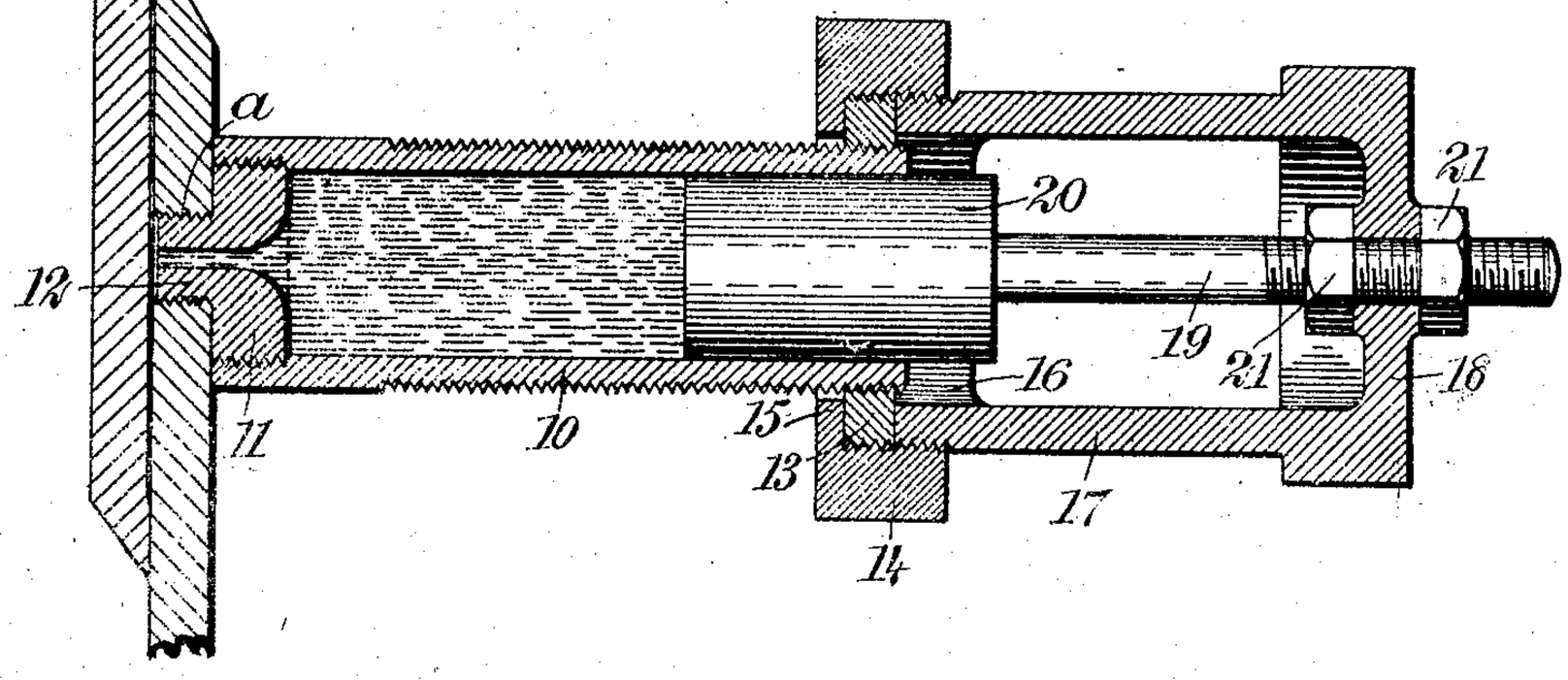
No. 791,286. PATENTED MAY 30, 1905.

T. M. PEARSON.

PUMP.

APPLICATION FILED FEB. 21, 1905.

Fig. 1.



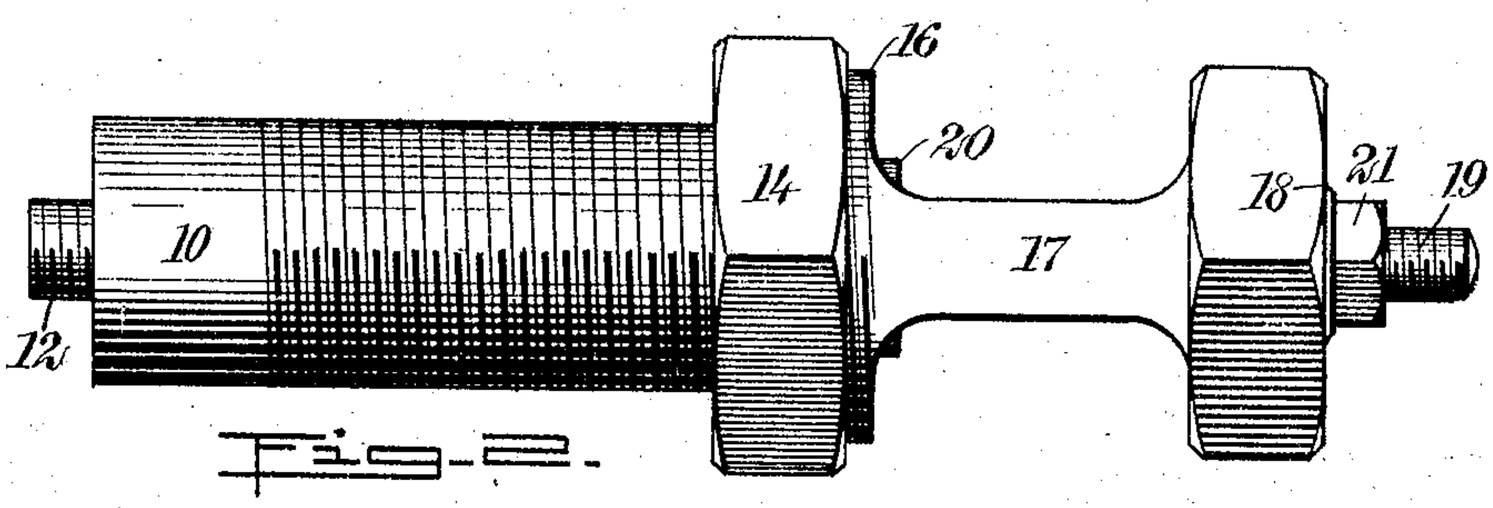


Fig. 2.

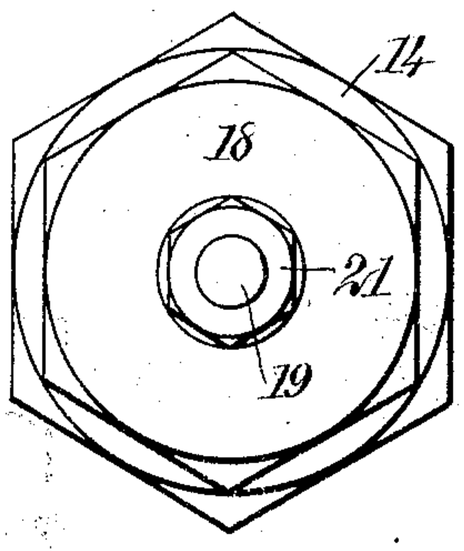


Fig. 3.

WITNESSES:
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No. 791,286. Patented May 30, 1905.

UNITED STATES PATENT OFFICE.

THOMAS M. PEARSON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO EDWARD F. WOOD, OF BROOKLYN, NEW YORK.

PUMP.

SPECIFICATION forming part of Letters Patent No. 791,286, dated May 30, 1905.

Application filed February 21, 1905. Serial No. 246,689.

To all whom it may concern:

Be it known that I, THOMAS M. PEARSON, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Pump, of which the following is a full, clear, and exact description.

The invention relates to a means for applying heavy pressure to liquid or semiliquid substances. It is especially intended as a means for forcing lead into crevices between the plates of ships to prevent leaks therein, although it is useful in other connections, as will be apparent to skilled mechanicians.

The invention resides in certain peculiar features of construction and arrangement of parts, which will be fully set forth hereinafter and pointed out in the claims.

Reference is to be had to the accompanying drawings, which illustrate as an example the preferred embodiment of my invention, in which drawings like characters of reference indicate like parts in the several views, and in which—

Figure 1 is a sectional view showing the invention in connection with the plates in iron ships or other marine vessels. Fig. 2 is a side elevation of the same, and Fig. 3 is an end elevation.

In the usual ship-building practice in the event of a leak being discovered through the seam of two plates of the ship one of the plates is bored to form an opening *a*, (see Fig. 1,) and through this opening red lead or some other equivalent substance is forced under heavy pressure, causing it to fill the crevice, and after this is done the opening *a* is securely plugged up. My invention is intended particularly to force the lead into the crevice.

The pump comprises a cylinder 10, having a head 11 in one end formed with an opening surrounded by a nipple 12. The nipple is preferably exteriorly threaded, so that it may be screwed into the opening *a* above referred to. The cylinder 10 is exteriorly threaded, as illustrated, and it carries a ring 13, which is threaded internally and externally, the internal threads coacting with the threads on the cylinder and the external threads coacting with a lock-ring 14. This ring has a flange 15, which engages one side of the ring 13, and the width of the ring 14 is greater than that of the ring 13, so that the ring 14 may also engage the exteriorly-threaded annular portion 16 of a yoke which comprises, in addition to the annular portion 16, an arm 17 and a head 18. Through the said head 18 passes the threaded stem 19 of the pump-plunger 20. 21 indicates lock-nuts which hold the stem 19 and plunger 20 in the desired position relatively to the head 18 and the other parts of the yoke.

In the use of the invention the lock-ring 14 is unscrewed from the annular portion 16 of the yoke and the yoke, stem, and plunger removed from their engagement with the cylinder. The cylinder is then filled with the material to be forced from the nipple 12, and the ring 13 is screwed out to the end of the cylinder, as shown in Fig. 1. After this is done the plunger 20 should be replaced into the outer end of the cylinder and the annular part 16 of the yoke engaged with the ring 13 and the two parts securely joined by the lock-ring 14, this ring being tightened sufficiently to cause the yoke and ring 13 to turn as a unit. The head 18 of the yoke is hexagonal, as shown in Figs. 2 and 3, and by applying the wrench to the yoke it may be turned with the parts 13 and 14, causing the ring 13 to screw down on the cylinder 10 and forcing the plunger 20 toward the head 11. This extrudes the lead from the cylinder, and owing to the screw action involved with the operation of the plunger great pressure may be applied thereto, forcing the lead into the smallest crevice in the seam of the ship. The construction and arrangement shown enables the plunger to be quickly and completely removed from the cylinder, so that the cylinder may be again filled without causing all of the parts of the pump to be clogged with the lead or other material to be used. It will be seen that by disconnecting the lock-ring 14 the yoke and plunger may be completely separated from the pump, and then in order to reënter the plunger it is only necessary to screw out the ring

13. This may be readily done by hand, since but a minimum exertion may be required to operate the ring as explained.

Having thus described the preferred form of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pump having an exteriorly-threaded cylinder, a plunger arranged to operate in the cylinder, a yoke in connection with the plunger, a threaded member coacting with the threads on the cylinder, and a releasable means for connecting the yoke with the said threaded member.

2. A pump comprising an exteriorly-threaded cylinder, a plunger operating therein, a part in connection with the plunger and extending to the outside of the cylinder, a threaded ring screwing on the cylinder, and means for releasably connecting said ring with said part connected with the plunger.

3. A pump comprising a cylinder, a ring adapted to move along the outside thereof, a plunger operating within the cylinder, a part having connection with the plunger and extending to the outside of the cylinder, and means for releasably connecting said ring and said part connected with the plunger.

4. A pump comprising a cylinder, a plunger operating therein, a ring arranged to move along the outside of the cylinder, a yoke, a stem connecting the yoke and plunger, and a means for releasably connecting the ring and yoke.

5. A pump comprising an exteriorly-threaded cylinder, a plunger operating therein, a threaded ring screwing on the cylinder, a yoke having connection with the plunger and an interiorly-threaded lock-ring coacting with the first-named ring and the yoke releasably to connect the two.

6. A pump comprising an exteriorly-threaded cylinder, a plunger operating therein, a threaded ring screwing on the outside of the cylinder, a yoke having connection with the plunger, and means for releasably connecting said yoke and ring together.

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

THOMAS M. PEARSON.

Witnesses:
EDWARD F. WOOD,
J. L. PEARSON.