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DRAWINGS ATTACHED.

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COMPLETE SPECIFICATION.

Fluid-Tight Coupling.

We, CAMILLO PASQUALE and ALBINA COMOGLIO PASQUALE, both Italian citizens of 85, corso Pietro Colletta, Turin, Italy, trading as R.C.M. REVISIONE COSTRUZIONE MACCHINE, do hereby declare the invention for which we pray that a patent may be granted to us and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a fluid-tight pipe coupling of the type in which sealing of a smooth pipe end and an external sleeve surrounding with a clearance the pipe end portion is effected by an annular seal of resilient material received by an annular groove in the inner periphery of the sleeve, pressed against the outer periphery of the abovementioned pipe end.

This invention provides a pipe coupling of the abovementioned type for sealingly coupling pipes, suitable for so-called sleeve joints in which the facing ends of two contiguous pipes are fitted into a sleeve, as well as for so-called socket couplings in which the sleeve forms the end portion of larger diameter of one pipe and receives the end of the other pipe.

According to this invention a coupling of the type referred to above is characterised by the fact that the seals of resilient material, preferably rubber, are substantially rectangular in cross sectional shape and of a bore slightly smaller than the outer diameter of the pipe and against which sealing is to be effected, and the inner edges of the rectangular cross section of the seals are rounded to facilitate insertion of the pipe into the sleeve.

The invention is illustrated by way of example in the accompanying drawings, in which:

[*Price* 4*s.* 6*d.*]

Figure 1 shows the ends of the two pipes connected by a sleeve coupling, and

Figure 2 is an axial sectional view of two pipes connected by a socket joint.

In the drawings, 1, 2 denote the ends of two coaxial pipes fitted with a circumferential clearance into a sleeve 3, 4, 5 denote two annular seals of resilient material, preferably rubber, each rectangular in cross sectional shape and accommodated substantially without any clearance by annular grooves in the circumferential inner surface 6 of the sleeve 3. The inner edges 7, 8 of each seal are rounded to facilitate insertion of the pipes.

The resilient annular seals 4, 5 are of an outer diameter substantially matching the diameter of the bottom of the grooves cut in the sleeve 3, and of a bore which is somewhat smaller, preferably by about 1 mm than the outer diameter of the ends of the pipes 1, 2.

The depth of the grooves cut in the sleeve equals about two thirds of the height of the rectangular cross section of the seals when the seal is not assembled. The ratio of the height to the length of the rectangular cross section of the seals amounts preferably to about 1 to 3.

In Figure 2 which, as mentioned above, shows a socket joint, the end 1 of a pipe is fitted into a socket 3^1 on the other pipe. The inner circumference of the latter is formed with an annular groove accommodating the seal 9 which is similar to the above described seals 4, 5.

In order to assemble the coupling, the resilient annular seals are forced into the sleeve or socket, whereupon the end of the pipe or pipes to be coupled is inserted into the sleeve or socket.

The resulting coupling affords a fully tight seal against escape of pressure fluid, though the pressure may be high, from the piping, as well as against access of air to the pipe should an underpressure be set up in the latter. The coupling distinguishes by simplicity in construction and low cost and is easily assembled and disassembled whenever a pipe is to be replaced or a provisional piping is to be renewed. The coupling admits of a limited mutual oscillation of the coupled pipes and is more particularly suitable for coupling asbestos-cement pipes. In the latter case the sleeve is made of the same material as the pipes.

WHAT WE CLAIM IS:—

1. A fluid-tight pipe coupling, more particularly for asbestos-cement pipes, of the type in which the smooth end of a pipe is fitted with a clearance into a sleeve made of rigid material, sealing of the outer periphery of the pipe end and inner sleeve periphery being effected by a resilient annular seal accommodated by an annular groove formed in the inner sleeve circumference, pressed against the outer circumference of the pipe end, wherein the annular seal of resilient material is substantially rectangular in cross sectional shape and of a bore slightly smaller than the outer diameter of the pipe, the inner edges of the rectangular cross section of the seals being rounded.

2. A coupling as claimed in Claim 1, wherein the ratio of the height to the length of the cross section of the annular resilient seal is about 1 to 3.

3. A coupling as claimed in any preceding claim, wherein the depth of the grooves cut in the sleeve, accommodating the annular seal of resilient material amounts to about two-thirds of the height of the rectangular cross section of the seal.

4. A fluid-tight pipe coupling constructed and arranged substantially as described herein with reference to the accompanying drawings.

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1. A fluid-tight pipe coupling, more particularly for asbestos-cement pipes, of the type in which the smooth end of a pipe is fitted with a clearance into a sleeve made of rigid material, sealing of the outer periphery of the pipe end and inner sleeve periphery being effected by a resilient annular seal accommodated by an annular groove formed in the inner sleeve circumference, pressed against the outer circumference of the pipe end, wherein the annular seal of resilient material is substantially rectangular in cross sectional shape and of a bore slightly smaller than the outer diameter of the pipe, the inner edges of the rectangular cross section of the seals being rounded.

2. A coupling as claimed in Claim 1, wherein the ratio of the height to the length of the cross section of the annular resilient seal is about 1 to 3.

3. A coupling as claimed in any preceding claim, wherein the depth of the grooves cut in the sleeve, accommodating the annular seal of resilient material amounts to about two-thirds of the height of the rectangular cross section of the seal.

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