inwardly turned lugs or trunnions 15 engaging sockets or depressions forming bearings in the roof plate upstanding flange 11, the desired relation between the chimney support and roof plate being secured in order to align the chimney pipe, such connection being in the form of the threaded hook bolt 17 having nuts on the threaded portion thereof engaging an extension on plate 13 and being pivotally connected with the perforated lug or eye 16 on the roof plate, all in a manner well understood in the art.

When the invention is desired to be used in a chimney of the ridge type, as illustrated in the Dickinson patent referred to, the roof plate will be varied in construction to fit the apex or ridge of the roof, as indicated at 20, and will have the upstanding flange 21, which will co-operate with the chimney supporting plate 22 provided with the depending peripheral flange or skirt 23 arranged as in the case of the flange or skirt 14 to form a closure in any adjustment of the chimney with respect to the roof plate for the purpose of excluding rain or snow. A suitable pivotal connection between the plates 20 and 22 will be provided, as indicated at 24, the trunnions in this case being shown on the upstanding flange of the roof plate with the sockets or bearings

corresponding formed in the depending flange or skirt 23 of the chimney support.

It is well known that, in especially all forms of railroad work and small outhouses, such as stations for watchmen, it is desirable to construct chimneys of cast iron on account of its well known acid resisting tendencies, which prevent its being decomposed by the action of various fuels, notably bituminous coal, and I therefore prefer to form integrally with the chimney supporting plates 13 and 22 around the central pipe opening therein a short upstanding flange, as indicated at 25, and a depending flange which may be somewhat longer, if desired, and preferably terminating about in line with the common axes of the pivotal connection between the chimney support and the roof plate, for the reason that I find in chimneys of this type when installed, particularly in buildings that contain no ceiling, or when for other reasons it is desirable to extend the stove pipe, which is usually constructed of sheet metal, directly through the roof and in connection with the pipe opening in the chimney support, such construction affords the most desirable connection for the upper extremities of the stove pipe, since the connection will permit without disturbing the pipe of the maximum amount of adjustment of the chimney and its support without disturbing the stove pipe connection, due to having such connection in line with the axes of the pivotal connection between the chimney support and the roof plate. This depending section of pipe is merely an extension of the integrally upwardly extending pipe section 25, and is indicated by reference character 26 in both the slope and ridge types of chimney of Figs. 1 and 2. The pipe sections 25 on the support extending upwardly are perforated to take suitable connecting bolts, as indicated at 27, and by this means the enlarged lower extremity of the chimney pipe 28 will be fastened to its support. This detachable connection of the chimney pipe 28 from its support is a decided convenience in shipping and lessens the liability of breaking of these cast iron parts in transit and by reason of this construction it results that the outer chimney section 28 with its cowl or ventilator cover 29 may be used on a chimney support of either the ridge or slope type. The pipe section 26 depending from the chimney supporting plate 13 will be perforated so that if it is desired to attach thereto a cast iron pipe section to be extended downwardly through the ceiling, as indicated at 30, to connect with the stove pipe below the ceiling ventilator plate 31, and the manner in which I form the connection between a depending section of cast iron pipe, as indicated by reference character 32, Figs. 1 and 2 of the drawing, is an important feature of my invention.

This connection device illustrated in Figs. 1, 2, 4 and 5 has the appearance in cross section of one half the capital letter H shown most clearly in Fig. 5, and it comprises a peripheral ring or band 33 having midway between its upper and lower extremities, as indicated at 34 and 35, an inwardly projecting rib 36 designed to register with the thicknesses of the walls of the cast iron chimney pipe sections 26 and 32. The extensions 34 and 35 of the ring or band 33 are perforated to take suitable screw threaded bolts 37, which may be secured in said ring or band and the perforations in pipe sections 26 and 32 by means of threaded nuts on the extrior of the pipe, or by screwing the threaded extremities of the bolts 37 into correspondingly threaded apertures in the pipe. This construction forms a substantially gas tight connection of sufficient strength to support any length of cast iron pipe from the chimney supporting plates 13 and 22 and such connection has the further advantage that where it is desired to dispense with any cast iron pipe on the inside of the building the connection may be omitted and the stove pipe passes up on the interior of the pipe section of the supports 13 and 22, which will be formed in the ordinary manner with the inner diameter registering with the exterior diameter of the stove pipe.

I claim:

1. A chimney comprising a chimney pipe section and a chimney pipe section support, the latter comprising a plate perforated and having the chimney pipe detachably secured to the said plate with the interior thereof registering with the said perforation in the plate, a roof plate, a depending flanged or skirt portion on the chimney supporting plate, pivotal connections between the chimney supporting plate and the roof plate, a pipe extension formed integrally with the underside of the chimney supporting plate and registering with the chimney pipe and the said perforated portion in said plate, said integrally depending pipe section terminating substantially in the axial line of the pivotal connections between the said chimney support and the roof plate, and means for suspending a detachable pipe section from the said depending pipe section of the chimney support.

2. A chimney comprising a chimney pipe section and a chimney pipe section support, the latter comprising a plate perforated and having an upstanding flange extending peripherally around said perforation on the upper side of the plate and being provided with means for detachably connecting said chimney pipe section thereto, a roof plate, pivotal connections between the chimney

supporting plate and the roof plate, a chimney pipe extension formed integrally with the underside of the chimney supporting plate and registering with the chimney pipe and the said perforated portion in said plate, and means for suspending a detachable pipe section from the said depending pipe section of the chimney support.

3. A chimney comprising a chimney pipe section and a chimney pipe section support, the latter comprising a plate perforated and having the chimney pipe detachably secured to the upper side of said plate with the interior thereof registering with the said perforation in the plate, a roof plate, pivotal connections between the chimney supporting plate and the roof plate, a pipe extension formed integrally with the underside of the chimney supporting plate and registering with the chimney pipe and the said perforated portion in said plate, and means for suspending a detachable pipe section from the said depending pipe section of the chimney support comprising a peripheral band or ring of relatively flat material adapted to closely surround the cooperating extremities of the suspended pipe section from the depending pipe section of the chimney support, the said band being provided intermediate its edges with an inwardly projecting rib extending peripherally therearound and forming a shoulder against which the respective extremities of the detachable pipe section and the said depending section abut, there being registering perforations in the said peripheral band or ring and the corresponding telescoping extremities of the pipe sections, and means for locking the respective parts together in said perforations.

In testimony whereof I have signed my name to this specification on this 12th day of April, A. D. 1920.

ARTHUR J. FILKINS.