Y. TAMAKI.

BLOWPIPE.

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1,314,914. Patented Sept. 2, 1919.

Fig. 1.

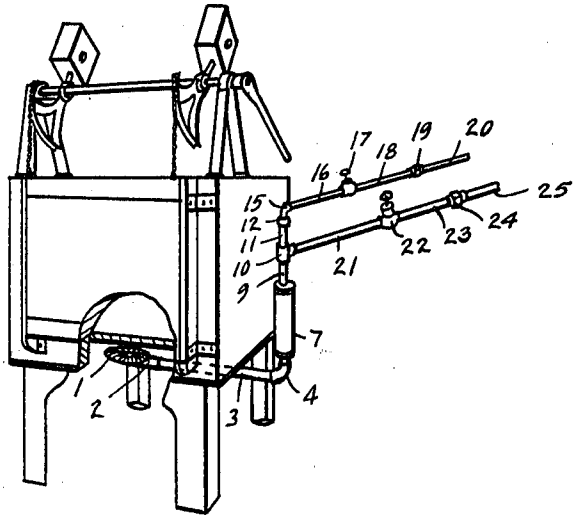
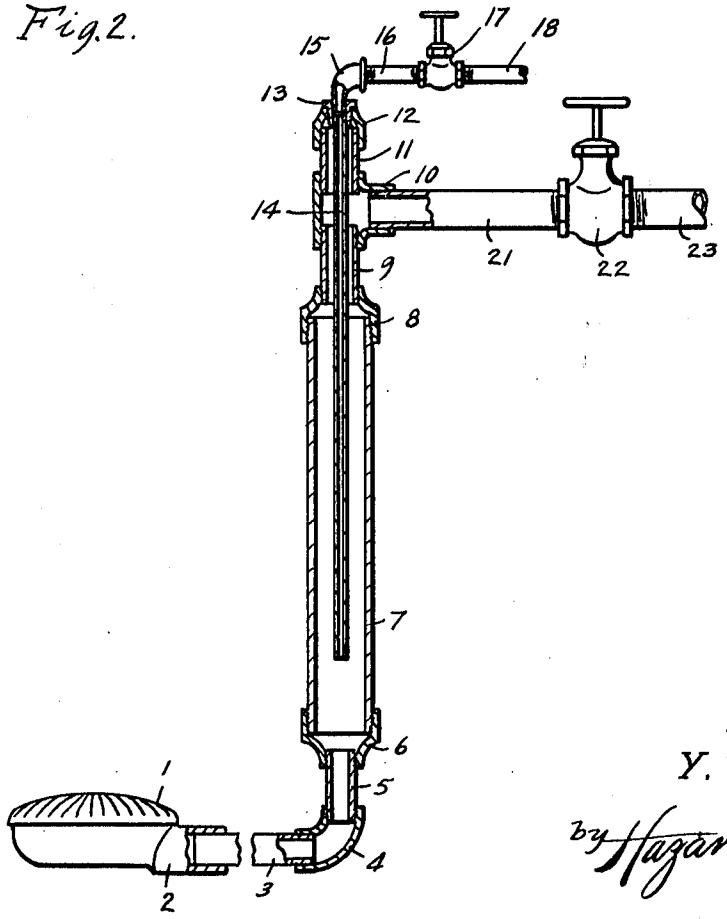


Fig. 2.



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BLOWPIPE.

1,314,914. Specification of Letters Patent. Patented Sept. 2, 1919.

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To all whom it may concern:

Be it known that I, YOSI TAMAKI, a citizen of Japan, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Blowpipes, of which the following is a specification.

My object is to make an air and gas mixer for supplying fuel to a gas float furnace, and my invention consists of the novel features herein shown, described and claimed.

Figure 1 is a perspective of a furnace provided with a gas burner having an air mixer embodying the principles of my invention.

Fig. 2 is an enlarged sectional detail of the air mixer.

The gas burner 1 may be of any size and of any type. A pipe 2 extends from the burner 1 and the pipe 2 is preferably long and straight. The pipe nipple 3 slides into the open outer end of the pipe 2, an elbow 4 is screwed upon the nipple 3, a nipple 5 is screwed into the other end of the elbow 4, a reducer coupling 6 is screwed upon the nipple 5, the large pipe nipple 7 forms a barrel and is screwed into the large end of the coupling 6, the second reducer coupling 8 is screwed upon the upper end of the barrel 7, the nipple 9 is screwed into the small end of the coupling 8, a T 10 is screwed upon the nipple 9, a nipple 11 is screwed into the opposite end of the T 10 from the nipple 9, the third reducer coupling 12 is screwed upon the pipe nipple 11, a bushing 13 is screwed into the small end of the third reducer coupling 12, a sump pipe 14 is screwed into the inner end of the bushing 13 and extends downwardly through the barrel 7 to a point near its lower end, said sump pipe being centrally located in the barrel 7. A street L 15 is screwed into the outer end of the bushing 13, a nipple 16 is screwed into the street L 15, a regulating valve 17 is screwed upon the nipple, a nipple 18 is screwed into the regulating valve, and a union 19 connects the nipple 18 to the air supply pipe 20. A nipple 21 is screwed into the side outlet of the T 10, a regulating valve 22 is screwed upon the nipple 21, a nipple 23 is screwed into the other end of the regulating valve, and the union 24 connects the nipple 23 to the gas supply pipe 25.

In the practical operation the gas valve 22 is operated to the desired extent, then the air valve 17 is opened until the air pressure produces the desired mixture to produce the desired flame in the burner 1. It is to be understood that the pipe 18 leads from a supply of compressed air, such as an air compressor, or an air tank, and that the valve 17 is to be accurately adjusted according to the air pressure and the fire desired. The compressed air will blow through the sump pipe 14 and produce an injector action to mix the air with the gas and blow the fuel mixture through the nipple 5, the elbow 4, the nipple 3 and the pipe 2 to the burner 1. Of course, the relative proportions and pressures must be, and may be, accurately adjusted by manipulating the valves 22 and 17.

Various changes may be made without departing from the spirit of my invention as claimed.

I claim:

1. An air mixer comprising a reducer coupling, a nipple screwed into the small end of the reducer coupling, a barrel screwed into the large end of the reducer coupling, a second reducer coupling screwed upon the other end of the barrel, a nipple screwed into the small end of the second reducer coupling, a T screwed upon the nipple, a sump pipe extending through the T, means for connecting and regulating air to the sump pipe, a gas pipe screwed into the side outlet of the T, and means for regulating the gas so as to blow the fuel mixture through the first nipple.

2. As an article of manufacture a pipe nipple, an elbow screwed upon one end of the pipe nipple, a second nipple screwed into the elbow, a reducer coupling screwed upon the second nipple, a barrel screwed into the reducer coupling, a second reducer coupling upon the other end of the barrel, a third nipple in the second reducer coupling, a T connected to the third nipple, a gas regulating valve connected to the side outlet of the T, an air regulating valve connected to the opposite end outlet of the T from the barrel, and a sump pipe extending from the air pipe through the barrel to a point near its lower end.

In testimony whereof I have signed my name to this specification.

YOSI TAMAKI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."