No. 754,584.

PATENTED MAR. 15, 1904.

W. MATHESIUS.

DELIVERING APPARATUS FOR YARN SKEINS.

APPLICATION FILED DEC. 2, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

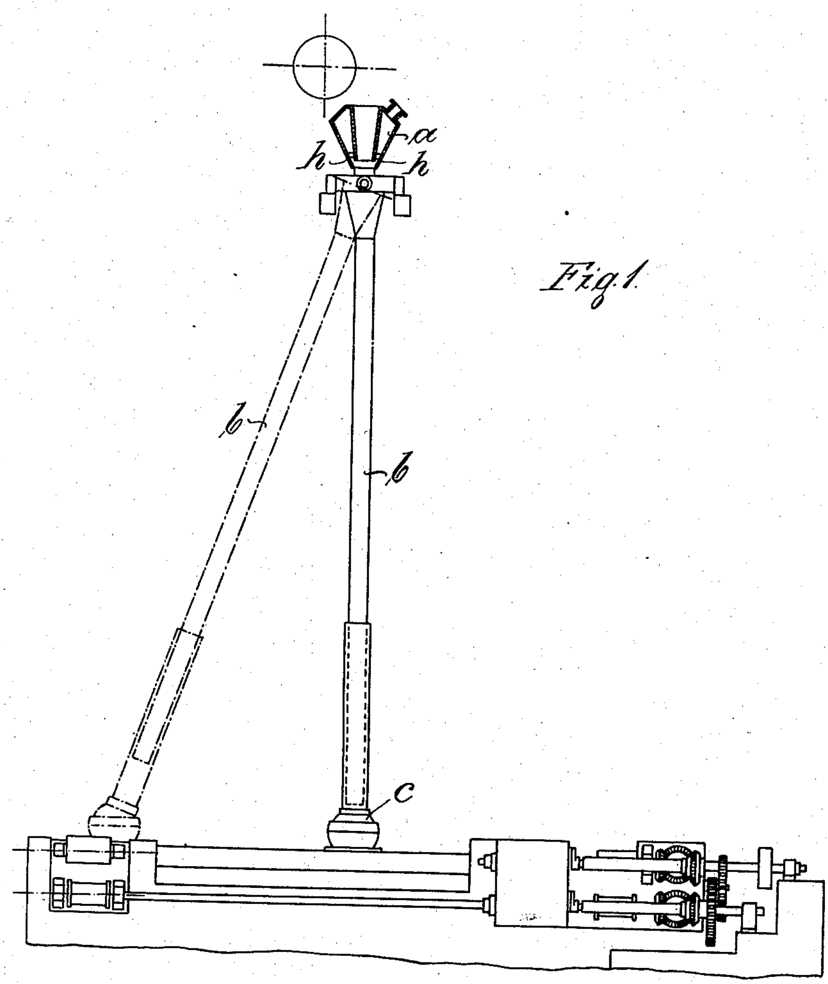

Fig. 1.

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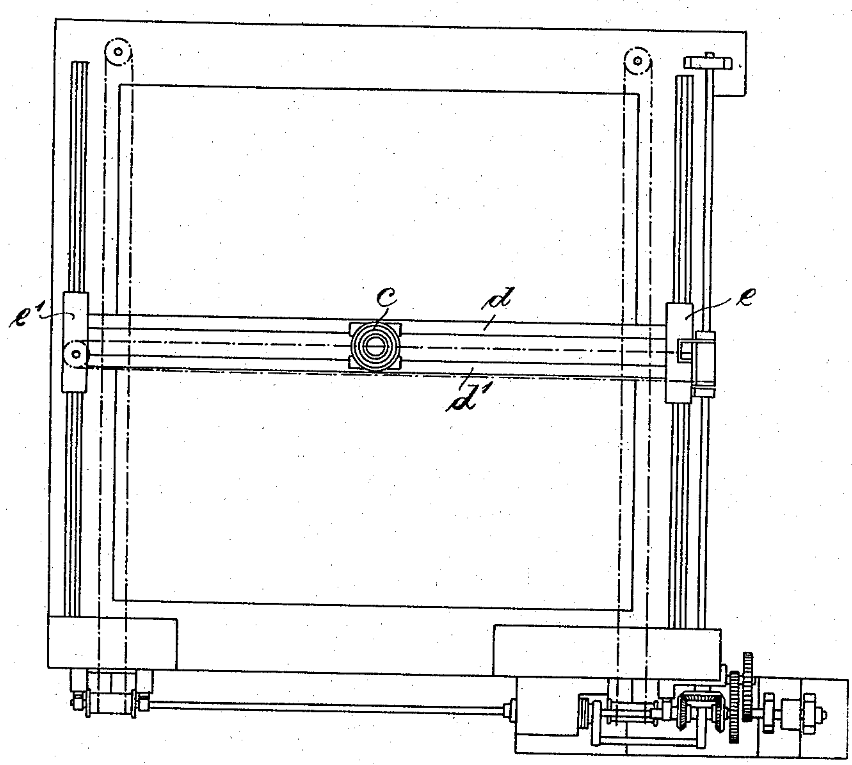
NO MODEL.

3 SHEETS—SHEET 2.

Fig. 2.



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NO MODEL. 3 SHEETS—SHEET 3.

Fig. 3.

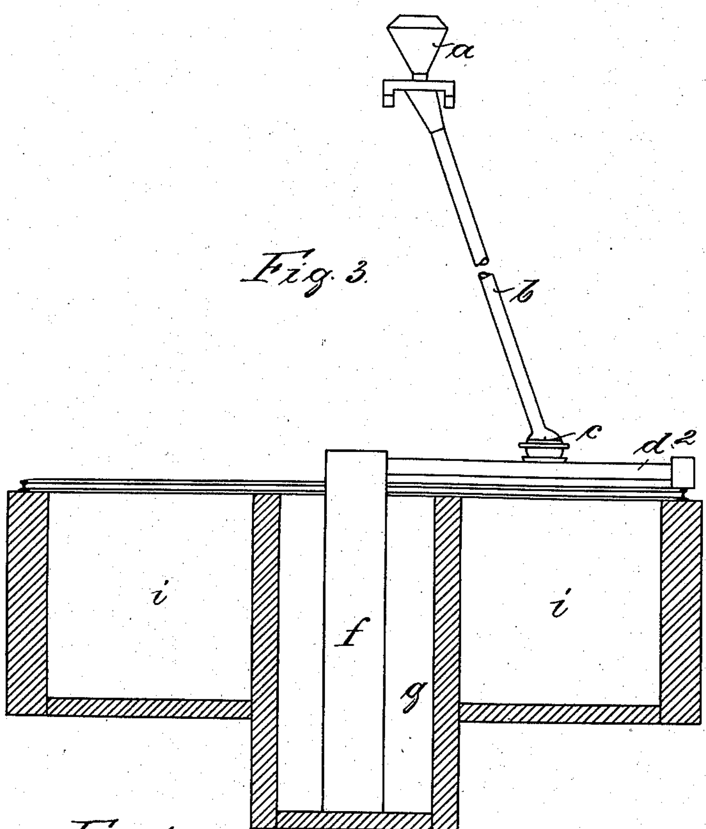
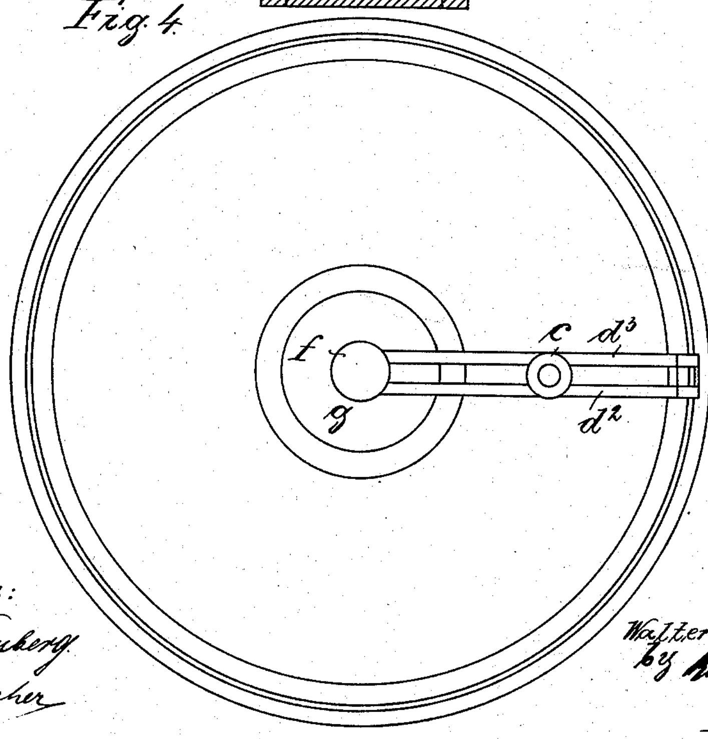


Fig. 4.



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No. 754,584. Patented March 15, 1904.

UNITED STATES PATENT OFFICE.

WALTER MATHESIUS, OF HÖRDE, GERMANY.

DELIVERING APPARATUS FOR YARN-SKEINS.

SPECIFICATION forming part of Letters Patent No. 754,584, dated March 15, 1904.

Application filed December 2, 1902. Serial No. 133,605. (No model.)

To all whom it may concern:

Be it known that I, WALTER MATHESIUS, a subject of the King of Prussia, German Emperor, and a resident of Hörde, in the Province of Westphalia, German Empire, have invented new and useful Improvements in Delivering Apparatus for Yarn-Skeins, of which the following is an exact specification.

My invention relates to a new and improved delivering apparatus for yarn-skeins, and has for its purpose to provide an apparatus by means of which it is attained that the skeins can be led from the reel to any part of their place of destination—as, for instance, of the dye-vat, washing-tub, or the like. I attain this object by the apparatus illustrated in the accompanying drawings, in which—

Figure 1 is a side view of my apparatus when used for delivering the yarn to a square reservoir or the like. Fig. 2 is a plan of the construction shown in Fig. 1. Fig. 3 shows my invention when used for delivering the yarn to a round reservoir.

a is a funnel to the lower end of which the pipe *b* is suspended, so as to be capable to swing in all directions. The pipe *b* is constructed in form of a telescope-pipe. The lower end *c* of the pipe *b* is ball-shaped and is situated upon rails *d d'*, so as to be capable to move along these rails. The rails *d d'* are fixed to trolleys *e e'*, movable in the longitudinal direction of the reservoir or the like—that is to say, in a direction vertical to the direction in which the rails *d d'* run.

The effect of the device is as follows: The skeins are brought directly from the reel into the funnel *a* and pass through the pipe *b*. As the lower spherical end *c* of this pipe *b* can by means of the arrangement of the rails *d d'* and the trolleys *e e'* be brought to any place of the reservoir, the skeins can be delivered to the reservoir in any desired manner. The funnel *a* may be provided with double walls, so that between the walls of this funnel hot, cold, neutral, acid, alkaline, oxidizing, or any other liquids can be brought, which liquids can be sprayed upon the skeins with great velocity through openings or nozzles *h*, provided in the lower part of the funnel. The bringing in of the liquids may have the purpose of accelerating the passage of the skeins or of chemically reacting upon the same.

In the modification shown in Figs. 3 and 4 the ball *c* is guided upon rails d^2 d^3, which are fixed to an axle *f*, so that these rails can be rotated by rotating this axle. The axle *f* is situated in the central part *g* of an annular vat *i*.

Having thus fully described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

1. In an apparatus for delivering yarn-skeins, the combination of a funnel with a pipe suspended underneath the same, said pipe consisting of several pieces shifted telescopically one into the other, and means for moving the lower end of this pipe in all directions, substantially as described and for the purpose set forth.

2. In an apparatus for delivering yarn-skeins, the combination of a funnel with a pipe suspended underneath the same, the lower end of this pipe being spherical, and means for moving this lower end of the pipe in all directions, substantially as described and for the purpose set forth.

3. In an apparatus for delivering yarn-skeins, the combination of a funnel with double walls, the inner wall being provided with openings, with a pipe suspended underneath the funnel and provided with a lower spherical end, a bearing for said end, said bearing being constructed so as to allow of a movement of the same and of the lower end of the pipe situated within the same in all directions, substantially as described and for the purpose set forth.

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

WALTER MATHESIUS.

Witnesses:
E. H. L. MUMMENHOFF,
OTTO W. HELLMRICH.