

No. 658,680.

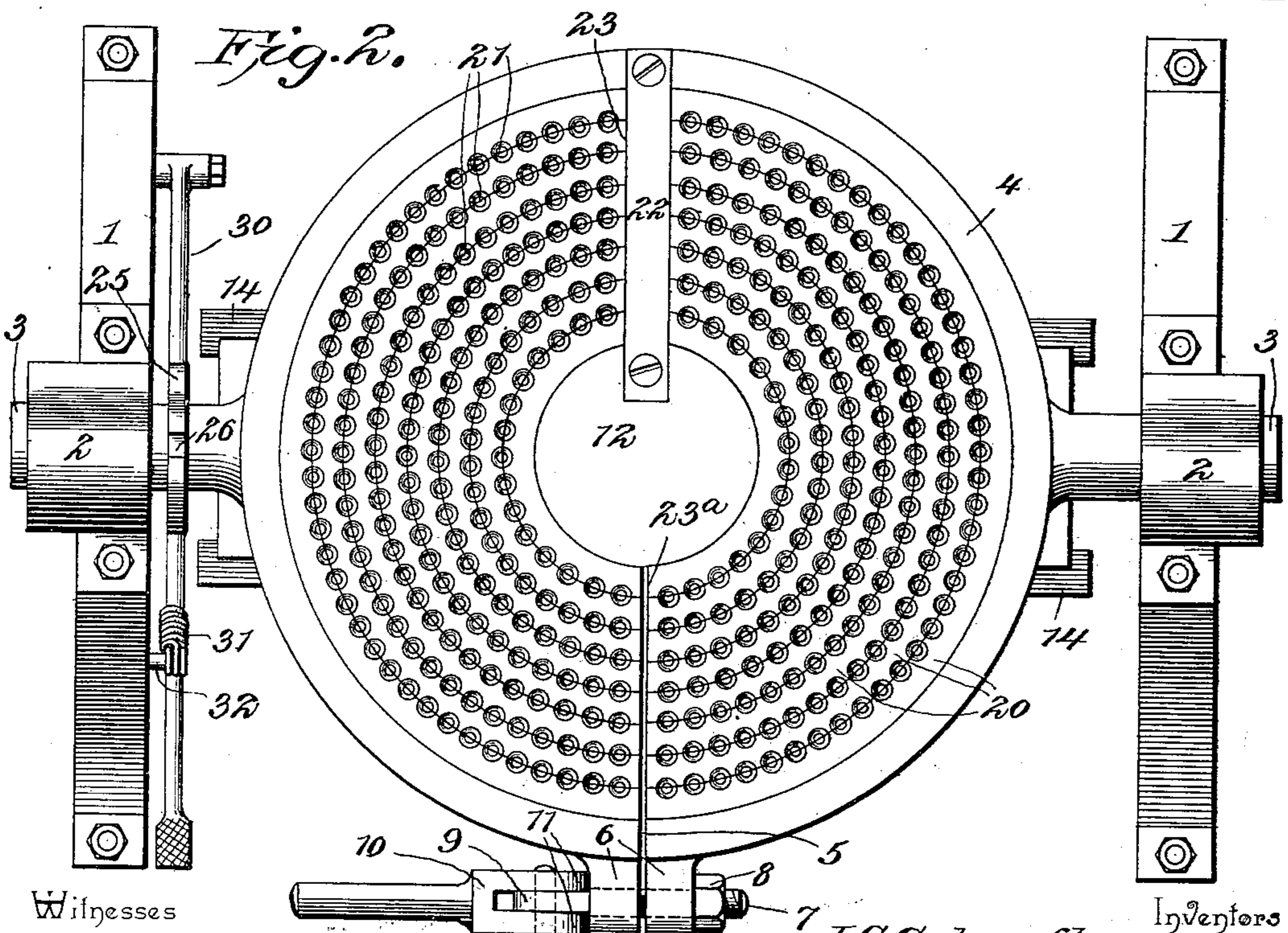
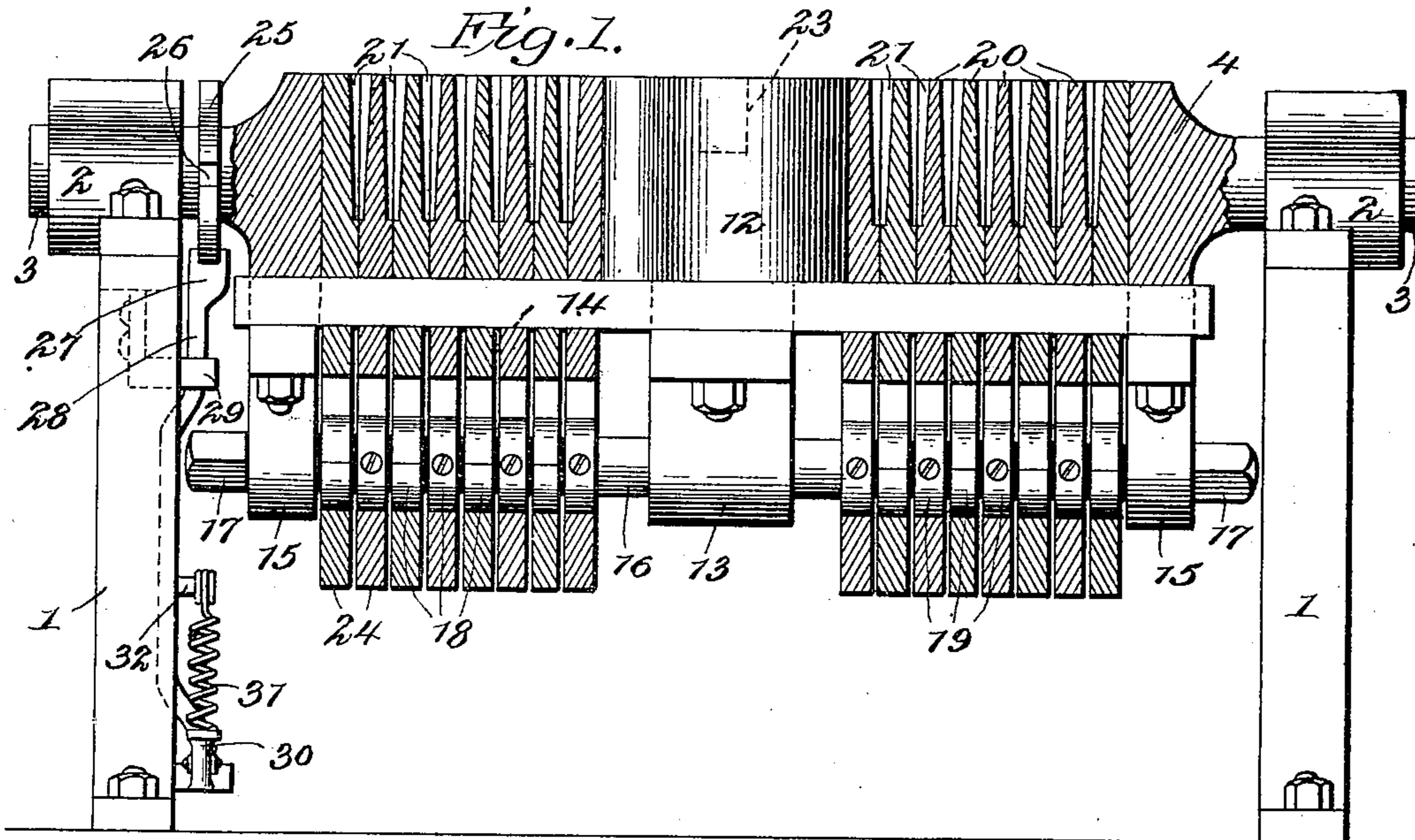
Patented Sept. 25, 1900.

J. C. SCHEUFLE & B. P. SEXTON.
MACHINE FOR MAKING CRAYONS.

(No Model.)

(Application filed Mar. 15, 1900.)

2 Sheets—Sheet 1.



Witnesses
Howard D. Orr.
Chas. S. Hoyer.

Inventors
J. C. Scheufler, and
Burton P. Sexton
By their Attorneys,
Chas. S. Hoyer.

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Fig. 3.

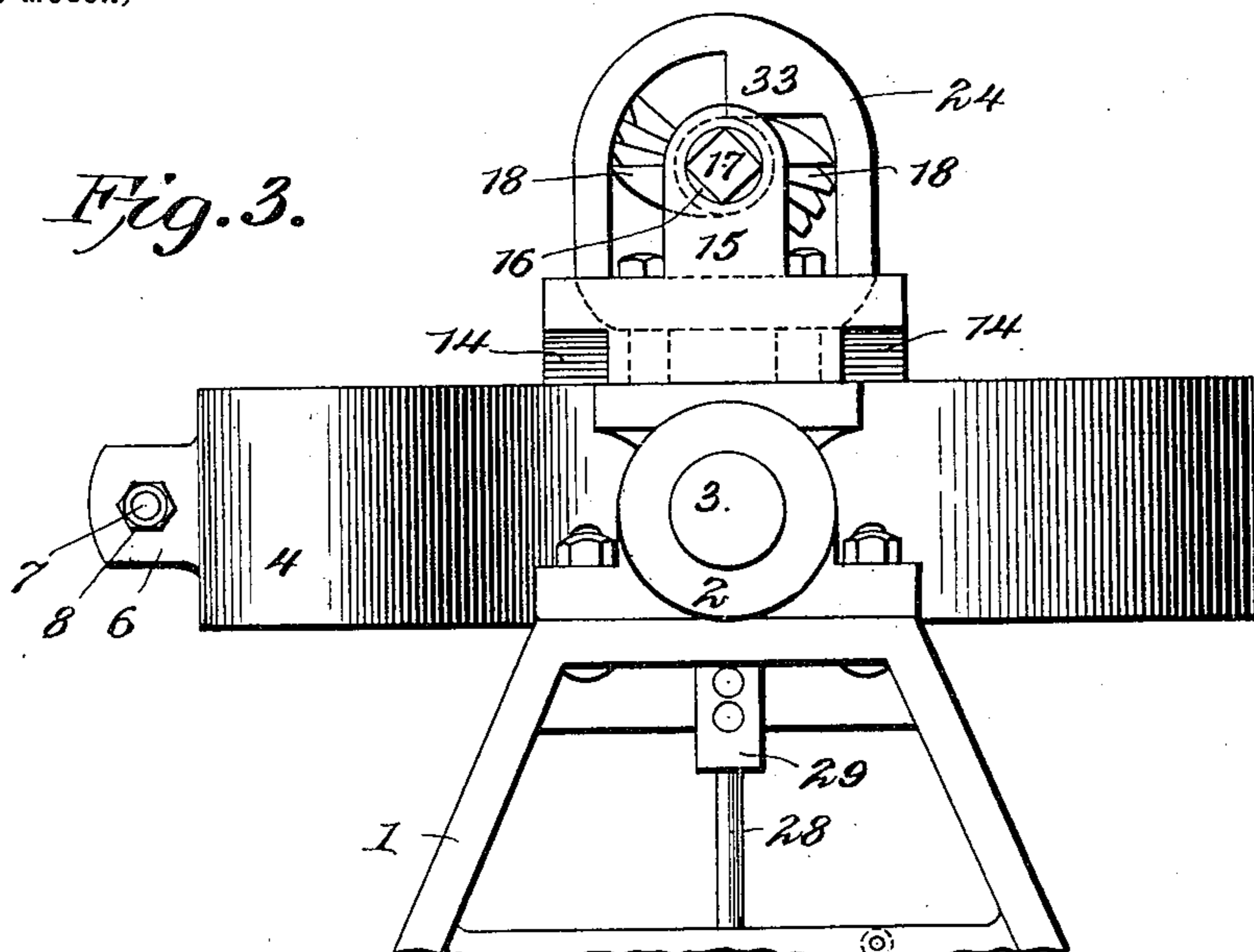
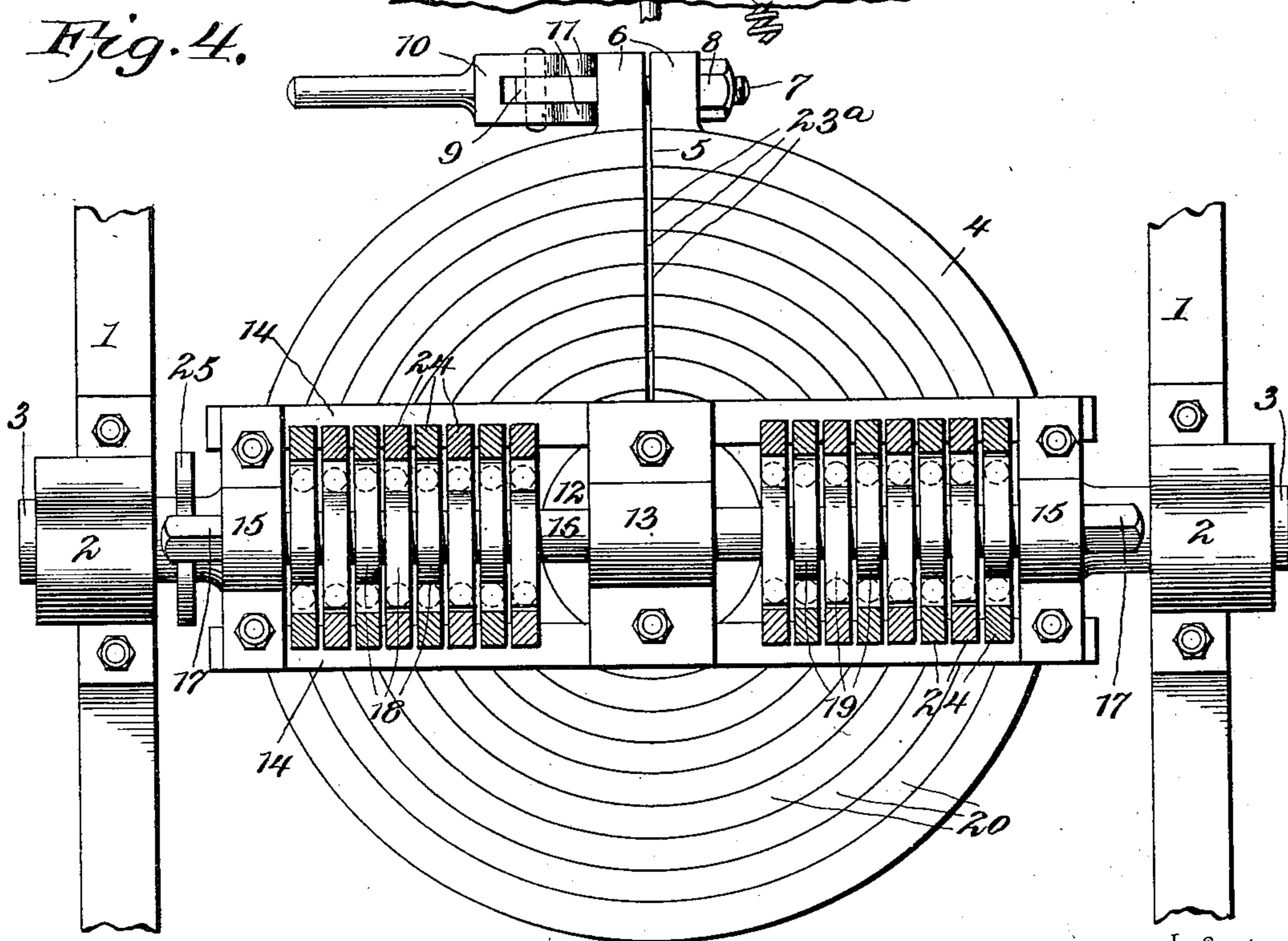


Fig. 4.



Witnesses

Howard D. Orr.

Chas. S. Hoyer

By their Attorneys,

J. C. Scheufler, and Inventors

Burton P. Sexton

CA Snow & Co.

UNITED STATES PATENT OFFICE.

JOHN C. SCHEUFLEER AND BURTON P. SEXTON, OF SANDUSKY, OHIO.

MACHINE FOR MAKING CRAYONS.

SPECIFICATION forming part of Letters Patent No. 658,680, dated September 25, 1900.

Application filed March 15, 1900. Serial No. 8,776. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. SCHEUFLEER and BURTON P. SEXTON, citizens of the United States, residing at Sandusky, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Machines for Making Crayons, of which the following is a specification.

This invention relates to a machine for making crayons; and the object of the same is to provide simple and effective means for conveniently loading and unloading a device of this character with the material from which the crayon is formed and to release the crayons without injuring the same or requiring a complex manipulation and having movable or adjustable molding parts, which are regularly controlled in unloading by cams acting in alternation and in a positive manner to correspondingly engage opposite portions of each part.

The invention primarily consists of a bed or support having a series of concentrically-arranged molding-rings movably mounted therein and provided with regularly-arranged semicircular or substantially-semicircular molding-recesses adapted to aline with corresponding recesses in adjacent rings, the said bed or support bearing the rings being rotatable, and a plurality of cams operatively arranged in intimate relation to portions of said rings for forcing the same outwardly during the operation of discharging or unloading the molded crayons therefrom.

The invention further consists of details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a longitudinal vertical section of a crayon-molding machine embodying the features of the invention. Fig. 2 is a top plan view of the improved machine. Fig. 3 is an elevation of the same, partially broken away. Fig. 4 is a bottom plan view of the improved machine, shown broken away in part and a portion in section.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates opposite end legs, which are of open form, as shown by Fig. 3, and converged toward their upper ends or

top portions, and it is proposed to make these legs light in structure, so as to reduce the weight of the machine as much as possible. 55 On the upper end of each leg a bearing 2 is bolted or otherwise secured and therein diametrically-arranged trunnions 3, connected to or forming part of a circular body 4, are rotatably mounted and of such dimensions and strength as to practically support the said body and the devices carried thereby, which will be presently set forth. The body 4 forms the bed of the machine and is split or cut through, as at 5, and adjacent 65 the said separated portion are outstanding ears or lugs 6, through which extends a bolt 7, having a nut 8 on one end and the opposite end flattened, as at 9, to provide means of attachment or bearing for a bifurcated 70 clamping-lever 10, having cam faces or edges 11, which bear against the end of the adjacent ear or lug 6. The nut 8 is adjustable on the bolt 7 and primarily it is set to accommodate the binding action of the body 4 that will be 75 predetermined, and the clamping-lever 10 will be turned in one direction to relieve the impingement of its cam edges from the end of the adjacent ear or lug 6 and slacken the binding action of the body, or said lever can 80 be as easily operated in the opposite direction to cause the cam edges thereof to forcefully bear on the adjacent ear or lug and draw both ears or lugs more closely together, and thereby increase the binding action of the said body. 85

In the center of the body 4 a solid core 12 is located, and said body has a central hanger 13 fixed to the under side thereof, to the opposite portions of which hangers supporting-bars 14 are secured and extend longitudinally 90 of the machine between the legs 1 in parallel planes and serve as guides for parts of the device mainly arranged above the same when the body is in normal position and also have opposite end depending bearing-hangers 15. 95 In the bearing-hangers 13 and 15 a cam-shaft 16 is rotatably mounted and has angular end extensions 17 projecting beyond the hangers 15, which are adapted to be engaged by a wrench or analogous instrument for rotating 100 the shaft and actuating the opposite series of cams 18 and 19. The said series of cams are of the form shown more clearly by Fig. 3 and are arranged in regular succession or so that

they will have operative bearing with the devices in which they are located, the cams of each series being arranged to engage opposite portions of the same device simultaneously and in alternation through the whole series of the operating devices.

Within the body 4, which forms the bed of the machine, a series of mold-rings 20 are concentrically mounted and gradually increase in diameter from the central one to the outermost one and are adapted to fit closely one over another, and having mold-holes 21, which are formed by boring downwardly in and between said rings, so as to leave a portion of the hole in each ring or adjacent wall, the two contiguous sides or walls of a pair of rings producing a complete circular line of molds. These rings are movable outwardly in the body 4, but are held against turning by a tongue-strip 22, fastened at one end to a part of the said body and at the opposite end to the core 12, the several rings being vertically slotted, as at 23, Fig. 1, in dotted lines, the united slots of all the rings being deep enough to permit an outward movement thereof in a regular manner and always insure a return to normal position. Each ring is cut through, as at 23^a, and the cut portions of all the rings are aligned, as clearly shown by Fig. 2, and also with the separated part of the body 4, and it will be seen that when the body 4 is tightened around the rings the latter will also be drawn firmly together to effectively carry on the molding operation and prevent the formation of or overcome any tendency toward openings between the rings adjacent the mold-holes and counteract and avoid the formation of fins on the crayons molded. Moreover, the binding action of the rings through the medium of the body 4 insures their retention in accurate position, and in loosening the body 4 the rings correspondingly relax, the latter operation being necessary in unloading the machine. It is preferred that the rings 20 be formed of brass, and the capacity of the machine may be varied by increasing or decreasing the number of the rings, and depending from opposite portions of each ring are centrally-located extensions 24, having transversely-elongated cam-openings therein, all of the said extensions and openings being in longitudinal alinement and each having a cam located therein. The cam extensions project between the parallel bars 14, and the rings are thus given a proper alinement and a rest provided therefor while in position for filling or loading.

In loading the machine the rings are disposed as shown by Fig. 1 and the body, as well as said rings, tightly clamped, and the filling of which the crayons are to be formed is then deposited in the molding-holes 21 in a semifluid state and permitted to harden, the body and rings being held in the position shown by Fig. 1 until the period of time necessary for such hardening operation shall have elapsed, and to prevent movement of

the body and rings one of the trunnions 3 has a stop-disk 25 fixed thereon with radial notches 26 formed therein at diametrically-opposite points or at the quarters and adapted to receive the enlarged end 27 of a locking-arm 28, movably mounted in a bearing 29, projected inwardly from one of the legs 1. The lower extremity of the locking-arm 28 is connected to a foot-treadle 30, which is held in a normal elevated position by a spring 31, attached thereto and also to a lug or projection 32 on an adjacent part of the leg 1.

From the foregoing it will be seen that the enlarged engaging end 27 of the locking-arm 28 is normally held elevated and within the path of movement of the disk 25, and when in engagement with the said disk through the medium of the notches 26 the body 4 and the rings carried thereby, together with all the parts supported by the trunnions 3, will be held against accidental swinging movement until the treadle 30 has been depressed and the said upper end of the arm 28 released from the disk. By this means it will be observed the molding portion of the machine can be held stationary during the hardening of the material molded thereby.

As soon as the crayons become hard they are removed from the rings, and to accomplish this the end extension 17 of the cam-shaft is engaged by a proper implement and rotated so as to bring the cams in alternation in contact with a part of each extension 24, and which consists of an angular projection 33, as shown by Fig. 3, and normally bearing upon the lowest part of each cam in the beginning of the operation of the latter when the contact of the said cam starts with relation to each extension. It will be understood that all of the extensions have these projections, and by the use of the same the cams will be prevented from being turned in the wrong direction, as will be obviously apparent, and thereby a regular operation of the rings can be pursued. As before indicated, opposite portions of the rings are simultaneously engaged by one cam of each series, so as to avoid binding of the ring, and after the cam has reached its highest throw or greatest elevation in each alternate series the ring with which it has been in engagement will fall by its own weight, and this same operation being carried on with all the rings will result in a thorough loosening of the crayons without breaking the same and while one side is supported throughout the whole circular series of the crayons. From the foregoing explanation it will also be understood that previous to the operation of the cams for loosening the crayons the body 4 and the rings therein will be loosened by slackening the binding effect of the clamping-lever 10, and after the crayons are loosened they are again held tight, while the body 4 and other parts carried by the trunnions 3 are turned over, as shown by Fig. 4, said body and rings being again relaxed to permit the

crayons to be unloaded or dropped from the molding-holes of the rings. After the unloading operation the parts are brought back to the position shown by Figs. 1 and 2 and the semiliquid crayon material is again poured into the molding-holes and a similar operation pursued thereafter.

In the operation of elevating the rings by means of cams the latter are also so arranged that the second set of rings are pushed upwardly just before the first set begin to fall back and the downward drop of the first set or the first rings operated and carry with them the crayons from the second set, and in falling to their normal position with a slight jar and sudden stopping entirely loosen all the crayons from the mold-rings.

It is intended that the improved machine be used in making school, carpenters', or other crayons or analogous devices, and the same principle of molding can be carried into effect with other elongated devices, and it will be understood that the molding-holes may be varied, as well as the size, proportions, and minor details of construction, without departing from the principle of the invention.

Having thus described the invention, what is claimed as new is—

1. In a molding-machine of the character set forth, the combination of a series of vertically-movable molding-rings concentrically arranged and having recesses therein to coincide with similar recesses in adjacent rings, and means for operating the said rings to release the crayons.

2. In a molding-machine of the character set forth, the combination of a series of vertically-movable molding-rings, and means for operating said rings.

3. In a molding-machine of the character set forth, the combination of a surrounding body, a series of molding-rings movably mounted in the said body, the body and rings being cut through or separated at one portion, means for clamping the body and rings, and means for operating the said rings.

4. In a molding-machine of the character set forth, the combination of a plurality of concentric vertically-movable molding-rings, a support or bed in which said rings are movably mounted, and cams arranged to engage alternate series of the said rings.

5. In a molding-machine of the character set forth, the combination of a rotatable support or bed, and a series of vertically-movable concentric rings in the said bed, and having molding-recesses.

6. In a molding-machine of the character set forth, the combination of a bed or support, a series of molding-rings movably mounted and concentrically arranged in the bed or support and having cam-engaging extensions with openings therein, and a cam-shaft extending through the openings of the cam extensions and provided with cams to bear upon portions of said extensions.

7. In a molding-machine of the character set forth, the combination of a bed or support including a body and a central core, a tongue-strip attached to a part of said body and core, and a series of movable molding-rings mounted in the said body and having slots to receive the tongue-strip.

8. In a molding-machine of the character set forth, the combination of a body, a plurality of molding-rings movably mounted in the body, and a tongue-strip to engage portions of the rings to prevent the latter from turning.

9. In a molding-machine of the character set forth, the combination of a body, a central core, the body and core having depending bearing-hangers, parallel bars connected to the said bearing-hangers, a plurality of molding-rings movably mounted in the said body and having depending cam-engaging extensions located between the said bars and provided with openings therethrough, a cam-shaft mounted in the said bearing-hangers, and cams on the said shaft to contact with portions of the said cam-engaging extensions.

10. In a molding-machine of the character set forth, the combination of a clamping-body, a series of molding-rings vertically movable in the said body, the said body having trunnions at diametrically-opposite points, legs in which the said trunnions have bearing to permit the body to be rotated and means for locking the body and parts carried thereby against movement.

11. In a molding-machine of the character set forth, the combination of a rotatable clamping-body, a series of rings movably mounted and concentrically arranged in the said body and cut through a portion thereof, and a tongue-strip engaging the said rings.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN C. SCHEUFLE.
BURTON P. SEXTON.

Witnesses:

HENRY A. SCHEUFLE,
CONRAD PLETSCH.