

No. 797,784.

PATENTED AUG. 22, 1905.

F. M. STAMBAUGH.
MACHINE FOR ASSEMBLING THE PARTS OF COUPLINGS.
APPLICATION FILED MAR. 7, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

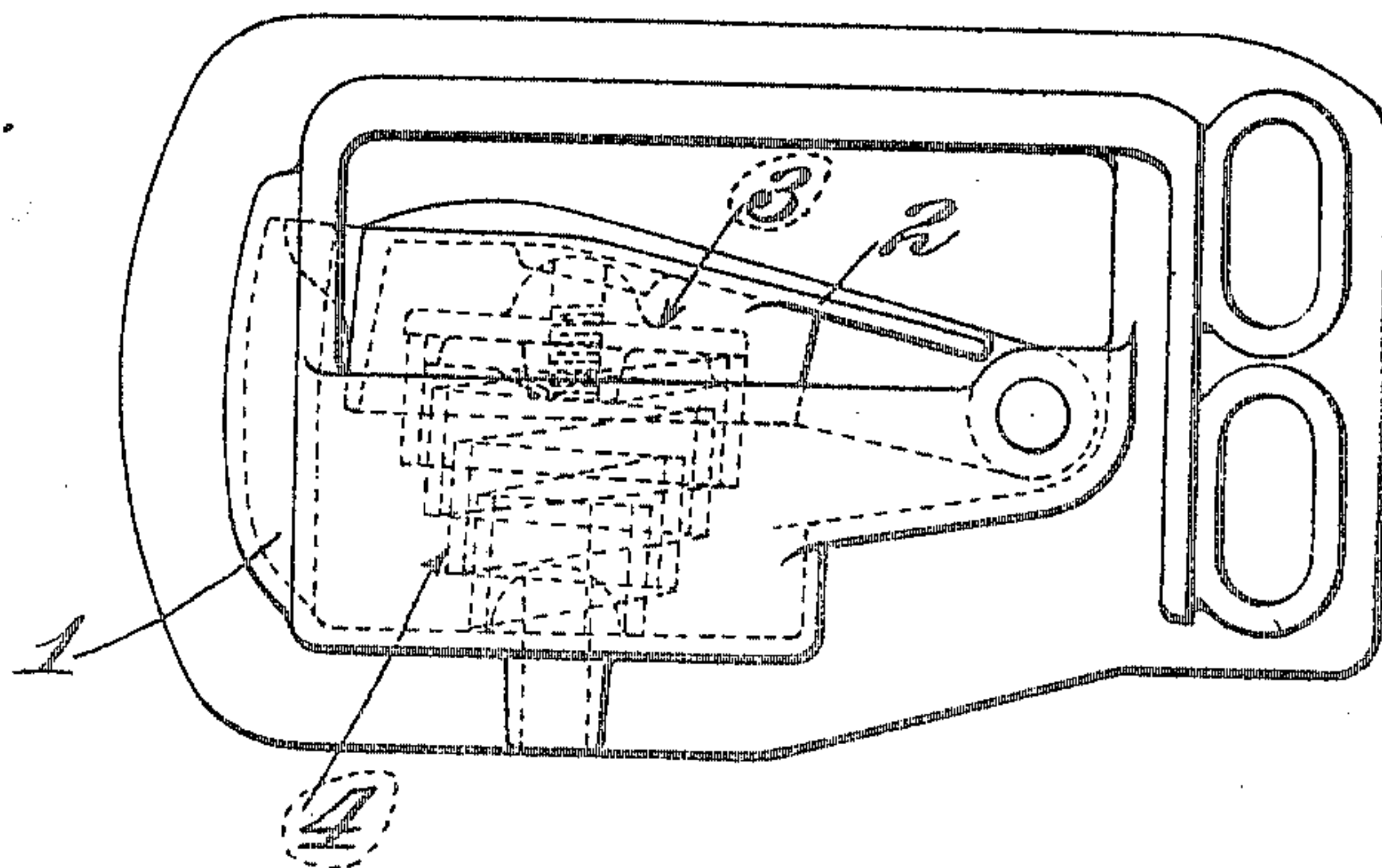
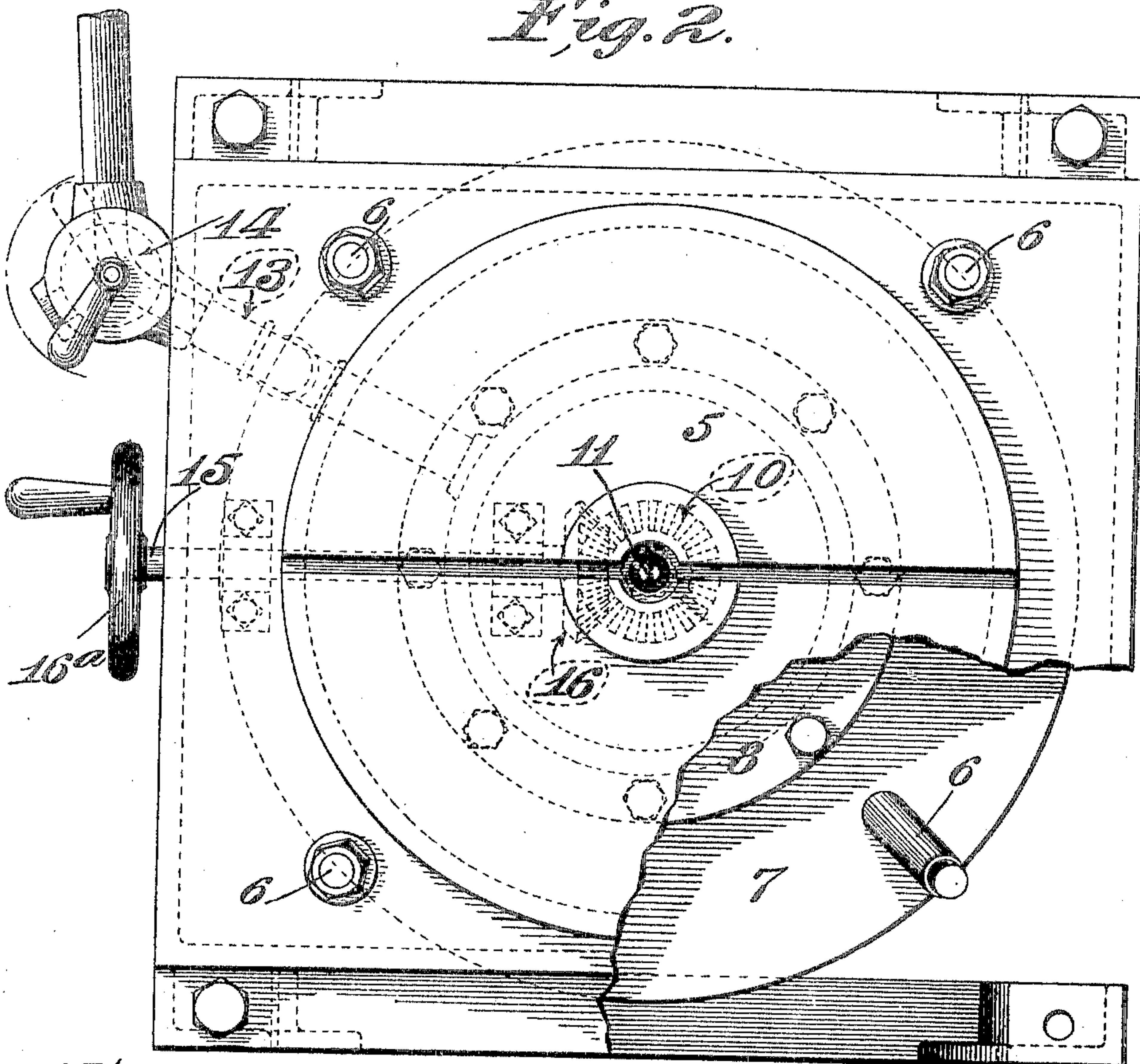


Fig. 2.



Witnesses:

G. A. Pennington

A. J. McAuley.

Inventor:

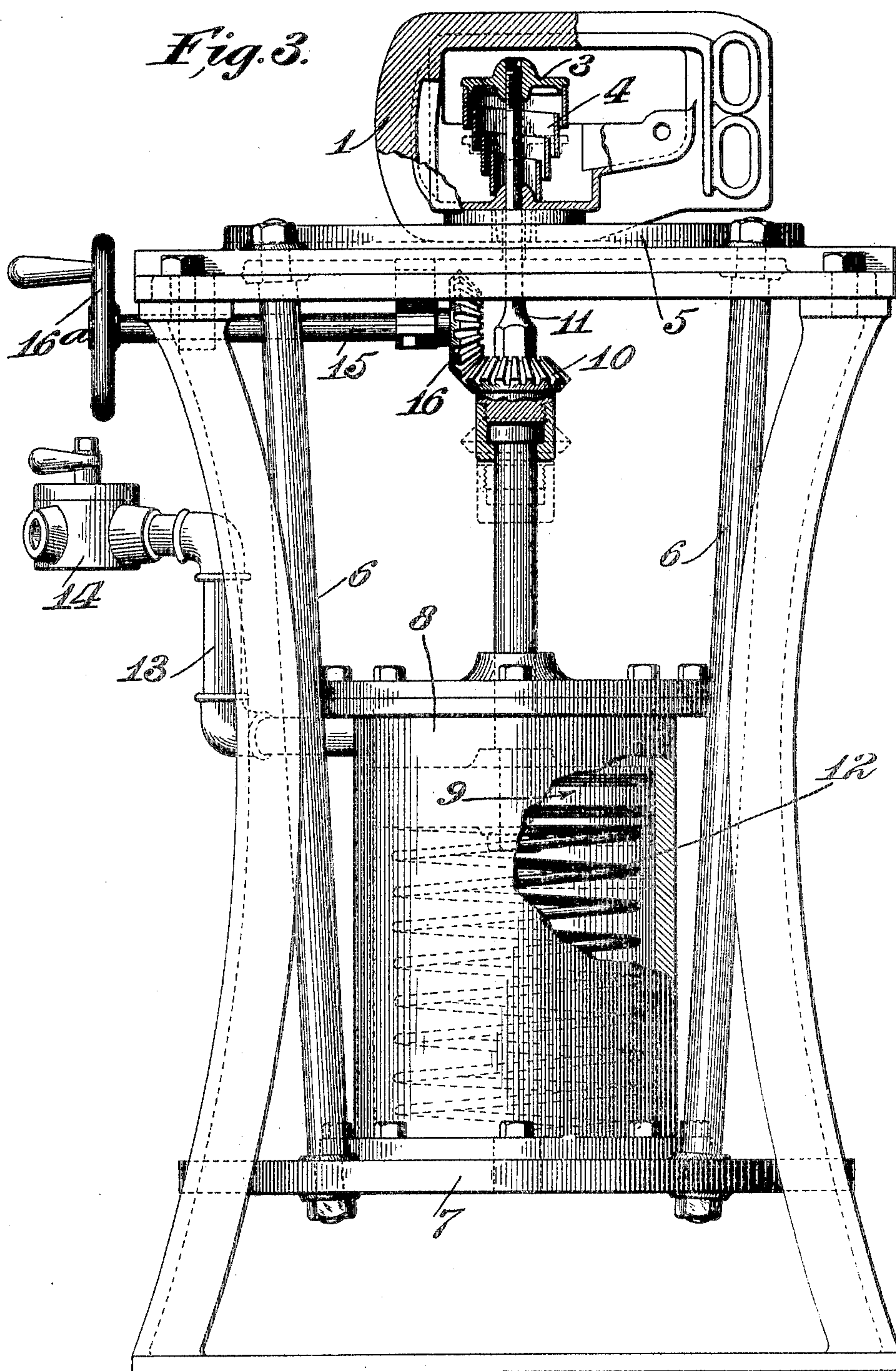
Francis M. Stambaugh,
by Parker & Cornwall
Attys.

F. M. STAMBAUGH.

MACHINE FOR ASSEMBLING THE PARTS OF COUPLINGS.

APPLICATION FILED MAR. 7, 1905.

2 SHEETS—SHEET 2.



Witnesses:
E. A. Pennington
A. J. McCauley

Inventor:
Francis M. Stambaugh,
by Makewell Cornwall Attys.

UNITED STATES PATENT OFFICE.

FRANCIS M. STAMBAUGH, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE
AMERICAN BRAKE COMPANY, OF ST. LOUIS, MISSOURI, A CORPO-
RATION OF MISSOURI.

MACHINE FOR ASSEMBLING THE PARTS OF COUPLINGS.

No. 797,784.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed March 7, 1905. Serial No. 248,851.

To all whom it may concern:

Be it known that I, FRANCIS M. STAMBAUGH, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Machines for Assembling the Parts of Couplers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevational view showing the parts with the coupler assembled by my improved machine. Fig. 2 is a top plan view of the machine; and Fig. 3 is an elevational view, partly in section.

This invention relates to a new and useful improvement in a machine for assembling the parts of couplers—such, for instance, as the Westinghouse automatic air and steam coupler commonly applied in freight-service.

Heretofore the parts of the coupler shown in Fig. 1 have been assembled by hand; and it is the object of my present invention to mechanically assemble these parts whereby a great saving of time is effected.

With this object in view the invention consists in the construction, arrangement, and combination of the several parts of my device, all as will be hereinafter described and afterward pointed out in the claims.

In Fig. 1 I have shown the parts of the coupler as assembled by my improved machine, in which 1 indicates a casting having a pivoted cap 2 arranged therein, said cap being provided on its under side with a seat for a spring-follower 3, under which is arranged a helical spring 4. Heretofore it has been the practice to insert a threaded bolt through the bottom of the casting and into the spring-cap and by turning the nut on the bolt place the spring 4 under compression, enabling the cap 2 to be inserted with its stop-lug under the shoulder in the casting and its hinge-lug in alinement with the openings in the casting for the reception of the pivot-bolt. This hand-assembly has taken considerable time, in addition to being extremely awkward by reason of the odd shape of the parts to be assembled.

My improved machine consists of a table 5, supported by appropriate legs, and from

which is suspended by appropriate rods 6 a cylinder-support 7. On this support is arranged a cylinder 8, having a piston 9, whose rod is provided with a head at its upper end fitting in a coupling carrying a miter-gear 10. In line with the piston and carried by this coupling is a rod 11, having a threaded upper end designed to engage the threaded follower 3. A spring 12 is arranged under the piston tending at all times to hold the same in an elevated position. A pipe 13 leads into the cylinder above the piston from some suitable source of compressed-air supply, said pipe being controlled by a three-way valve 14, whereby pressure may be admitted to or exhausted from the upper end of the cylinder.

15 indicates a shaft having a miter-gear 16 at its inner end designed to mesh with gear 10 when the piston is in its raised position. The outer end of shaft 15 has a hand-wheel 16^a. The operation of these parts is as follows: The spring 4 and follower 3 are arranged in their relative positions in the casting 1, and the casting is placed on the table, as shown in Fig. 3, so that the threaded rod 11 will engage the follower 3. By manipulating the hand-wheel 16^a the rod 11 is screwed into the follower 3 until said follower is securely connected to the rod. The valve 14 is now operated to admit pressure on top of the piston, which causes the piston to descend, disengaging the gears 10 and 16 and depressing the follower 3, so as to compress the spring 4. The operator is now free to insert the cap-piece 2 in position and introduce the pivot-bolt, as shown in Fig. 1. The operator of course has the use of both hands in doing this, as the pressure on top of the piston is constant and the spring 4 is held in its compressed position during the fitting and securing in position of the cap-piece 2. When valve 14 is manipulated to exhaust the pressure from above the piston, the spring 12 raises the parts until the gear 10 meshes with the gear 16, when by reversely rotating the hand-wheel the rod 11 is disengaged from the follower 3.

I am aware that minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a machine of the class described, the combination with an assembling-table for supporting the parts to be assembled, of a fluid-actuated piston and its rod, a gear carried by said rod and rotatable independently thereof, a stationarily-mounted gear for coöperating with the piston-rod gear in one of its positions, and a threaded rod carried by the piston-rod gear and projecting through the table; substantially as described.
2. In a machine of the class described, the combination with an assembling-table for supporting the parts to be assembled, of a cylinder and its piston and piston-rod, a gear rotatably mounted on the end of said piston-rod, a threaded rod 11 carried by said rotatable gear and projecting through the table, and a manually-operable gear meshing with the piston-rod gear in certain positions of the latter; substantially as described.
3. In a machine of the character described, the combination with an assembling-table for supporting the parts to be assembled, of a cylinder suspended by rods from said table, a piston and piston-rod, a rotatable, threaded rod mounted on the piston-rod and projecting up through the table, and means for rotating said threaded rod; substantially as described.
4. In a machine of the class described, the combination with an assembling-table for sup-

porting the parts to be assembled, a threaded rod projecting through said table, means for rotating said rod, and a fluid-actuated piston connected to said rod for moving the same longitudinally and away from its rotating means; substantially as described.

5. In a machine of the character described, the combination with a table, of a threaded rod projecting through the table, means for rotating said rod, a fluid-actuated piston connected to said rod, a spring for moving the piston and said rod in one direction, and means for admitting and exhausting pressure to and from said cylinder; substantially as described.

6. In a machine for assembling the parts of air-brake couplers, the combination with a table, of a threaded rod designed to engage one of the parts to be assembled, means for rotating said rod to effect threaded engagement with said part, and a fluid-actuated piston for depressing said rod and its connected part, said piston holding said rod and part depressed so as to permit the operator to effect other assembling operations; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 3d day of March, 1905.

FRANCIS M. STAMBAUGH.

Witnesses:

EDWARD WILSON,
GEORGE BAKEWELL.