

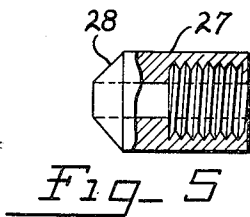
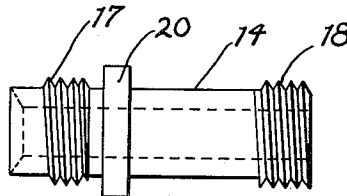
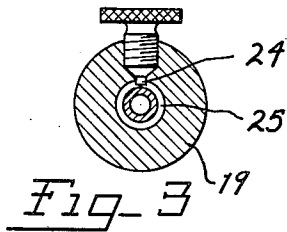
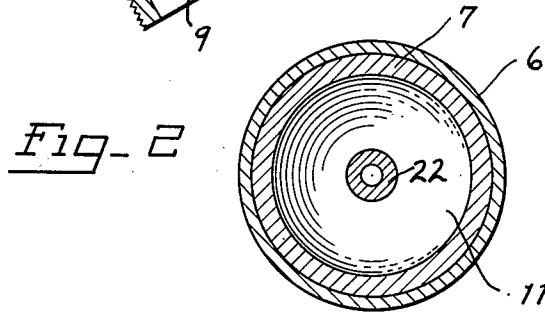
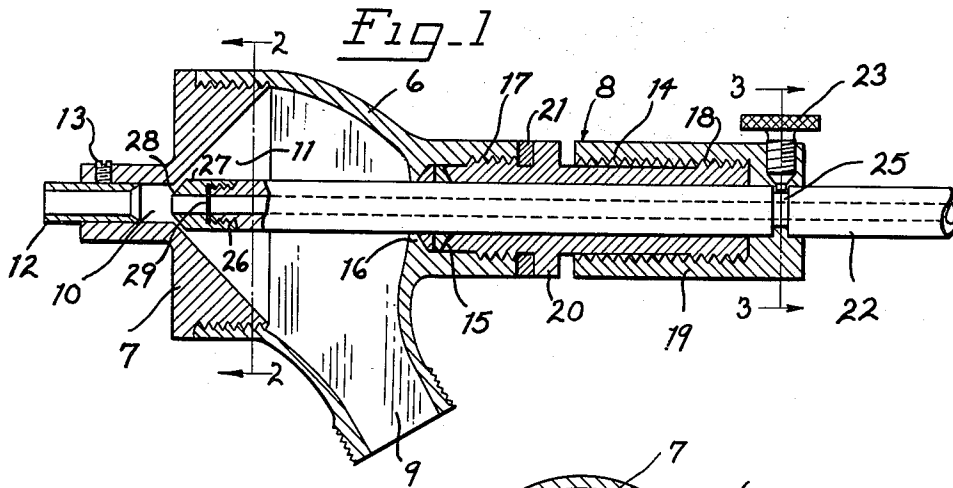
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AIR GUN FOR APPLYING PLASTER

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AIR GUN FOR APPLYING PLASTER

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3 Claims. (Cl. 299-86)

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This invention comprises an air gun for applying plaster, being a continuation in part of my copending application filed November 17, 1943, Serial No. 510,689, now abandoned.

It is essential to the effective operation of a plaster spray gun that adjustment of the air stream be at all times in the control of the user and that minute adjustment of the air-line be constantly available to the user, particularly to increase or decrease the velocity of flow of the sprayed plaster and to adjust the area of distribution. This condition is difficult to maintain because some of the "kick back" of the sprayed plaster coats the working parts employed for adjusting the air-line. I have found from experiment that this is overcome by employing motive means for the air-line which embodies matching concealed screw threads which are at no time exposed to the "kick back" plaster and adjustment of the air-line, either minute or extensive, may be made even after the gun has been in prolonged use.

Another object of this invention is to provide an air-line completely free from peripheral screw threads yet movable by screw thread adjustment to axially move the air-line.

Other objects of the invention will be apparent from the following description of the present preferred form of the invention taken in conjunction with the accompanying drawings wherein:

Fig. 1 is a longitudinal sectional view of an air gun constructed in accordance with the present invention;

Fig. 2 is a vertical sectional view taken on the line 2-2 of Fig. 1 looking in the direction of the arrows showing to advantage the position of the air-line in the conical recess of the body bushing;

Fig. 3 is a vertical sectional view taken on the line 3-3 of Fig. 1 looking in the direction of the arrows showing to advantage the manner of anchoring the movable adjustable member to the air-line;

Fig. 4 is an elevational view of the bearing sleeve constructed in accordance with the present invention, and

Fig. 5 is an elevational view partly in section of the removable air-line tip.

The device of the present invention includes a hollow body or housing 6 provided with a plurality of openings, two of which are in axial alignment, the outer aligned opening having a bushing 7 detachably mounted therein and the inner aligned opening being engaged by an assembly generally designated at 8. The remaining housing opening, indicated at 9, is a plaster inlet.

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The bushing 7 is provided with a bore 10, the inner terminal of which issues into a conical recess 11. The central portion of the bushing extends outwardly appreciably beyond the outer end of the housing 6 and has a nipple 12 slidably mounted therein. The nipple is adjustable in the bushing and held in a predetermined position of adjustment by a screw 13. Obviously, the nipple 12 may be expeditiously removed from the bushing and replaced at the option of the user.

The assembly 8 comprises inner and outer members. The inner member consists of a tubular bearing sleeve 14, the inner terminal of which may be recessed, as indicated at 15, for the reception of gaskets. Forward movement of the gaskets is restricted by an annulus 16 formed on the inner wall of the body 6 as shown in Fig. 1. The sleeve 14 is provided with screw threads 17 adapted for engagement with complementary threads formed in the bore at the inner end of the body 6. The opposite extreme end of the sleeve is provided with screw threads 18 engageable with the complementary internal threads formed in the bore of the outer member 19 of the assembly 8. Intermediate the threads 17 and 18, a ring 20 is formed on the sleeve. Between the inner wall of the ring 20 and the aft terminal of the body 6 a packing gasket 21 is mounted.

Slidably mounted through the bores of the inner and outer members of the assembly 8 and through the annulus 16 of the body 6 is an air-line or pipe 22, the bore of which communicates with the bore of the bushing 7 and with the bore of the nipple 12 as illustrated in Fig. 1. Fore and aft movement of the air-line is effected by rotation of the outer member 19 to which latter the air-line is anchored. For this purpose, as shown in Figs. 1 and 3, I employ a set screw 23 which is threaded in said outer member 19 and at its inner end with a pintle 24 mounted in a groove 25 formed in the air-line. When the pintle is removed from the groove the air-line may be withdrawn from the housing 6 and assembly 8.

The air-line 22 has its forward end reduced and screw-threaded as indicated at 26 which is adapted for detachable engagement with complementary threads formed in the bore of a tip or nozzle. The forward or outer end of the tip is bevelled or tapered, as indicated at 28, to complement the taper of the conical recess 11 of the bushing 7. Axial movement of the air-line 22 forwardly through the assembly 8 and housing 6 will urge the terminal 28 into engagement with the wall of the recess 11 and the bore 10. Retrac-

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tion of the air-line provides a space for the passage of plaster entering through the opening 9 of the housing for expulsion through the nipple 12. Minute adjustment of the air-line is effected through rotation of the other member 19 for increasing and decreasing the volume of plaster forced from the gun. The position of the nipple 12 in the outwardly extending portion of the bushing 7 determines the area of distribution of the sprayed plaster. When the nipple is in an extended position, substantially as shown in Fig. 1, the area of distribution of the plaster is relatively small. When the nipple is retracted into the forwardly extending position of the bushing 7, the area of distribution of the sprayed plaster is increased. Consequently, adjustment of distribution may be effected by adjustment of the position of the nipple 12 in the bushing 7.

Interposed between the nozzle 27 and the forward reduced screw threaded end of the air-line 22 is a fine wire mesh screen 29 which will prevent the backwash of plaster into the air-line 22. Since the nozzle 27 is removable, access is readily gained to the screen for cleansing.

While I have herein described a preferred form of the invention, it is, nevertheless to be understood that changes may be made therein within the scope of the appended claims.

What I claim is:

1. An air gun for spraying plaster comprising a hollow body provided with openings, two of which are in axial alignment, a bushing mounted in one of said axial openings provided with a bore, an air-line mounted in the other axial opening, one end of which is engageable with the bore of the bushing, a pair of relatively movable parts one of which is sleeved over and slidably mounted on the air-line, one end of said part being engaged with the housing, external threads on the opposite end of said part, the other of said part being provided with a screw threaded bore of greater length than the extent of the threads on the first part, and means for anchoring the second part to the air-line.

2. An air gun for spraying plaster comprising a hollow body provided with an opening which

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is adapted for the reception of plaster to be sprayed, said body being also provided with a pair of openings in axial alignment, a bushing mounted in one of said axial openings, said bushing being provided with a bore, an air-line mounted in the other axial opening, the outlet end of which is adapted for relative movement toward and away from the bore of the bushing, and a nipple mounted in said bushing bore, the nipple being adjustable to vary the area of distribution of the sprayed plaster, the air wall of the nipple being smooth to prevent interruption of plaster passing through the nipple.

3. An air gun for spraying plaster comprising a hollow body provided with openings, two of which are in axial alignment, a bushing mounted in one of said axial openings provided with a bore the inner end of which issues into a conical recess, a tubular bearing sleeve one end of which is screw-threaded into the other of the axial openings of said body, an outer member movably mounted on the sleeve, an airline slidable through said outer member and sleeve, the inner end of the airline being adapted for engagement, at times, with the conical wall of the bushing, and a set screw threaded in said outer member and engaged with the airline for effecting fore and aft movement of the latter when said outer member is rotated clockwise or counterclockwise respectively.

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