J. BROWELL.

Sectional Chimney.

No. 217,985. Patented July 29, 1879.

Fig. 1

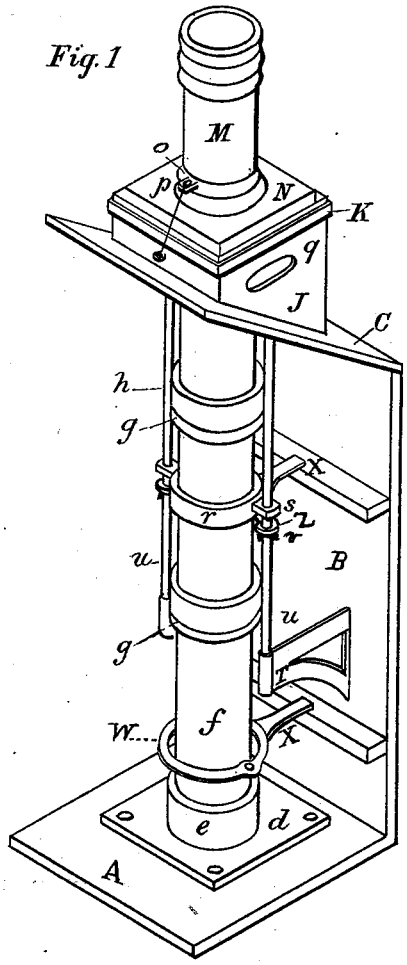


Fig. 2

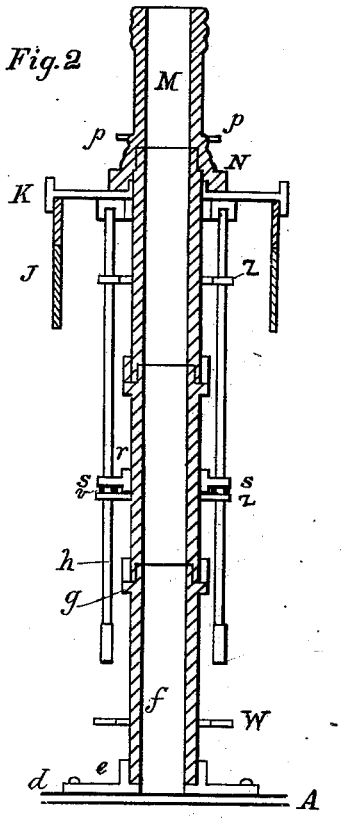


Fig. 3

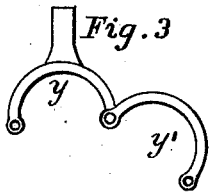
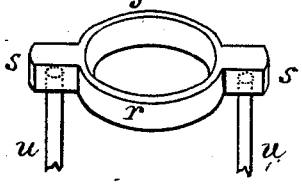


Fig. 5



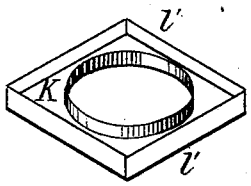


Fig. 4

Witnesses

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JEREMIAH BROWELL, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN SECTIONAL CHIMNEYS.

Specification forming part of Letters Patent No. **217,985**, dated July 29, 1879; application filed December 27, 1878.

To all whom it may concern:

Be it known that I, JEREMIAH BROWELL, of the city and county of San Francisco, and State of California, have invented an Improved Sectional Chimney; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the drawings accompanying this specification and forming a part of the same.

My invention has reference to that class of chimneys in which short sections of cement, earthenware, or clay pipes are placed one above another and jointed together, so as to form a continuous flue or smoke-conductor leading from the interior of a house up through the roof and communicating with the air outside of the house.

My invention relates, first, to a stepping-plate or base-section for sustaining and holding the foot or base of the chimney; secondly, to a novel arrangement for covering, sealing, and banding the joints between the ends of the sections; thirdly, to an improved arrangement for staying or bracing the chimney as a whole, without interfering with the free vertical movement of the chimney in case it should settle; and, lastly, to an arrangement for securing the chimney-top in its proper position above or upon the roof of the house, all as hereinafter more fully described.

Referring to the accompanying drawings, Figure 1 is a perspective view of the sectional chimney. Fig. 2 is a vertical section. Fig. 3 is a detached view of the loose band connected with the wall. Fig. 4 is a detached view of plate K, used as a cover to the tower or housing J. Fig. 5 is a detached view of loose band *r*, connected by rods.

Let A represent the floor, B the wall, and C the roof, of a house.

Upon the floor, where the foot of the chimney is to rest, I secure a plate, *d*, which has a short tube or flange, *e*, projecting upward from it. This tube is large enough to allow the lower end of the bottom tubular section, *f*, to slip down inside of it and rest upon the plate. If the plate does not fit tightly in the section, I fill between them with cement; but usually it will fit sufficiently tight without the cement. This bottom plate, with its upward section, can be made of metal, earthenware, or other material, as desired.

I am aware that a plate with a hole through its center, and having an upward-projecting flange or rim around the hole, has heretofore been used for supporting the foot of a tubular chimney; but my plate is solid, and the flange or tubular section projects upward from its upper face.

Each tubular section of which the chimney is composed has a bulge or ledge, *g*, formed on it a short distance below its upper end. Before placing another section upon the one already in place, I slip a ring or band, *h*, over the upper end of the section last placed in position, so that the ring or band will rest upon the ledge or projection. I then insert the lower end of the next section inside of this ring and force it down until the ends of the two sections are connected, leaving the band loose upon the pipes and covering the joint. I then insert a slight filling of cement between the upper edge of the band and the upper pipe. This holds the band with sufficient firmness over the joint and keeps its lower edge to its seat on the ledge, so that the joint is made perfectly air and spark tight.

This arrangement is quite simple and effective. It permits me to readily disconnect the sections, when desired, without injuring them, so that the chimney can be taken down and put up again without trouble. The former method of placing a body of cement around the joint inside of a cup-shaped band made it almost impossible to disconnect the sections, after they were once put together, without injuring the pipes or sections so that they were unfit to be used again. If the bands *h* fit the upper pipe sufficiently snug, however, the cement filling can be dispensed with. The bottom plate serves as an ash-pan or receptacle for soot, that always accumulates in a chimney; and as the chimney is so constructed that it can be raised vertically, allowing the ashes and soot to remain in the base-plate, it can be taken out and cleaned, then replaced, and the chimney lowered, which could not be done were it cast with a hole or opening, as heretofore.

I connect each two sections together in this

manner from the bottom to the top of the chimney.

Through the roof C, I make an opening sufficiently large to permit the chimney to pass freely through without being close enough to heat the wood-work. In fact, I can make as large an opening as desired. Around this opening I then build up a square housing or low tower, J, of wood or other convenient material, and bring its upper edges in a horizontal plane. The chimney is built up into and through this housing or tower so that its upper end projects slightly above it. I then place a metallic or earthenware plate, K, over the housing or tower, as shown. This plate has a hole in its middle, which is large enough to allow it to slip down over the upper end of the chimney and rest upon the top of the housing.

The plate K has a rim, *l*, projecting upward from its rim, and another, *l'*, projecting downward from its rim. This downward-projecting rim fits down outside of the top of the housing or tower, while the upward-projecting rim forms the top of the plate into a pan.

The chimney-top M has a wide base, N, and this base has a recess in it which will fit down over the projecting top of the chimney, and allow the base N to rest in the pan-shaped plate. I then fill in between the edge of the base and upward-projecting rim *l* with cement, so as to form a perfectly water-tight joint.

Instead of placing the cement between the band and pipe, I can place it between the joints of the pipe, and leave the band loose and free around the joint, so that it will protect it and prevent the cement from falling out. It will be seen that this leaves the chimney free to settle bodily without disturbing the chimney top or housing, as it is not permanently connected with either.

To further stay the chimney-top I place a band, *o*, around it, which has two lugs, *p*, formed on it, one on each side, through each of which I pass a wire, and fasten it down to the roof or to the body of the housing or tower.

Ventilating-holes *q* can be made in the housing or tower, through which air from the room and tower can pass, and thus establish a circulation that will keep the tower cool

To stay the chimney and prevent displacement, I place two or more loose bands, *r*, around it at suitable points, each of which has two lugs, *s*, one on each side, and each lug has a hole through it.

If the chimney is built near a wall, I secure a bracket, T, to the wall on each side of the chimney, and to the outer wall of each bracket I secure the lower end of a vertical rod, *u*. These rods pass up alongside the chimney on each side and through the holes in the lugs *s*, and their upper ends are fixed in the lugs of the upper band inside of the housing. At intervals I connect this rod with the wall of the building by open brackets or braces *z*. A button, *v*, is secured on the rods *u* below the points where the bands *r* are to be set, and so as to prevent the bands from dropping down. This allows the chimney to move up or down without disturbing the bands.

The rods *u* could be continued down to the floor, if desired; or I can use a number of loose bands, W, each of which is connected with a beam or studding of the house by a lug, X. In this case I make each band in two parts, *y y'*, and hinge the parts together on one side of the chimney. The opposite ends I fasten by a pin or other device, so that by removing the pin or fastening I can swing them open, and remove them from the chimney without disturbing any of the parts of the chimney.

I thus provide several important improvements in this class of chimneys, all of which can be used in either single or double wall chimneys of this class. Stove-pipe connections can be made at any desired point, and these openings, when not in use for that purpose, can be covered by registers for ventilating and heating the rooms of the house.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with a sectional chimney, the solid base-plate *d*, with its flange or upward-projecting tubular section *f*, substantially as and for the purpose described.

2. The housing or low tower J, with its pan-shaped plate or cover K, in combination with the chimney-top M, with its enlarged base N, and the cement filling for securing the chimney-top base in the pan-shaped plate or cover, substantially as and for the purpose described.

3. The fixed upright rods *u*, arranged to pass loosely through the lugs *s* of the loose bands *r*, and provided with the buttons or stops *v*, in combination with a sectional chimney, substantially as and for the purpose described.

4. A sectional chimney provided with an independent chimney-top, M, and arranged to move freely through stay-bands W, which are connected with one or more fixed rods, *u*, substantially as and for the purpose described.

5. A sectional chimney having joint bands or rings *h* and loose supporting-bands W, the latter being connected with fixed rods *u*, substantially as and for the purpose described.

6. A stay-band for sectional chimneys consisting of two parts, *y y'*, which are hinged together on one side, so as to be clasped around the chimney and fastened, substantially as and for the purpose described.

In witness whereof I hereunto set my hand and seal.

JEREMIAH BROWELL. [L. S.]

Witnesses:
D. B. LAWLER,
WM. FLOYD DUCKETT,