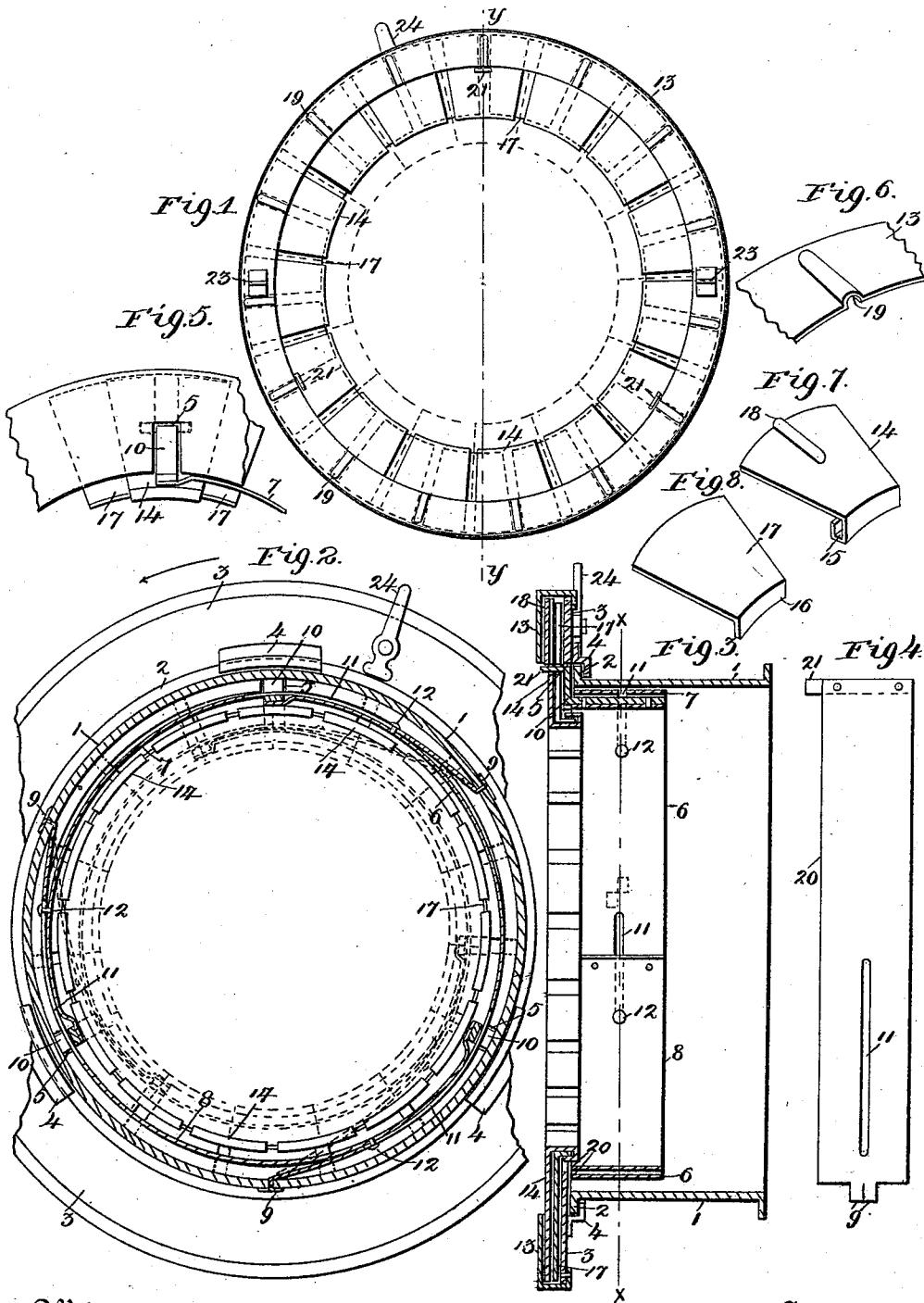


(No Model.)

J. J. SCHAAB.
STOVEPIPE THIMBLE.

No. 549,217.

Patented Nov. 5, 1895.



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UNITED STATES PATENT OFFICE.

JOHN J. SCHAAB, OF ST. LOUIS, MISSOURI.

STOVEPIPE-THIMBLE.

SPECIFICATION forming part of Letters Patent No. 549,217, dated November 5, 1895.

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To all whom it may concern:

Be it known that I, JOHN J. SCHAAB, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Stovepipe-Thimbles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to adjustable stovepipe-thimbles; and it consists in the novel arrangement and combination of parts more fully set forth in the specification, and pointed out in the claims.

In the drawings, Figure 1 is a front view of my improved thimble. Fig. 2 is a section taken on the line *xx* of Fig. 3. Fig. 3 is a vertical side section taken on the line *yy* of Fig. 1. Fig. 4 is a detail plan view of one of the yielding, expanding, and contracting metallic strips by which the opening of the thimble is varied. Fig. 5 is a detail, the thimble being removed, of the disk-plate by which the strips shown in Fig. 4 are controlled. Fig. 6 is a detail in perspective showing the disposition of the guide-grooves along the surface of the metallic band secured to the disk-plate. Fig. 7 is a perspective view of one of the series of outer assembling segments; and Fig. 8 is a similar view of one of the inner assembling segments, to be hereinafter referred to.

The object of my invention is to construct an adjustable stovepipe-thimble adapted to embrace accurately pipes of various diameters, the adjustment being accomplished by a single movement on the part of the operator.

The present device will accurately embrace pipes that are not absolutely circular in cross-section, its adaptability to accommodate such pipes resulting from a new form of construction, which in detail may be described as follows:

Referring to the drawings, 1 represents a cylindrical thimble having an outer peripheral flange 2, about which can be turned a terminal annular disk-plate 3, being held loosely thereon by suitable metallic retaining-clips 4, secured to the plate and having their free ends overlapping the flange 2. In the rear of each clip and cut in the plate 3 are suitable guideways 5, disposed along a radial line from the center of the disk-plate, the center of the plate being, of course, con-

centric with the axis of the cylindrical thimble. Along the inner periphery of the thimble 1 are secured at one end a series of suitable yielding metallic strips 6, 7, and 8, of suitable width and adapted to be contracted and expanded at the will of the operator, the method of securing the same being accomplished by passing the split ends 9 of each strip through the wall of the thimble outwardly and then folding said split ends in opposite directions along the outer surface of the thimble, as best seen in Fig. 2. The free forward end of each strip overlaps each succeeding strip along the inner surface of the same, as also shown in Fig. 2. The free ends or edges of the successive strips are denominated as "free" only because they are not secured to the thimble-wall and because they are free to play over the adjacent surface of each successive strip; but the relative positions of the free edges of the strips and of the guideways 5 remain constant, being kept opposite the guideways by a guide-arm 10, secured along the outer edge of each strip, and then bent outwardly so as to operate in the guideway 5, as seen best in Fig. 5. To prevent lateral displacement of the strips 6, 7, and 8 as they slide over each other, suitable slots 11 are cut in each strip, within which operates a guide-pin 12, secured to the next overlapping strip.

From the foregoing description it is obvious that as the disk-plate 3 is rotated along the open end of the thimble in the direction shown by the arrow in Fig. 2 (the thimble being either held by the operator or fixed in position in the opening of a flue) the free edge of each strip 6, 7, and 8 will be carried around with the disk-plate in the same direction. Before rotation begins—that is to say, when the parts are in their normal expanded position—the several strips will, as seen in Fig. 2, lie close to the inner periphery of the thimble; but with the rotation of the disk-plate as indicated the free edges of the successive strips will be carried forward with it and the body portion of each strip will be retracted away from the inner periphery toward the center of the thimble, and as the body portion of each strip is thus brought toward the center of the thimble it will to the same extent cause the free edge of the succeeding overlapping-strip to advance toward the center, so that the resulting circu-

lar opening of the hollow cylinder formed by the successive series of overlapping-strips will diminish in proportion, as indicated by the dotted position of the parts in Fig. 2.

5 With an understanding, therefore, of how the opening formed by the strips 6, 7, and 8 can be diminished at pleasure I will describe the parts directly controlled by the said expanding and contracting strips referred to.
 10 Over the outer edge and along the outer face of the disk-plate 3 is passed a metallic band 13, between which and the outer face of the disk-plate 3 are disposed and free to move in a radial line of the plate 3 a series of out-
 15 wardly or radially diverging metallic assembling segments, breaking joint with one another, the outer series 14 having each formed at its narrow end a groove 15 for the reception of the tongue 16 of the next succeeding
 20 strip 17 of the inner series. Each segment 14, too, has a radially-disposed rib 18, adapted to engage a groove 19, formed along the band 13 for its reception to properly guide the series of segments in their movement toward and
 25 from the center of the disk-plate 3. As the series of strips 6, 7, and 8 are coiled within the thimble, their outer edges 20 or those adjacent to the disk-plate are thus disposed interiorly to the inwardly-projecting unbroken
 30 ledge formed by the alternate grooves 15 and tongues 16 of the coupled segments. The free end of the guide-arm 10 of each strip has a right-angular projection 21 passed through the particular segment opposite thereto, thus
 35 securing at least one of the coupled series of segments to the free end of each strip, so that it is obvious that as the series of strips 6, 7, and 8 are made to contract in the manner before
 40 described they will draw after them the entire series of segments 14 and 17 toward the center of the thimble and causing them to assemble as a unit toward the common center, and thus reduce the size of the opening in the
 45 thimble formed by them, as illustrated in dotted lines in Figs. 1 and 2. The segments are guided in their movements by the ribs 18 and grooves 19, as before described. Of course, as the strips 6, 7, and 8 are contracted or brought
 50 together, thus reducing the size of the circle of the opening between them, the free edges of the strips, as each approaches the center of such circle, are guided by the guide-arms 10
 55 within the guideways 5, the said arms by their connection with one of the segment of the series carrying the entire series with them by reason of the coupled arrangement between the segments. When the thimble is once in
 60 place in a flue, the disk-plate may be operated by seizing the lugs 23, and after the stove-pipe is once inserted the segments 14 and 17 can be brought against it, whatever may be its diameter. The segments will also hug a
 65 pipe that is not a true circle in cross-section. When a pipe is once embraced, to prevent accidental displacement or opening of the parts a pivoted latch 24 is secured to the rear of the disk-plate 3 and its lower end brought

into engagement with the flange 2 to firmly lock the parts.

As seen from the drawings, the lower curved end of the latch is adapted to engage with and disengage from the edge of the flange 2, and when the latch is tripped to bring these parts into engagement the said parts are firmly locked, thus securing the thimble tightly about the pipe.

Having described my invention, what I claim is—

1. A stove pipe thimble, comprising a thimble proper, a series of assembling segments disposed along the thimble, and adapted to form between them a series of variable openings concentric with the axis of the thimble, a series of expansive and contractile metallic strips secured to the interior of the thimble and adapted to control said segments, and a retaining device for holding the series of segments in an adjusted position, substantially as set forth.

2. A stove pipe thimble comprising a thimble portion proper, a disk plate movably secured to the outer end thereof, a series of metallic overlapping strips secured at one end to the wall of the thimble and having their free ends movably secured to and guided by the disk plate, a band secured to the outer face of the disk plate, a series of interlocking assembling segments having a movement freely in a radial line of the circle of the disk plate, and in co-operative connection with the expansive and contractile overlapping strips and adapted to form a series of concentric openings about the axis of the thimble, substantially as set forth.

3. In a stove pipe thimble, a series of expanding and contracting strips, means for securing each strip at one end to the thimble, a slot in each strip, a guide pin secured to each strip and adapted to operate in the slot of the next succeeding strip, a series of assembling segments co-operating with said strips and adapted to form openings concentric with the axis of the thimble, and a guide arm forming a part of the free end of each strip, substantially as set forth.

4. In a stove pipe thimble, a thimble portion proper, a suitable band, a series of depressions disposed thereon in a radial line from the center of the band, a series of interlocking segments having alternate tongues and grooves, the outer series having each a rib adapted to engage the depressions on said band, and means for operating the segments and moving them simultaneously to and from the center of the thimble and thus form a series of concentric openings, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. SCHTAAB.

Witnesses:

LEE SALE,
E. STAREK.