

(No Model.)

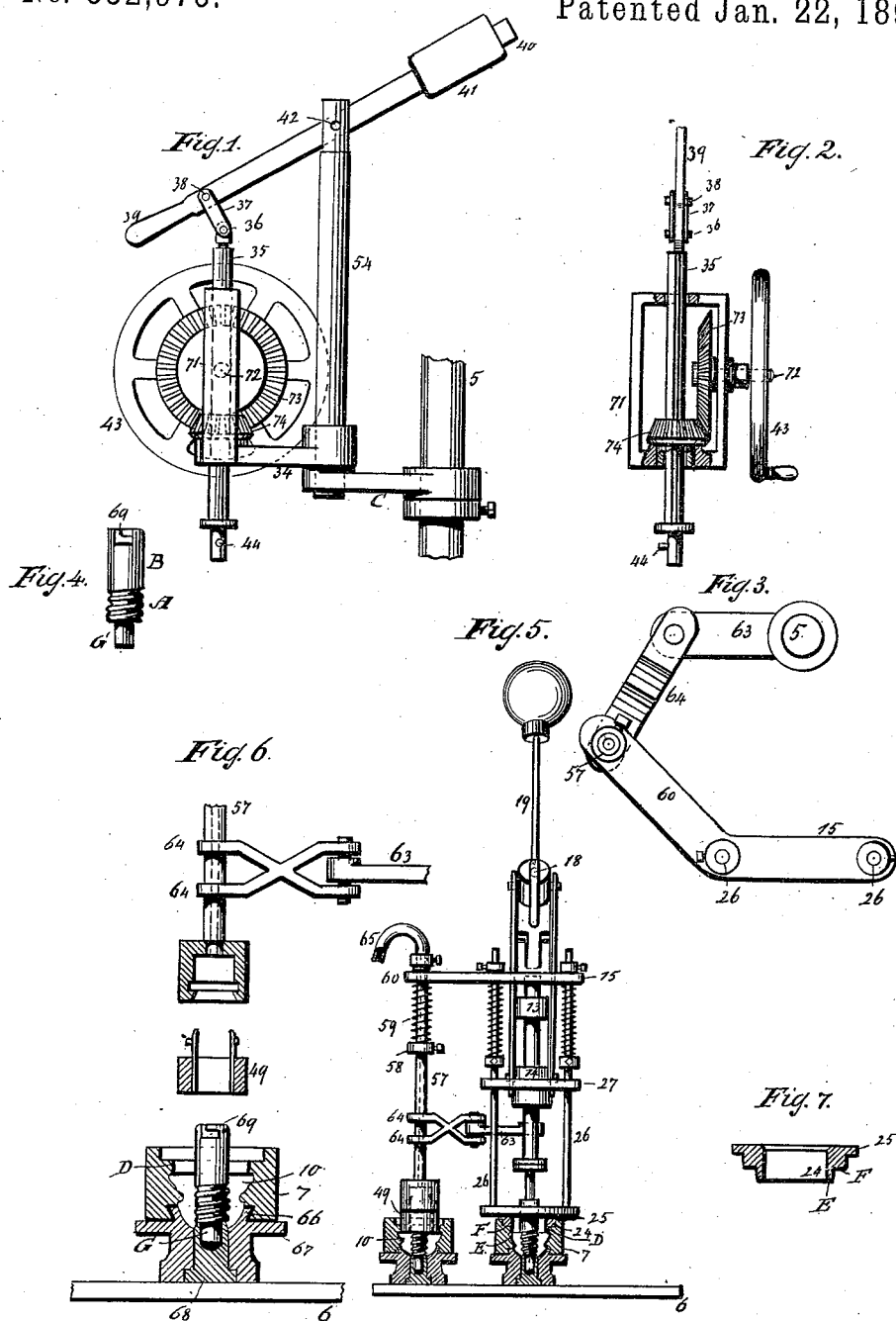
2 Sheets—Sheet 1.

S. KRIBS.

SCREW PRESS FOR FORMING INSULATORS.

No. 532,973.

Patented Jan. 22, 1895.



WITNESSES:

E. Wolff.
Chas. E. Remond.

INVENTOR:

Seraphin Kribbs.

BY

Haus & Haus
-ATTORNEYS.

(No Model.)

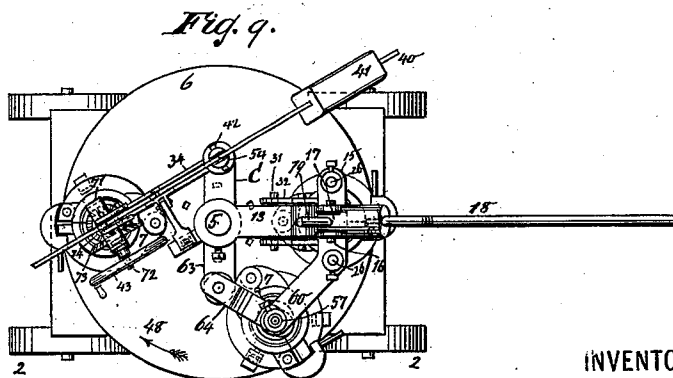
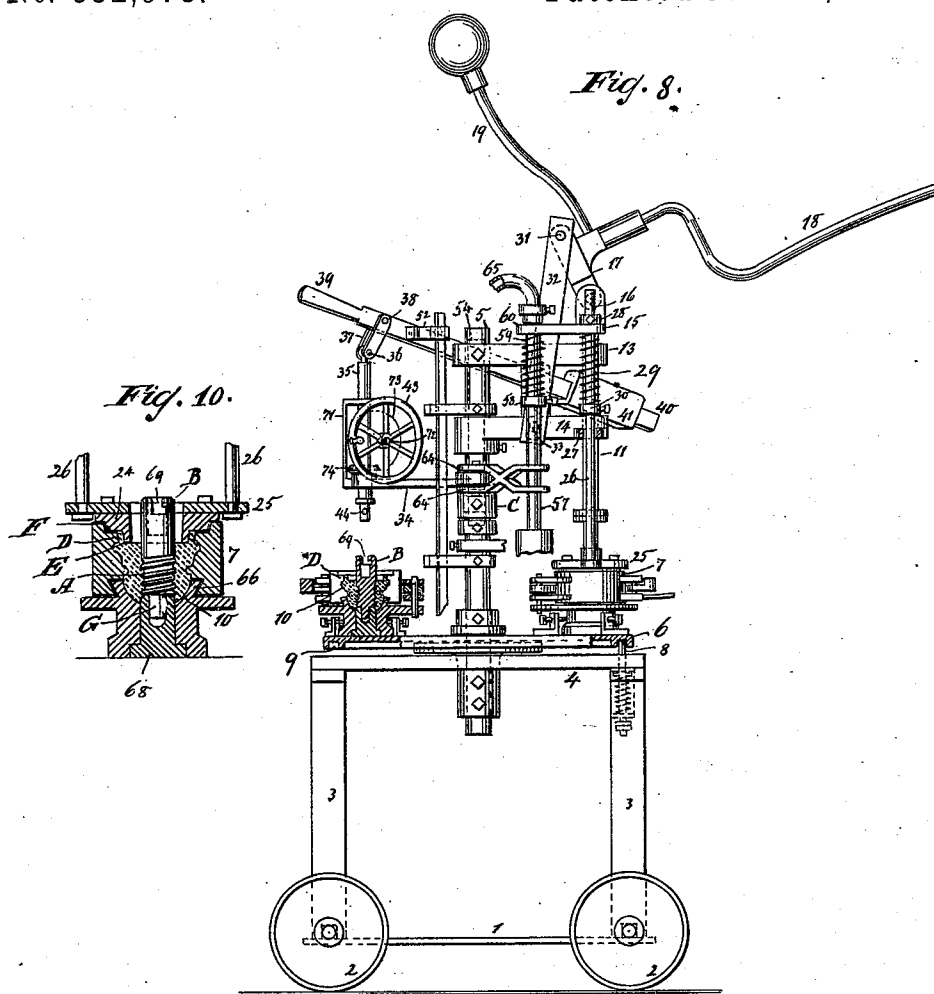
2 Sheets—Sheet 2.

S. KRIBS.

SCREW PRESS FOR FORMING INSULATORS.

No. 532,973.

Patented Jan. 22, 1895.



WITNESSES:

E. Wolff
Chas. E. Döring

INVENTOR:

Seraphin Kribs

BY

Hauff & Hauff
ATTORNEYS.

UNITED STATES PATENT OFFICE.

SERAPHIN KRIBS, OF BROOKLYN, ASSIGNOR TO WILLIAM BROOKFIELD, OF
NEW YORK, N. Y.

SCREW-PRESS FOR FORMING INSULATORS.

SPECIFICATION forming part of Letters Patent No. 532,973, dated January 22, 1895.

Application filed September 6, 1894. Serial No. 522,289. (No model.)

To all whom it may concern:

Be it known that I, SERAPHIN KRIBS, a subject of the Emperor of Germany, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Screw-Presses for Forming Insulators, of which the following is a specification.

This invention relates to certain improvements in screw presses for insulators, and the object of this invention is to increase the speed and accuracy of the press as set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

Figure 1 is an elevation of a rotary and longitudinally movable spindle. Fig. 2 is an elevation at right angles to Fig. 1. Fig. 3 is a plan view of a cross head. Fig. 4 is a detail view of a screw. Fig. 5 is an elevation of the spindle for the shell or filling piece with adjacent parts. Fig. 6 is a detail view of parts of Fig. 5 enlarged. Fig. 7 is a detail sectional view of a former and follower. Fig. 8 is an elevation partly in section of the press. Fig. 9 is a plan view of the same. Fig. 10 is a sectional view of a mold.

The base 1 by being mounted on wheels 2 enables the device to be readily moved to any desired point. From the base 1 rise legs 3 carrying a top plate 4 in which is fixed a standard 5. A platform or support 6 carrying a suitable number of molds 7 is rotatable about standard 5. This support 6 when rotated a sufficient distance to bring one or another of the molds 7 into operative position can be locked in position by a spring catch or detent 8 engaging one or another of the recesses or shoulders 9 in the support 6.

A screw plunger A B having been placed by hand in a mold said mold is filled or charged with the molten glass or material for the insulator 10. The screw threaded portion A of the plunger forms a screw thread in the mass, and the part B is hollow so that the lower end of actuating rod 11 as it descends and rises in the guide arms 13 and 14 extending from standard 5 can readily slip into and out of the part B, leaving the screw plunger sticking in the mass in the mold. The actuating rod 11 is caused to descend

after a charged mold has been moved under said rod. To this actuating rod is secured a cross head 15 jointed at 16 to an arm 17 extending from lever 18 and 19. The actuation of lever 18 and 19 with arm 17 will actuate cross head 15 with actuating rod 11.

The former 24 with follower 25 moves with the actuating rod 11 toward and from the mold 7. The former and follower are secured to rods 26 sliding in arm 27 extending from arm 14 and extending loosely through cross-head 15, being prevented from falling or passing out of engagement with the latter by collars 28 secured to the rods 26. The cross head 15 when moving toward a mold presses on springs 29 coiled about the rods 26 and acting against collars 30 fastened to said rods, so that the motion of the cross head 15 toward a mold will move or hold the former and follower toward such mold by a yielding or spring pressure.

The arm 19 of the lever 18 and 19 is weighted and it is noticed that the movement of arm 18 against the action of the weighted arm 19 will move the rod 11 with the former 24 and follower 25 toward a mold, while the weighted arm 19 on the release of arm 18 can be made to automatically return the rod 11 with the former and follower. The lever 18 and 19 is fulcrumed at 31 to links or rods 32 jointed at 33 to arm 14.

From standard 5 extends an arm C to which is secured a rod 54 which carries an arm 34 in which is guided the sliding and rotary rod or spindle 35 jointed at 36 to link 37 which is jointed at 38 to lever 39 and 40 having its arm 40 weighted as at 41 and having its fulcrum 42 on rod 54 carried by arm C extending from standard 5. The spindle is suspended to link 37 in any suitable well known way to be rotary thereon, a hand-wheel 43 enabling the spindle to be rotated.

The operation of the device is as follows: A mold with a screw plunger inserted therein and suitably charged, being brought under rod 11 and the support 6 locked by detent 8 engaging a recess 9, the lever 18 and 19 is actuated to force the rod 11 toward the screw plunger sticking in the mass in the mold; said screw plunger remaining in the mass on the return or rise of rod 11. The support 6

is then freed to rotate in the direction of arrow 48 (Fig. 9) to bring the mold with the screw-plunger sticking therein under plunger or rod 57 (Figs. 5, 6, and 9) carrying a shell 49 which when slipped over the screw plunger to dip into the mass in the mold will harden said mass sufficiently to prevent it from sinking back against the stem B. The plunger 57 with shell 49 then rising will allow the mold to travel farther in the direction of arrow 48 to come under spindle 35 by which the screw or stem B is withdrawn, as will presently appear.

The shell 49 is shown as being removably attachable to the foot part or lower end of rod 57 and is to remain permanently connected to said rod while in use. This rod 57 has a shoulder 58 on which rests a spring 59 which abuts against an arm 60 made to extend from and to reciprocate with the cross head 15 actuating rods 26 carrying the former and follower 24 and 25.

Extending from standard 5 is an arm 63 carrying arms 64 for guiding the plunger or rod 57. At the proper moment when a charged mold 7 is under the rods 26 and consequently another charged mold is under rod 57 the cross head 15 with arm 60 is depressed so that not only are rods 26 forced toward a mold but at the same time and by the same movement by means of spring 59 the rod 57 with shell 49 is depressed about the screw sticking in the charge 10 of another mold so that said charge is cooled sufficiently not to flow or lose its shape. The rod 57 is hollow and is provided with cooling medium by means of hose or conduit 65. The cross head 15 with extension 60 is actuated by weighted lever 18, 19 as shown.

The mold 7 is shown with a rim D and the former 24 has a depending portion E and shoulder F made to fit into and upon the rim D so as to properly finish the edge of the article or insulator. The former 24 with lower or top part 25 is shown in Fig. 7 as made in one piece. The mold 7 is made in the usual well known way of two hinged halves or sections so as to open and close as required. The mold is adapted to close or engage its lower portion about the dovetail 66 on base piece 67 having a plug 68 with a seat for the entry of the lower projecting part G of screw A. The screw having been put in place with its part G in the seat plug 68 and the charge 10 having been poured into the mold, the part G will project below the charge so that the completed article when withdrawn from the mold will have a perforation extending clear through the same. The mold 7 need not necessarily be of a form for making insulators, since it can be made to form other articles as for example screw caps. By dispensing with the part G of screw A and making plug 68 without a seat for said part G the recess or screw hole in the insulator can be made to extend only part way

into the same. The part G is preferably made plain or unthreaded.

The screw A has its stem B provided with a groove 69 (Fig. 4) which in connection with pin 44 (Fig. 1) on spindle 35 forms a bayonet joint so that the spindle 35 when depressed toward screw A and rotated to turn the screw out of the mass in the mold will engage and hold the screw by means of the joint 44, 69. The spindle 35 is jointed at 36 to link 37 jointed at 38 to lever 39, 40 weighted at 41 and fulcrumed at 42 to rod 54. The rod 54 and arm 34 are supported by arm C secured to standard 5. The spindle 35 is rotatably suspended from link 37.

A frame 71 is screwed or secured to arm 34. This frame 71 supports a rotary shaft 72 to which are secured the hand wheel or crank 43 and bevel gear 73 engaging bevel gear 74 feathered to spindle 35 so that the latter while moving longitudinally will still rotate with gear 74. The spindle 35 by means of lever 39, 40 having been depressed to a screw A in a mold, the hand wheel 43 when properly rotated will cause the spindle to engage the screw by means of joint 44, 69 and to turn the screw up out of the mass in the mold. The hand wheel 43 is in vertical position so as to be conveniently and rapidly operated by the attendant. The stem B of screw A is hollow to allow the entry of the lower end part of spindle 35 carrying pin 44.

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

1. A mold and a standard about which the mold is made movable, combined with supporting arms carried by the standard, a frame carried by the arms, a rotary spindle mounted in the frame, actuating gear wheels to one of which the spindle is feathered, an actuating wheel or handle for the gear wheels, a weighted lifting lever for the spindle, and a screw adapted to be inserted into the mold, said spindle and screw being respectively provided with engaging parts of a joint for enabling the spindle to detachably engage the screw substantially as described.

2. A mold, a standard, and a screw adapted to be inserted into the mold combined with a reciprocating rod provided with a filling piece or shell adapted to be pressed about the screw and a rotary spindle adapted to engage the screw, said mold being made movable about the standard so as to travel from the filling piece to the spindle substantially as described.

3. A mold, a standard, and a screw adapted to be inserted into the mold, combined with a hollow reciprocating rod provided with a conduit or hose and with a filling piece or shell adapted to be pressed about the screw, and a rotary spindle adapted to engage the screw, said mold being made movable about the standard so as to travel from the filling piece to the spindle substantially as described.

4. A mold provided with a seat 68, and a

screw or stem adapted to engage said seat for projecting entirely through the material in the mold, said stem having the portion engaging the seat made plain or unthreaded substantially as described.

5 5. A mold and a standard, combined with a movable cross head made to carry forming parts toward the mold, and provided with an arm or extension, a rod reciprocated by said
10 arm or extension, and a filling piece or shell connected to said rod, said mold being made

movable about the standard so as to travel from under the cross head to the filling piece or shell substantially as described.

In testimony whereof I have hereunto set 15 my hand in the presence of two subscribing witnesses.

SERAPHIN KRIBS.

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.