

(No Model.)

2 Sheets—Sheet 1.

H. DOLLMAN.
MACHINE FOR DRAWING METALS.

No. 535,534.

Patented Mar. 12, 1895.

FIG 1

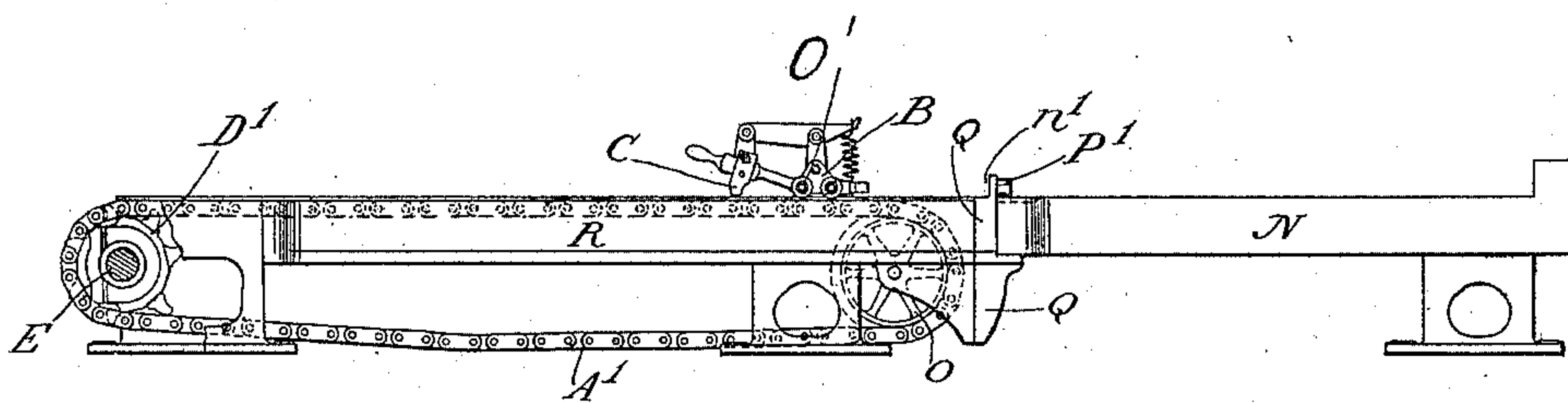


FIG 2

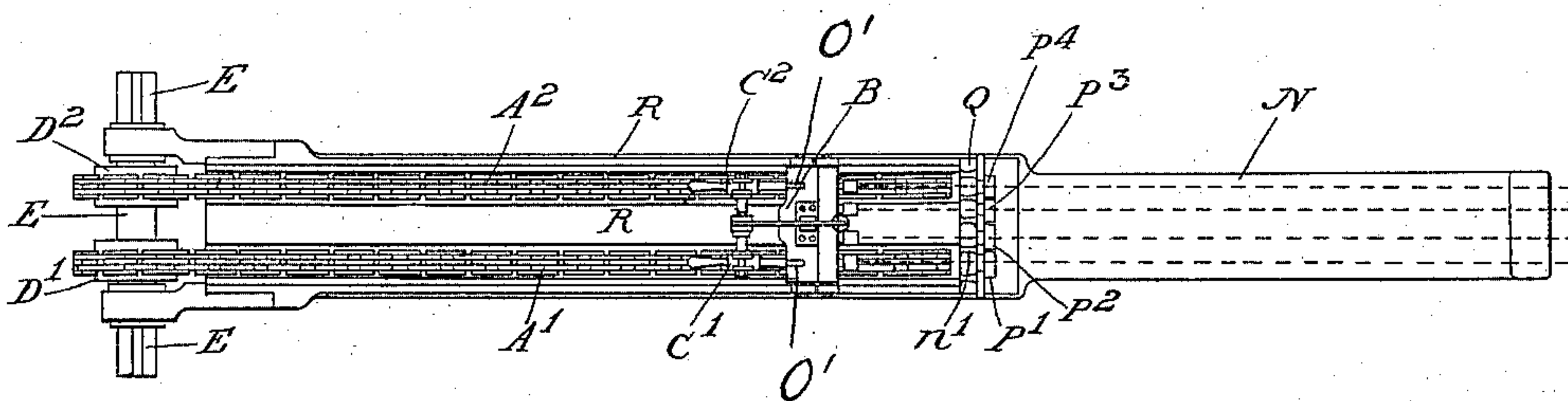
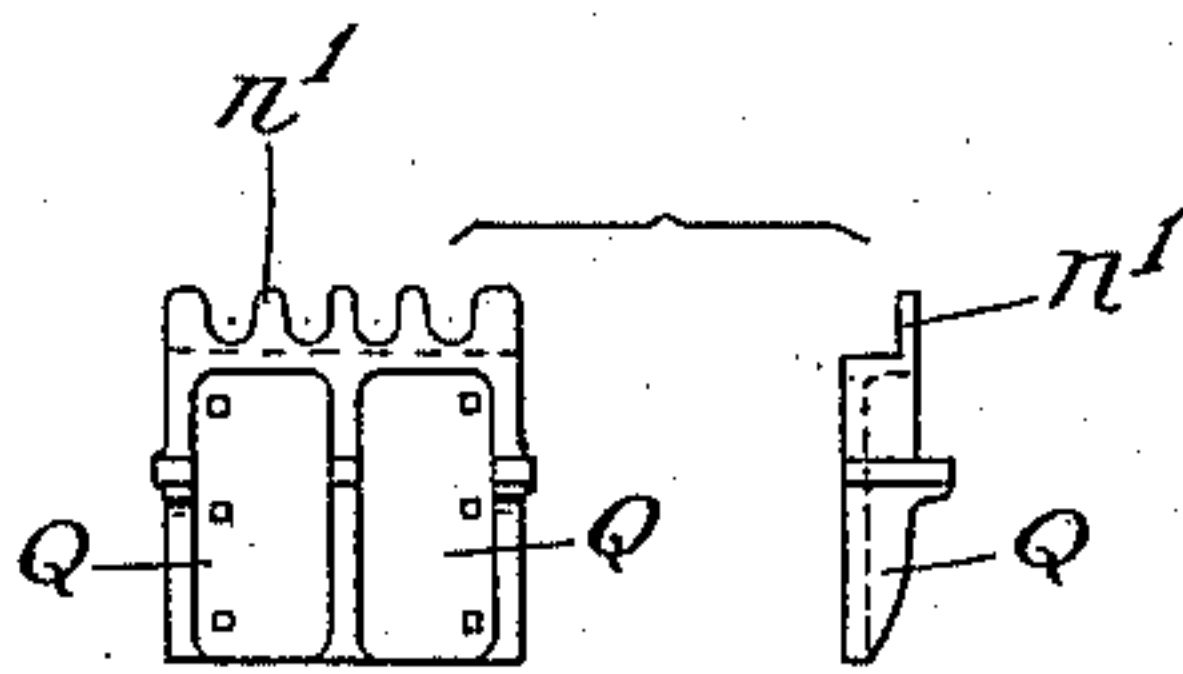


FIG 2*



WITNESSES

Charles Brimworth Kelley
Herbert Whitehouse.

INVENTOR

Hubert Dollman.

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FIG 3

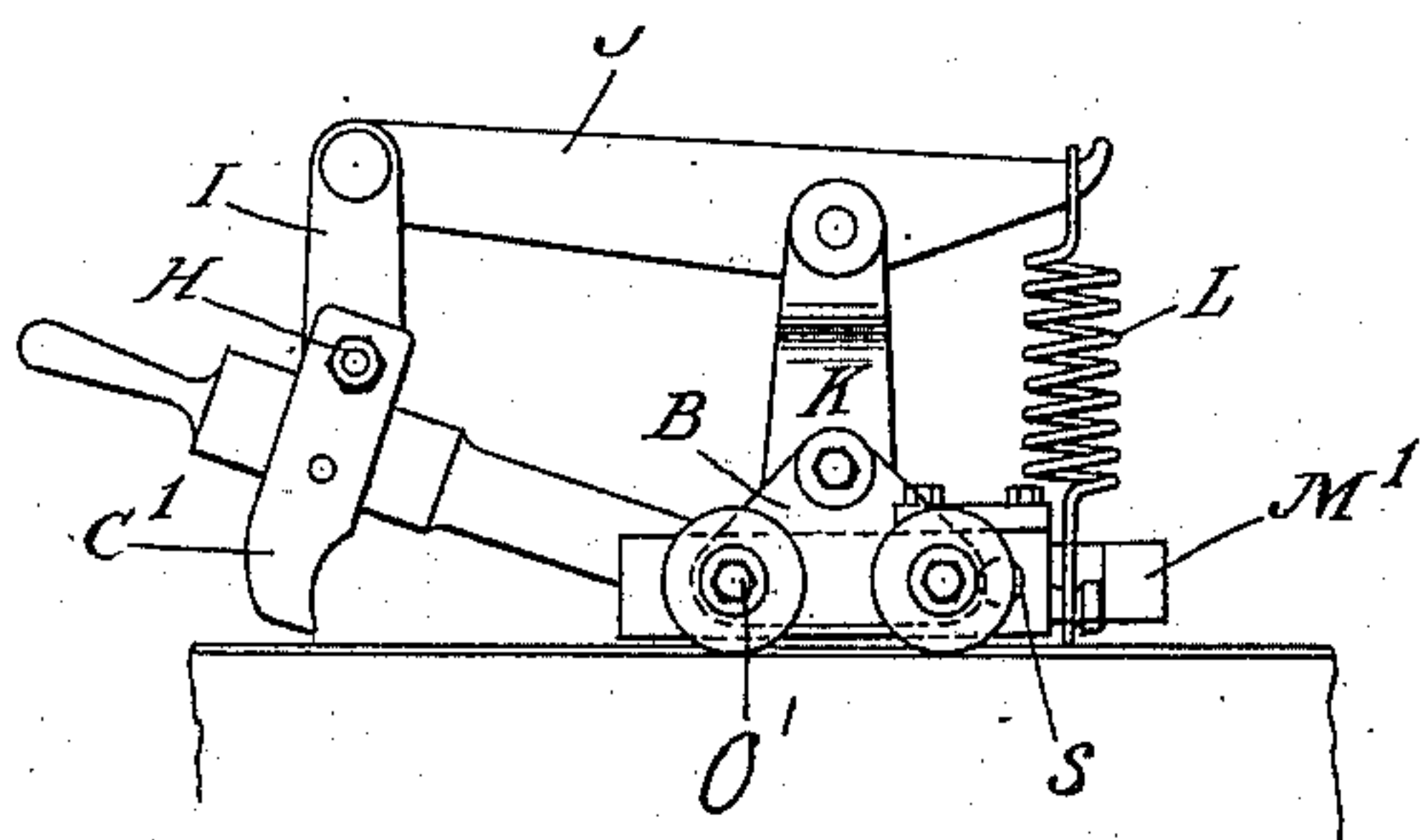


FIG 5

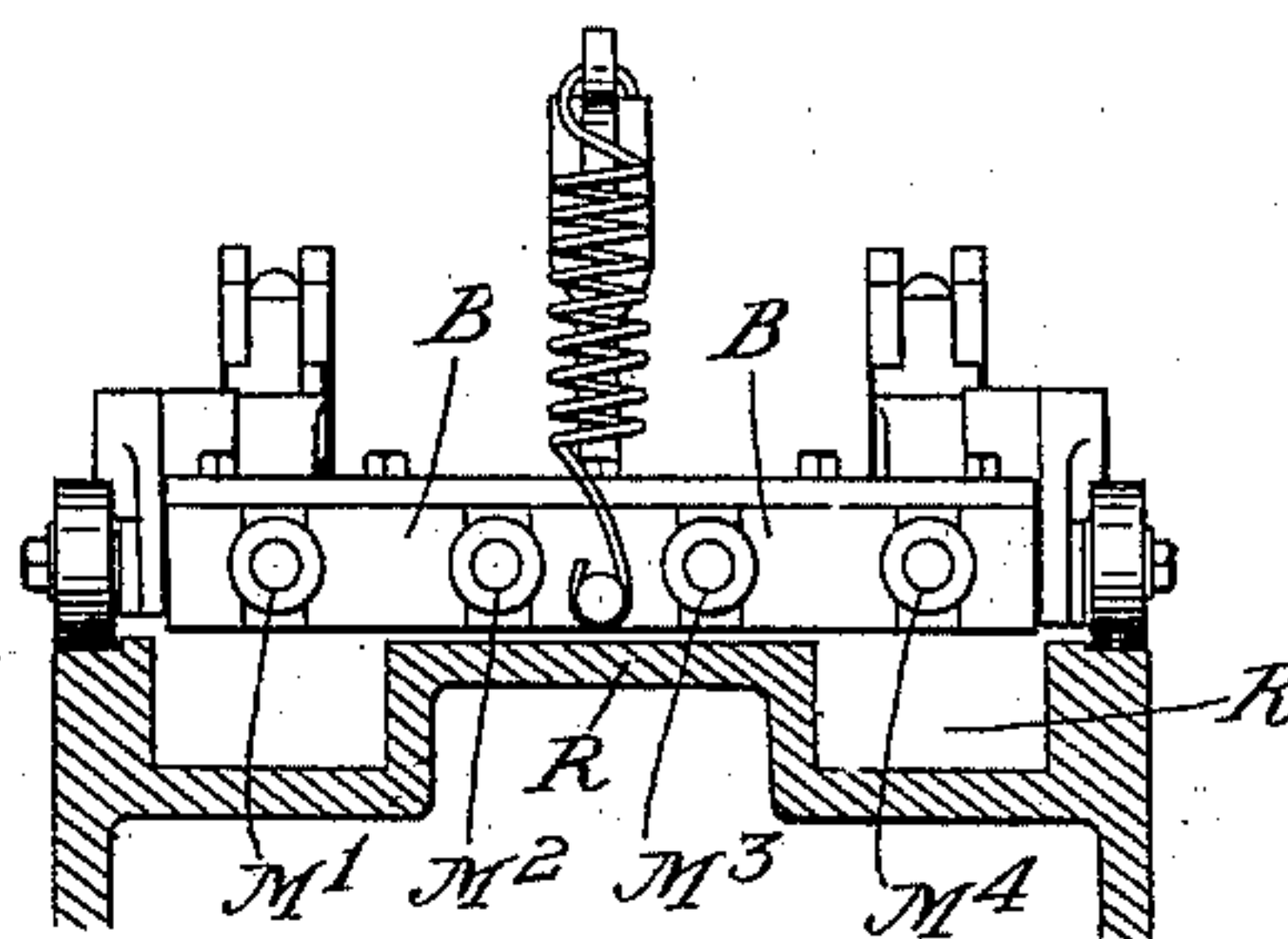


FIG 4

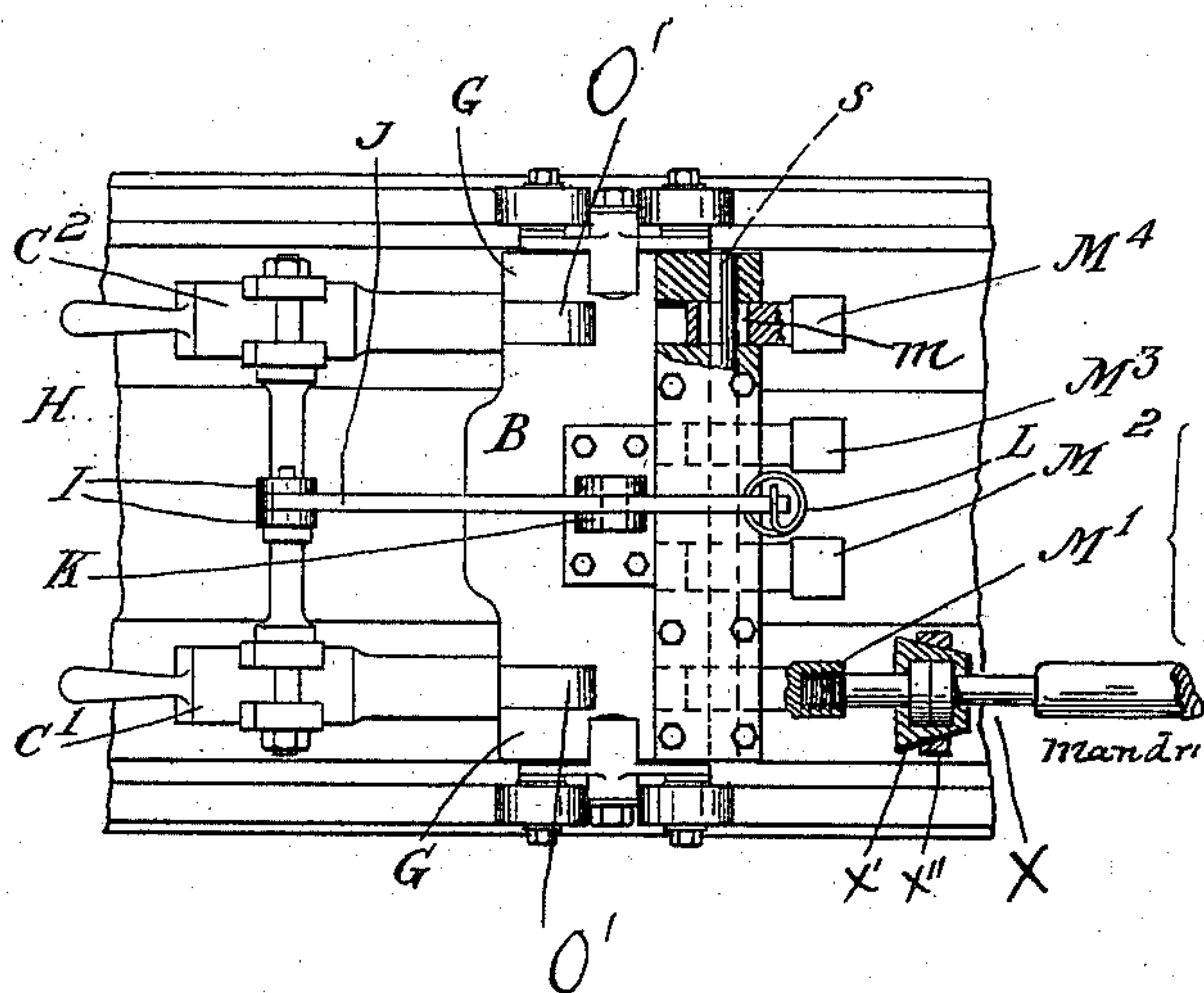
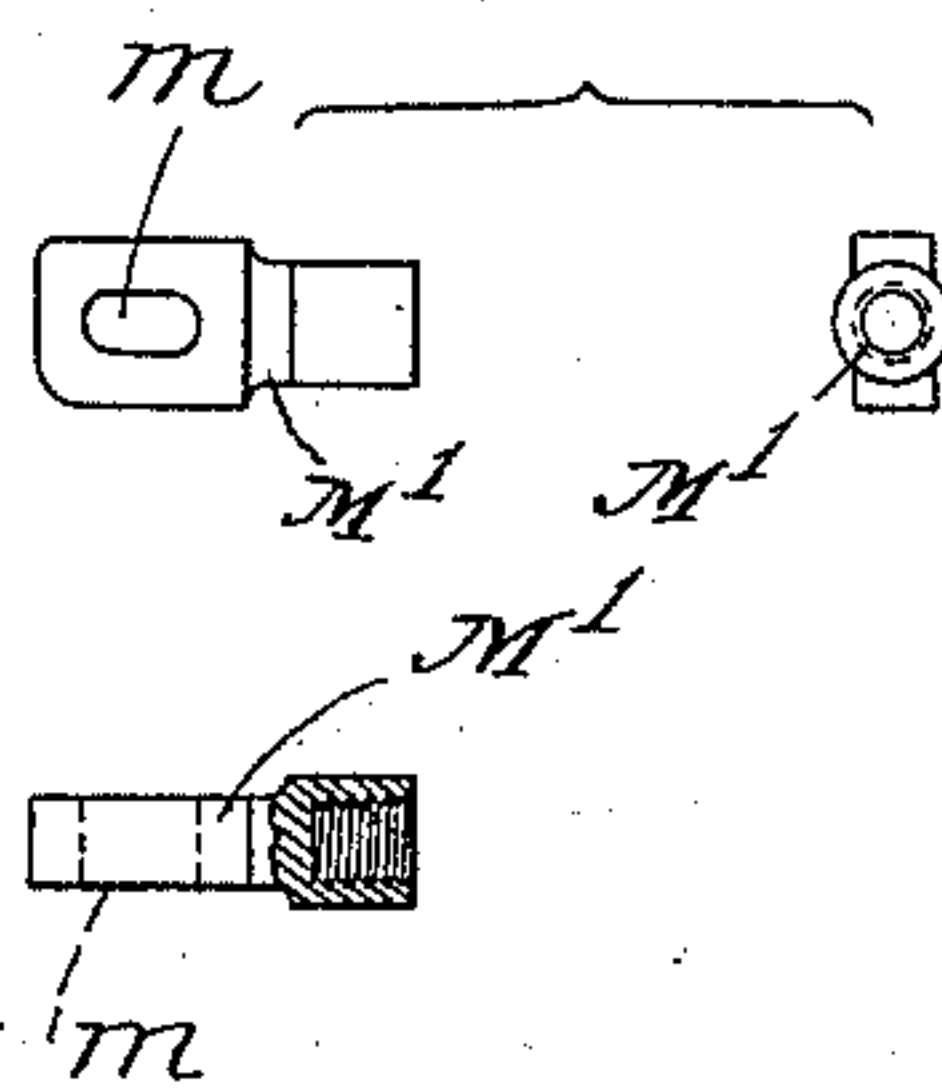


FIG 6



WITNESSES

Charles Bismuth Kelley
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INVENTOR

Hubert Dollman.

UNITED STATES PATENT OFFICE.

HUBERT DOLLMAN, OF BIRMINGHAM, ENGLAND.

MACHINE FOR DRAWING METALS.

SPECIFICATION forming part of Letters Patent No. 535,534, dated March 12, 1895.

Application filed July 11, 1893. Serial No. 480,106. (No model.) Patented in England June 10, 1893, No. 11,413.

To all whom it may concern:

Be it known that I, HUBERT DOLLMAN, a subject of Her Majesty the Queen of Great Britain and Ireland, residing at Edgbaston, Birmingham, in the county of Warwick, England, have invented certain new and useful Improvements in Machines for Drawing Metals, of which the following is a specification.

This invention has been patented in Great Britain June 10, 1893, No. 11,413.

This invention consists of the herein described improvements in machines (commonly known as draw benches) for drawing metal tubes, rods, moldings and the like.

The principal object of my invention is to so construct a metal drawing machine or draw bench that two or more tubes, rods, moldings or the like can be drawn by the same carriage through the dies at the same time thus enabling the operators to turn over a very much larger quantity of work in a given time than is possible on an ordinary draw bench where each tube or rod or molding or the like is drawn by a separate carriage.

Another object of my invention is to improve the construction of the horn plate against which the die holder or die holders or draw plate rests or rest.

I will describe my invention by referring to the accompanying drawings, on which—

Figure 1 is a side elevation and Fig. 2 is a plan of a draw bench constructed according to my invention for drawing four tubes, rods, moldings or the like at the same time. Fig. 2* shows the horn plate of the same separately. Fig. 3 is a side elevation, Fig. 4 is a plan and Fig. 5 is a back elevation of the carriage of the said machine on an enlarged scale, and Fig. 6 is a side elevation, plan and back elevation of one of the draw bolts by which the ordinary gripping appliances are attached to the carriage.

The same letters of reference indicate the same or corresponding parts in all the figures of the drawings.

In carrying out my invention I make the draw bench with two or more draw chains arranged parallel with each other side by side as is now sometimes done in other draw benches which have two or more carriages, and I make the carriage with two or more dogs corresponding with the draw chains so

that both draw chains will act upon the carriage and keep it square with the draw chains as it is by them moved along the bench; and I construct the carriage with two or more sets of draw bolts or teeth or tongs or other well known appliances to connect to corresponding mandrels, tubes, rods or moldings or the like which are arranged parallel side by side and are thus drawn through the dies simultaneously by the same carriage.

The machine shown on my drawings has two draw chains marked respectively A' A² receiving motion by passing around two of the usual toothed drums D' D² mounted upon a driving spindle E at the front end of the draw bench in the usual way; this driving spindle E receiving rotary motion by spur gearing or other means in the well known manner. The draw chains A' A² pass around the usual cylindrical drum O at the back part of the draw bench.

C' C² are the two dogs which are hinged to the carriage at O' and connected together by the cross bar H which by the links I is jointed to the top lever J carried by the bracket K from the top of the carriage; this lever J being connected to the carriage at one end by a coiled spring L, which thus acts upon and maintains both dogs lifted out of the chains when the carriage is being pushed back.

The carriage B has four draw bolts marked M' M² M³ M⁴ (or there may be two, three or more than four draw bolts) or other well known appliances to connect to the mandrels or the draw tongs or gripping appliances in the usual way, such for instance as shown at x in Fig. 4 where the parts are connected by a collar x' and ring x''. These draw bolts are by preference secured to the carriage B by the cross pins passing through the carriage B and through a slotted hole m in each of the draw bolts. By slotting the holes m in the draw bolts I obtain the necessary adjustment of the draw bolts and gripping appliances fixed thereto so as to connect to the ends of the mandrels or tubes, rods, moldings or the like, which may be projecting through the dies at different distances.

N is the usual back part of the draw bench on which the mandrel or article being drawn rests and P' P² P³ P⁴ are the four die holders resting against the horn plate Q through

which the tubes, rods, moldings or the like are drawn. The horn plate may be made in the well known manner or (and this is what I prefer) as shown upon my drawings where
5 the horn plate is represented as a steel casting (see separate view Fig. 2*) made to fit between and bolted to the front portion R and the back portion N of the draw bench and standing up above the same as shown to form
10 the horns n' or part for the die holders to rest against.

My improved draw bench above described works in the well known manner and therefore the method of working requires no description here. It will be seen that by the
15 carriage drawing two or more tubes, rods, moldings or the like simultaneously, the operators can turn out much more finished work in a given time than is possible with a draw
20 bench made in the usual way.

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

1. In combination in a drawing machine two chains, the carriage adapted to be connected to two or more tubes, rods, moldings
25 or the like, the two pawls carried thereby for engaging the chains and the cross bar con-

necting the two pawls to disengage them simultaneously from the two chains, substantially as described. 30

2. In combination, in a drawing machine the two chains, the carriage, the two pawls engaging the same, the cross bar connecting the pawls, the lever J connected to the cross bar and pivotally supported by the carriage and
35 the spring connected to the lever J, substantially as described.

3. In a drawing machine, the carriage with means for moving it, the series of draw bolts having their shanks resting in the carriage
40 and each provided with a slot and the means for securing the draw bolts in place and permitting the adjustment of the same consisting of the single cross bar passing transversely of the carriage and through the slots
45 in the draw bolts, substantially as described.

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

HUBERT DOLLMAN.

Witnesses:

CHARLES BOSWORTH KETLEY,
HERBERT WHITEHOUSE.