

(No Model.)

F. HILDEBRANDT.

STOVE PIPE ELBOW.

No. 244,720.

Patented July 19, 1881.

Fig: 1.

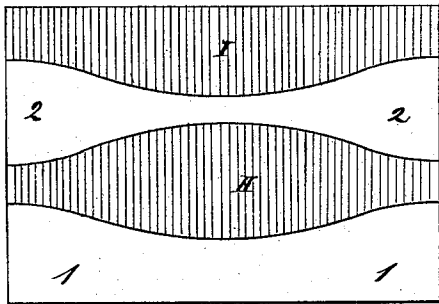


Fig: 2.

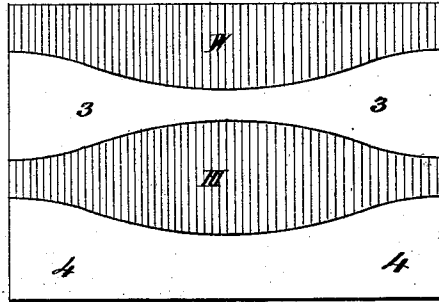


Fig: 3.

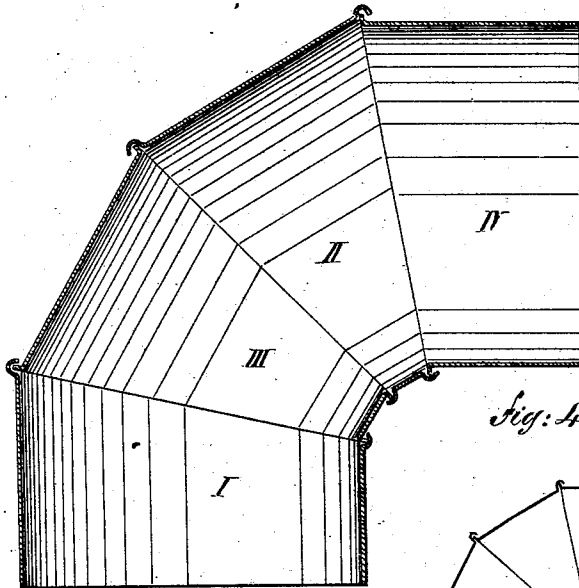
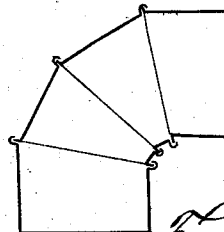


Fig: 4.



WITNESSES:

Carl Karp
Otto Risch

INVENTOR

Fredrick Hildebrandt

BY *Paul Goepel*

ATTORNEY

UNITED STATES PATENT OFFICE.

FREDRICK HILDEBRANDT, OF NEW YORK, N. Y.

STOVE-PIPE ELBOW.

SPECIFICATION forming part of Letters Patent No. 244,720, dated July 19, 1881.

Application filed October 18, 1880. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK HILDEBRANDT, of the city, county, and State of New York, have invented certain new and useful Improvements in Stove-Pipe Elbows, of which the following is a specification.

This invention relates to improvements in the four-piece stove-elbows, by which a neater, more durable, and stronger elbow is obtained.

The four-piece elbows heretofore manufactured were made of two different grades, the first grade having all the connecting-rivets of the four pieces or sections on the inside, so as to be out of sight, while the second or cheaper grade has the rivets on the outside. They are manufactured by cutting two sets of blanks from two sheets of sheet metal and using one-half of the blanks obtained thereby for one grade and the other half for the other grade of elbows. Each middle piece of these elbows was provided at one end with an outwardly-bent flange or lip and at the other end with an annular bead, while the end sections had respectively a bead and a lip at their inner edges, which connected with the lip of one of the middle sections and with the bead of the other middle section. In putting the sections together there is always considerable delay in springing the tongues or lips of one section into the connecting-beads of the adjoining section. Another objection was that in closing the beads over the lips by the bead-closing machine a bad and faulty joint was obtained, which rendered the article unsightly and objectionable.

The object of this invention is to furnish a four or more piece elbow, which is quickly put together and uniformly connected without any flaw or defect; and the invention consists of providing one middle section of the elbow with lips or tongues at both ends, and the second middle section with annular beads at both ends, and making the end sections, as before, with lip and bead respectively.

It consists, secondly, of making the blanks of the outer and middle sections, provided with annular beads at their ends, of slightly greater width than the outer and middle sections having end lips, the latter sections being riveted closer to decrease slightly their diameter, so that an easier insertion of the pieces or sec-

tions is obtained, and a better joint formed over the lips in passing them through the bead-closing machine.

In the accompanying drawings, Figures 1 55 and 2 represent the blanks from which my improved stove-pipe elbow is made. Fig. 3 is a vertical central section of my improved stove-pipe elbow, and Fig. 4 is a diagram, on a smaller scale, of the old style of elbow. 60

Similar letters of reference indicate corresponding parts.

In manufacturing my elbows I prefer to make them also in two grades by cutting the blanks, as heretofore, from two pieces of sheet metal, 65 and using one-half of the blanks so obtained for the first grade, in which the rivets are placed at the inside of the elbow, while the remaining blanks are used for the second grade, in which the rivets are arranged at the outside 70 of the elbow. The middle sections of the first grade are preferably slightly bulged at their outer circumference, by which the elbow receives a more rounded and better appearance. The blanks of the first grade are marked in 75 Roman figures I to IV, and the blanks of the second grade in Arabic figures 1 to 4 in Figs. 1 and 2 of the drawings. In making up the blanks care has to be taken that the blanks I and II of the first sheet are made of slightly 80 greater width than the blanks III and IV of the second sheet, the blank I being then beaded at the inner edge, while blank II is beaded at both ends. The remaining blanks III and IV are bent up with lips or tongues, and are 85 riveted at their edges in such a manner that their diameter is slightly less than the diameter of the sections I and II.

By making one-half the blanks of slightly greater width than the other half and reducing the diameter of the latter, as described, 90 the sections or pieces are joined without difficulty by simply throwing one into the other, so that no time is lost in springing one section into the adjoining sections, as has been 95 formerly the case.

By means of the slightly greater width of one-half of the blanks there is also secured a better overlapping of the beads over the lips when connecting the sections in the bead-closing machine. In this manner considerable 100 time and labor are saved in making the elbows.

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

5 A four or more piece stove-pipe elbow, in
which the inner edge of one of the end sec-
tions and both edges of one of the middle sec-
tions are provided with annular beads and
made of slightly greater width and diameter
than the second middle and opposite end sec-
tion, which are provided respectively at both
10 ends and at the inner end with outwardly-bent

lips or tongues, all substantially as and for the
purpose set forth.

In testimony that I claim the foregoing as
my invention I have signed my name in pres-
ence of two witnesses this 13th day of Octo- 15
ber, 1880.

FREDRICK HILDEBRANDT.

Witnesses:

PAUL GOEPEL,
CARL KARP.