

J. S. BIRCH.
 CONCRETE WORK FASTENER.
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1,311,036.

Patented July 22, 1919.

Fig. 1.

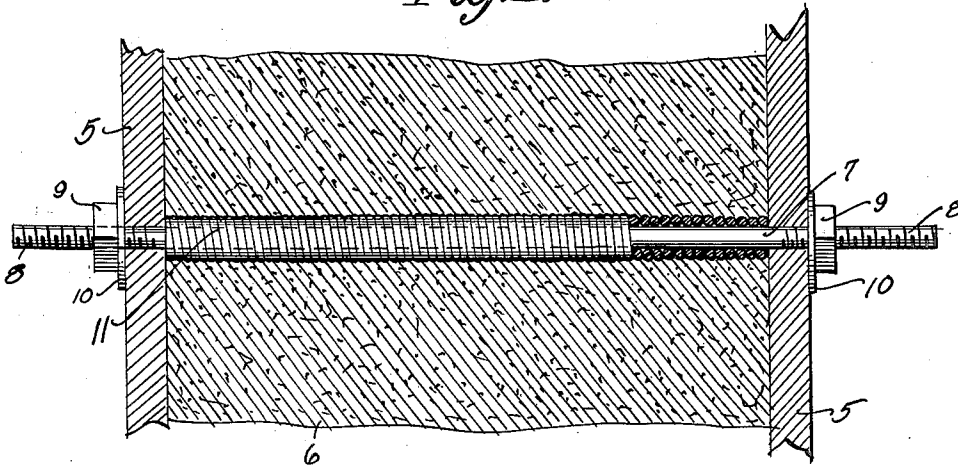
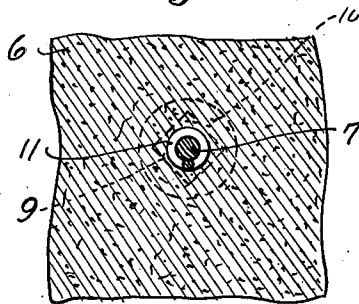


Fig. 2.



WITNESSES

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CONCRETE-WORK FASTENER.

1,311,036.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES S. BIRCH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Concrete-Work Fasteners, of which the following is a specification.

This invention relates in general to concrete and plastic work and more particularly to fasteners intended to firmly hold a mold against accidental spreading when the concrete or plastic material is poured thereinto, although after the concrete has hardened, the fastener may be readily removed therefrom.

Another object of this invention is the production of a concrete work fastener which includes a threaded rod which is connected to the two walls of the mold and is anchored in place, a sleeve of spirally twisted wire being placed upon the rod while the rod is being placed in engagement with the mold as above specified, whereby after the concrete has hardened the rod may be removed and the mold displaced and then the end of the sleeve may be gripped and pulled, thus causing the spiral sleeve to slightly contract and break from engagement with the concrete thus allowing the same to be easily removed and to be used again.

One practical form of construction and assembly of the present invention will be hereinafter described and is illustrated in the drawing, in which:—

Figure 1 is a side elevation of the fastener with a portion of the sleeve and the concrete and mold being shown in section.

Fig. 2 is a vertical section through the device.

In the preferred embodiment of the present invention about to be described, it will be seen that the parallel walls 5 of an ordinary concrete or plastic mold are shown and the usual filling of concrete or other material 6 which is shown as placed within the mold in the usual manner.

A supporting rod 7 is provided and has its end portions threaded as shown at 8, this rod being passed through the two walls 5 as will be hereinafter more clearly set forth. This rod is retained in position by nuts 9 carried upon the threaded end portions 8 thereof, these nuts 9 bearing upon washers 10 also carried upon the rod 7 and bearing upon the outer surfaces of the wall 5.

Particular attention is invited to the sleeve of the rod 7 which is formed from a strand of heavy wire, this wire being coiled to form a plurality of contacting convolutions to form a protector sleeve 11. This sleeve 11 is of a size sufficiently large to receive the rod 7 as illustrated in both figures of the drawing.

In application of the device, the walls 5 of the mold are set up as is the usual practice and then the rod 7 is passed through one of the walls and is then passed through the protector sleeve 11, this sleeve at this time being placed between the two walls 5. The rod may then be passed through the remaining wall and thus the protector sleeve will be supported upon the rod. The washers and nuts may then be applied to the rod 7 as shown in Fig. 1. It will be understood that this protector sleeve will act as a spacer to hold the walls at a proper distance apart even when the nuts are tightened upon the end portions of the rod, for when the walls move toward each other they will finally jam the convolutions of the sleeve upon each other to such an extent as will prevent further compression of the protector sleeve, and thus the walls 5 will be held properly in spaced relation. It is obvious that these protector sleeves may be cut to provide standard widths for the wall being formed between the walls 5, such widths being for instance 8, 10 or 12 inches as desired.

After the plastic material has become hardened the nuts and washers may be removed from the projecting ends of the rod and the rod may then be gripped and pulled outwardly. As the concrete and plastic material does not engage the rod, the rod will not stick and for this reason may be very easily removed. The wall 5 of the mold may then be displaced and access therefore is allowed to the plastic material 6 and also to the ends of the protector sleeve 11 so carried within this plastic material 6. Either end of the sleeve may be gripped by a pair of pliers and may then be pulled outwardly, owing to the fact that the sleeve is hollow and is not at this time reinforced by the rod it is obvious it may slightly contact and thus break from engagement with the cement or plastic material 6 and may then be very easily pulled outwardly from its original position within the plastic material 6.

With devices ordinarily in use where bolts are employed or bars are used, these bolts or

bars very often wedge or stick so tightly within the plastic material that it is often necessary to cut off their projecting ends and thus considerable loss is experienced in use of devices of such nature. The present protector sleeve may be placed upon all of such devices and obviously after the bolts, bars or rods are removed then the mold is displaced and after this action the protector sleeve may be easily removed and then be in condition to be used again.

It will therefore be noted that a very simple protector sleeve has been provided which may be used any number of times and which will protect the bolt or bar or rod used for holding the mold against spreading, while the sleeve will properly space the walls of the mold apart. After the operation has been completed the entire device may be removed as above specified and used again.

The foregoing description and drawings have reference to what may be considered the preferred or improved form of my invention. It is to be understood however that I may make such changes in construction and assembly of parts, materials, dimensions, etc., as may properly come within the scope of the appended claims.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination with a mold consisting of a pair of walls, means spanning the distance between said walls for holding the same from spreading, and a protector sleeve positioned upon said first mentioned means formed from a strand of wire and coiled to provide a plurality of contacting convolutions, whereby after said mold and said first mentioned means are displaced said sleeve may be gripped and pulled outwardly from engagement with a body formed within the mold.

2. In combination with a mold consisting of a pair of walls, a rod spanning the distance between said walls and passing there-through, means carried upon the projecting ends of said rod to hold the same against displacement, and a protector sleeve positioned upon said rod between said walls, said protector sleeve being formed from a strand of wire coiled to form a plurality of convolutions, whereby after a body has been formed between said walls, said rod may be removed after which the sleeve may be gripped and pulled to be slightly contracted, thus causing the same to be easily removed from such body.

3. In combination with a mold consisting of a pair of walls, means spanning the distance between said walls for holding the same from spreading, and a contractible protector positioned upon said means, whereby after said mold and means are displaced, said protector may be slightly contracted to be easily moved from engagement with the body formed by said mold.

4. In combination with a mold consisting of a pair of walls, a rod spanning the distance between said walls and passing there-through, means carried upon the projecting ends of said rod to hold the same against displacement, and a contractible protector carried upon said rod between said wall, whereby after a body has been formed between said walls said rod may be removed and then said protector may be slightly contracted to easily move from engagement with the body formed between said wall.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES S. BIRCH.

Witnesses:

JAMES S. GIBSON,
ELDON H. RICHBERGER.