PATENT SPECIFICATION

Application Date: Oct. 12, 1921. No. 27,033/21. **187,830**

" " Oct. 21, 1921. No. 27,974/21.

One Complete Left: Nov. 14, 1921.

Complete Accepted: Nov. 2, 1922.

PROVISIONAL SPECIFICATION.

No. 27,033, A.D. 1921.

Improvements in Pipe Connections.

I, GEORGE CONSTANTINESCO, of "Carmen Sylva", Beechwood Avenue, Oatlands Park, Weybridge, in the County of Surrey, a subject of the King of Great Britain and Ireland, do hereby declare the nature of this invention to be as follows:—

The present invention relates to pipe connections in metal pipes.

The object of the invention is to provide a connector by which a tight joint can be made between the ends of the two metal pipes in a very ready and convenient manner. The connector may be applied to pipe joints in pipes carrying air or other gases or vapours; or water, petrol or other liquids, under pressure or vacuum.

The invention consists in a pipe joint comprising a metal connecting piece of cylindrical form having inwardly projecting flanges at its ends enclosing a sleeve of rubber fitting closely within the connecting piece and round the pipe ends and into which the two ends of the pipes to be connected are pressed so that they are held tightly by the rubber enclosed in the cylindrical member.

The invention further consists in slightly coning the ends of the pipes so that they can be readily forced in to the rubber sleeve.

The invention further consists in forming the two pipes with coned ends so that one end fits within the other when the two are forced into position in the connector thus preventing the escape and minimising the action of any fluid which may be carried on the rubber in the connector.

The invention further consists in the improved pipe connections hereinafter described.

In carrying the invention into effect according to one example, a cylindrical metal connector is spun over at one end and a rubber sleeve inserted. A washer is then inserted at the opposite end and the end of the cylinder spun over to hold the rubber sleeve and washer in place. The pipe ends are merely pressed into the cylindrical connector so formed.

The ends of the tubes inserted in the connections butt against each other and are held firmly by the compressed rubber. If petrol or liquid or gas which affects rubber is to be passed through the tubes the ends of the pipes may be coned so that one fits within the other thus forming a somewhat tighter metal to metal joint. It is not essential, however, that the metal joint should be perfect. If there is leakage the effect produced by the liquid carried is to cause the rubber to swell and as this is prevented by the surrounding case and ends of the connector, the effect of leakage between the ends of the pipe is merely to make a tighter joint. It will be seen that the connector may be applied to a very large number of purposes and is suitable for carrying water, petrol, or other liquids or gases and will withstand considerable pressure or may be used under vacuum.

Dated the 12th day of October, 1921.

W. GRYLLS ADAMS,
87, Victoria Street, London, S.W. 1,
Chartered Patent Agent.

PROVISIONAL SPECIFICATION.

No. 27,974, A.D. 1921.

Improvements in Pipe Connections.

I, GEORGE CONSTANTINESCO, of "Carmen Sylva", Beechwood Avenue, Oatlands Park, Weybridge, in the County of Surrey, a subject of the King of Great

Britain and Ireland, do hereby declare the nature of this invention to be as follows:—

The present invention relates to pipe connections in metal pipes.

The object of the invention is to provide a connector by which a tight joint can be made between the ends of two metal pipes in a very ready and convenient manner.

The connector may be applied to pipe joints in pipes carrying air or other gases, or vapours or water, petrol or other liquids under pressure or vacuum.

The invention consists in a pipe joint comprising a metal connecting piece of cylindrical form enclosing a sleeve of rubber fitting closely within it, the rubber being held in position by washers inserted at the ends of the cylindrical member which is spun over at the ends to provide flanges which hold the washers in place, the washers being of slightly smaller diameter than the cylinder so that they are permitted a lateral movement, while round their inner circumference they fit tightly on the pipes which are to be connected.

In carrying the invention into effect according to one example, a cylindrical brass sleeve of length of two to three times its diameter is fitted with a rubber sleeve and washers of slightly smaller diameter than the sleeve are placed in contact with the rubber at the two ends of the sleeve. The ends of the brass sleeve are then spun over so that they hold the washers in place. The internal circumference of the washers is a tight fit on the pipes to be connected, but owing to the external diameter of the washers being smaller than the internal diameter of the sleeve, the washers are allowed lateral movement so that a flexible joint is provided in which the rubber is entirely protected by metal when the pipes are inserted.

Dated the 21st day of October, 1921.

W. GRYLLS ADAMS,
87, Victoria Street, London, S.W. 1,
Chartered Patent Agent.

COMPLETE SPECIFICATION.

Improvements in Pipe Connections.

I, GEORGE CONSTANTINESCO, of "Carmen Sylva", Beechwood Avenue, Oatlands Park, Weybridge, in the County of Surrey, a subject of the King of Great Britain and Ireland, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to pipe connections in metal pipes.

The object of the invention is to provide a connector by which a tight joint can be made between the ends of the two metal pipes in a very ready and convenient manner. The connector may be applied to pipe joints in pipes carrying air or other gases or vapours; or water, petrol or other liquids, under pressure or vacuum.

The invention consists in a pipe joint comprising a metal connecting piece of cylindrical form enclosing a sleeve of rubber fitting closely within it, and around the pipe ends, the rubber being held in position at one or both ends by washers inserted at the ends of the cylindrical member which is provided with flanges which hold the washer or washers in place, the washers being of slightly smaller diameter than the cylinder so that they are permitted a lateral movement, while round their inner circumference they fit tightly on the pipes which are to be connected.

The invention further consists in slightly coning the ends of the pipes so that they can be forced in to the rubber sleeve.

The invention further consists in forming the two pipes with coned ends so that one end fits within the other when the two are forced into position in the connector thus preventing the escape and minimising the action of any fluid which may be carried on the rubber in the connector.

The invention further consists in the improved pipe connections hereinafter described.

Referring to the accompanying drawings:—

Figure 1 is a section of one form of connector constructed according to the invention.

Figure 2 shows a modified form in which more flexibility is provided while the rubber is more effectively protected.

In the form of the invention shown in Figure 1, a cylindrical metal connector *a* is spun over at one end *b* and a rubber sleeve *c* inserted. A washer *d* is then inserted at the opposite end and the end *e* of the cylinder spun over to hold the

rubber sleeve and washer in place. The pipe ends are merely pressed into the cylindrical connector so formed.

The ends of the tubes *p* inserted in the connections butt against each other and are held firmly by the compressed rubber. If petrol or liquid or gas which affects rubber is to be passed through the tubes the ends of the pipes may be coned so that one fits within the other thus forming a somwhat tighter metal to metal joint. It is not essential, however, that the metal joint should be perfect. If there is leakage the effect produced by the liquid carried is to cause the rubber to swell and as this is prevented by the surrounding case and ends of the connector, the effect of leakage between the ends of the pipe is merely to make a tighter joint. It will be seen that the connector may be applied to a very large number of purposes and is suitable for carrying water, petrol, or other liquids or gases and will withstand considerable pressure or may be used under vacuum.

In the form of the invention illustrated in Figure 2, a cylindrical brass sleeve *a* of length somewhat greater than its diameter is fitted with a rubber sleeve *c* and washers *d* of slightly smaller diameter than the sleeve are placed in contact with the rubber at the two ends of the sleeve. The ends *b* of the brass sleeve are then spun over so that they hold the washers in place. The internal circumference of the washers is a tight fit on the pipes *p* to be connected, but owing to the external diameter of the washers being smaller than the internal diameter of the sleeve, the washers are allowed lateral movement so that a flexible joint is provided in which the rubber is entirely protected by metal when the pipes are inserted.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A pipe joint comprising a metal connecting piece of cylindrical form and enclosing a sleeve of rubber fitting closely within in and around the pipe ends the rubber being held in position at one or both ends by washers inserted at the ends of the cylindrical member which is provided with flanges which hold the washer or washers in place, the washers being of slightly smaller diameter than the cylinder so that they are permitted a lateral movement while around their inner circumference they fit tightly on the pipes which are to be connected, substantially as described.

2. A pipe joint as claimed in Claim 1 having the ends of the cylindrical member spun over to form flanges holding the washers in place, substantially as described.

3. A pipe joint as claimed in Claim 1 in which the ends of the pipes are slightly coned, substantially as and for the purpose described.

4. The improved pipe connections hereinbefore described and illustrated in the accompanying drawings.

Dated the 12th day of October, 1921.

W. GRYLLS ADAMS,
87, Victoria Street, London, S.W. 1,
Chartered Patent Agent.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1922.

Fig.1.

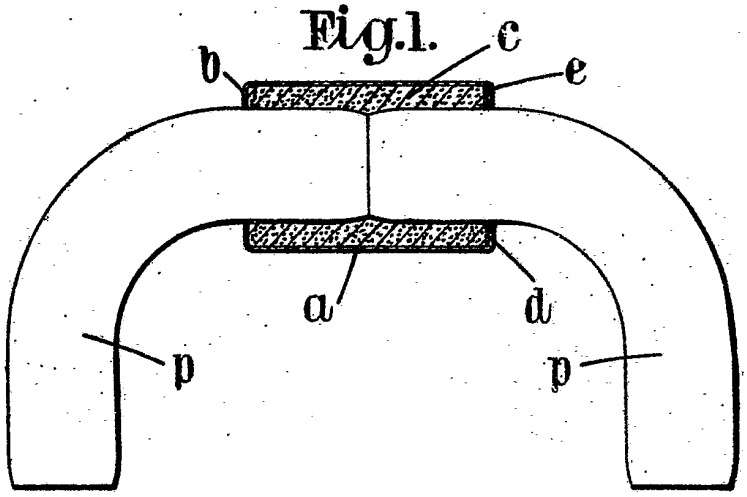
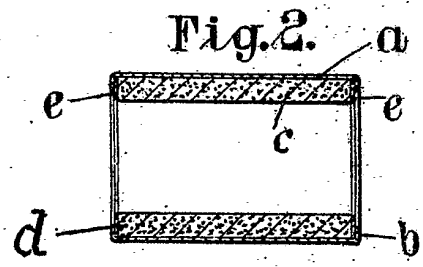


Fig.2.



Malby&Sons, Photo-Litho