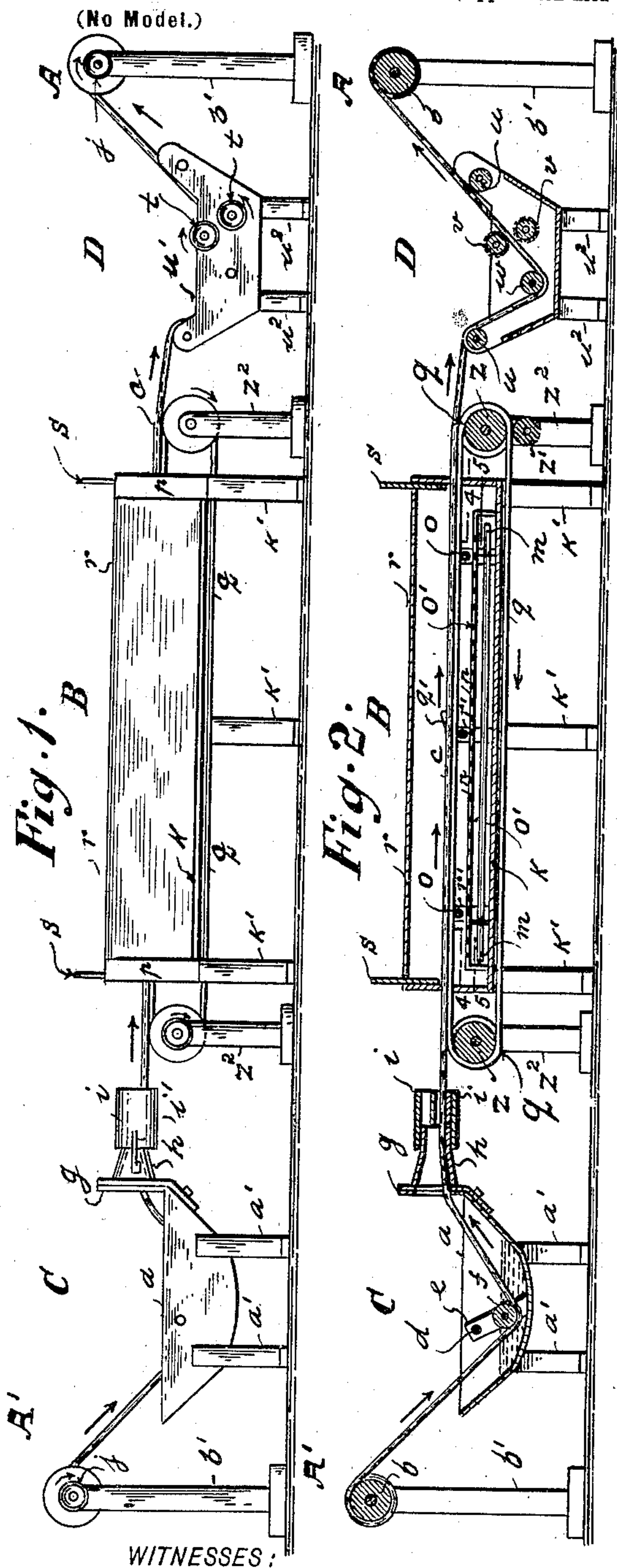


J. T. DICKEY.

APPARATUS FOR COVERING FLEXIBLE CONDUITS WITH RUBBER IN CEMENT
OR LIQUID FORM.

(Application filed June 7, 1901.)



(No Model.)

Fig. 1.

Fig. 2.

Fig. 3.

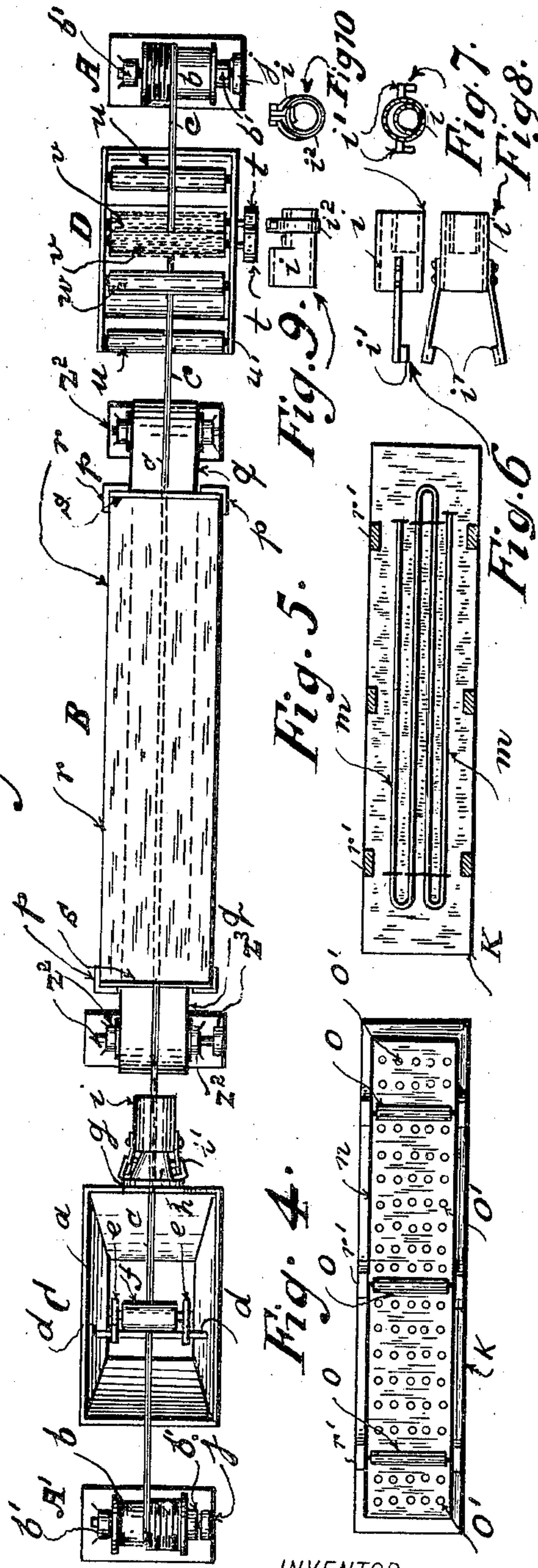


Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

WITNESSES:

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JOHN T. DICKEY, OF HOBOKEN, NEW JERSEY.

APPARATUS FOR COVERING FLEXIBLE CONDUITS WITH RUBBER IN CEMENT OR LIQUID FORM.

SPECIFICATION forming part of Letters Patent No. 701,472, dated June 3, 1902.

Application filed June 7, 1901. Serial No. 63,523. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. DICKEY, a citizen of the United States, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Apparatus for Covering Flexible Conduits with Rubber in Cement or Liquid Form or other Similar Elastic Liquids, of which the following is a specification.

10 This invention relates to an improved apparatus for covering flexible conduits with rubber in liquid form or similar elastic liquids; and it consists of an apparatus for coating, drying, and cleaning flexible conduits while they are moved from one roller to another. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

20 Figure 1 is a side elevation of my new device. Fig. 2 is a longitudinal section of same. Fig. 3 is a top view illustrating my new device. Fig. 4 is a horizontal section on line 4 4 in Fig. 2. Fig. 5 is a section on line 5 5 in Fig. 2. Figs. 6, 7, and 8 are a side, front, and top view, respectively, of an adjustable coating-controlling device. Figs. 9 and 10 are the same provided with a clamp regulated by a set-screw.

30 Similar letters refer to similar parts throughout the several views.

The flanged cylinder *b*, with its shaft and pulley *j*, is supported by the standards *b' b'*. Around said cylinder *b* is stored the flexible conduit to be covered with rubber compound.

35 The coating apparatus C consists of a vessel *a*, with its standards *a' a'*. One side *g*, vertically extending, has an opening to which a hollow conical cylinder *h* is fitted, the bearer of a stationary or adjustable pipe *i*, controlling and spreading the rubber compound over the surface of said flexible conduit. A rod *d*, extending across the vessel *a*, is bearing two flat arms *e e*, in which a guide-roller *f* is journaled.

45 The drying apparatus B consists of a table or plate *K*, its legs or standards *K' K'*. A steam-coil *m*, secured to the top of the former, is incased by perforated sheet metal *n*. Brackets *r' r'*, extending from said table or plate *K*, are bearing the guide-rollers *o o*. A cover *r*, provided with slides *s s*, will inclose said parts, leaving ample space for an endless belt *c*, of

canvas and rubber, revolved by two flanged cylinders *z z*, one provided with a driving-pulley whereas below the other a friction-roller *z'* 55 is journaled to the supporting-standards *z' z'*. The endless belt *c* will rest on the guide-rollers *o o* during its passage over the steam-coil *m*, a precaution taken to steady the movement of the belt and to prevent the same from coming too near the heating-coil. 60

The cleaning apparatus D consists of a vessel *u'*, its standards *u'*, arms extending from upper part, in which the guide-rollers *u* are journaled same as the roller *w*, located inside of said vessel *u'*, and a pair of brush-rollers *vv*, set in rotary motion by their pulleys *tt*. 65

The collecting-roller A consists of a flanged cylinder *b*, its shaft and pulley *j* supported by the standards *b' b'*. Said roller will serve to collect the flexible conduit after being coated, dried, and cleaned. 70

The coating-controlling device consists of a sleeve *i*, with an extending flat metal piece bent to the shape of a cylinder corresponding in width with the flexible conduit to be guided through. A clamp *i'*, with a set-screw, may be adapted to keep the so-formed cylinder in shape. (All shown in Figs. 6 to 10.) 75

By my improved apparatus flexible conduits 80 can be covered with rubber or other suitable material in a very quick and effective manner. The flexible conduit being guided through the coating-pan partially filled with rubber in liquid form or similar elastic liquid will be coated by said material, its thickness being regulated by the spreading-tube secured to the conical outlet of said pan when moved toward the drying apparatus, through which it is guided by the endless belt, secured to the former by any desired fastening device. 90 When reaching the cleaning apparatus, the flexible conduit will be sufficiently dry and hard to permit a cleaning or brushing, whereafter the flexible conduit being ready for use will be guided to the collecting-roller. 95

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an apparatus for covering flexible conduits with rubber in cement or liquid form or other similar elastic liquids, a coating-pan consisting of a vessel supported by standards, a guide-roller journaled to arms secured to a rod extending across said vessel, which has 100

one side extending, perforated, a hollow cylinder partially conical, partially straight provided with two slots or eyes, secured over said perforation for the purpose specified.

5 2. In an apparatus for covering flexible conduits with rubber in cement or liquid form or other similar elastic liquids the combination of a coating-pan, a vessel supported by standards, a guide-roller journaled to arms secured
10 to a rod extending across said vessel, having one side extending, perforated, a hollow cylinder partially conical, partially straight the bearer of two slots or eyes, secured over said perforation, with a spreading device consist-
15 ing of a tube or pipe partially slit open intersected by a cross-cut, forming two laps, bent to a tube, its diameter regulated by a round clamp and its bolt, said pipe bearing two arms having their ends shaped to a hook, all sub-
20 stantially as set forth.

3. In an apparatus for covering flexible conduits with rubber in cement or liquid form or other similar elastic liquids, a drying-pan consisting of a plate supported by standards,
25 a steam-coil secured to the upper face of said plate, incased by perforated sheet metal, brackets extending from said plate near longitudinal edges, in which are journaled guide-rollers, a cover having slides on both of its
30 ends, which incases said apparatus, all substantially as set forth.

4. The combination in an apparatus for covering flexible conduits with rubber in cement or liquid form or other elastic liquids of a
35 drying-pan, its plate supported by standards, a steam-coil secured to upper face of said plate, incased by perforated sheet metal, brackets extending from said plate near longitudinal edges in which guide-rollers are
40 journaled, a cover having slides on both of its ends which incases said apparatus; with an endless belt supported by flanged rollers, journaled to brackets, a driving-pulley secured to shaft of one of said rollers, all sub-
45 stantially as described.

5. In an apparatus for covering flexible conduits with rubber in cement or liquid form or other similar elastic liquids a cleaning-pan consisting of a vessel provided with stand-

ards, guide and brush rollers extending across 50 said vessel, the brush-bearing rollers rotated in same direction by means of driving-pulleys secured to their shafts, all substantially as specified.

6. An apparatus for covering flexible con- 55 duits with rubber in liquid form or similar elastic liquids consisting of a coating-pan, having a vessel supported by standards, a guide-roller journaled to arms secured to a rod extending across said vessel, having one 60 side extending, perforated, a partially straight, partially conical cylinder fitted to said perforation, two eyes secured to the former; a spreading device consisting of a pipe, partially slit open, intersected by a 65 cross-cut forming two laps, bent to a tube, its diameter regulated by a round clamp and its bolt, the straight portion of the adjustable pipe fitted to the same portion of the station- 70 ary, hook-shaped arms extending from the former fitted in the eyes located on the conical portion of the latter; a drying-pan consisting of a plate supported by standards, a steam-coil secured to upper face of said plate, 75 incased by perforated sheet metal, brackets extending from former near its longitudinal edges in which guide-rollers are journaled, a cover with slides incasing said apparatus, an endless belt supported by rollers and its standards guiding the material already coated 80 through the drying-pan; a cleaning-pan consisting of a vessel, its standards, guide-rollers and brush-rollers extending across said vessel the latter rotating in same direction by means of driving-pulleys; flanged rollers 85 placed one in front of the coating-pan and one in the rear of the cleaning-pan, for supporting the conduit before and after the operation, and pulleys secured to the shafts thereof, substantially as described. 90

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN T. DICKEY.

Witnesses:

MARY J. DICKEY,
KAROLINE RIKER.