

No. 657,802.

Patented Sept. 11, 1900.

C. H. WATSON.
CEMENT CURB MOLD.

(Application filed July 20, 1899.)

(No Model.)

2 Sheets—Sheet 1.

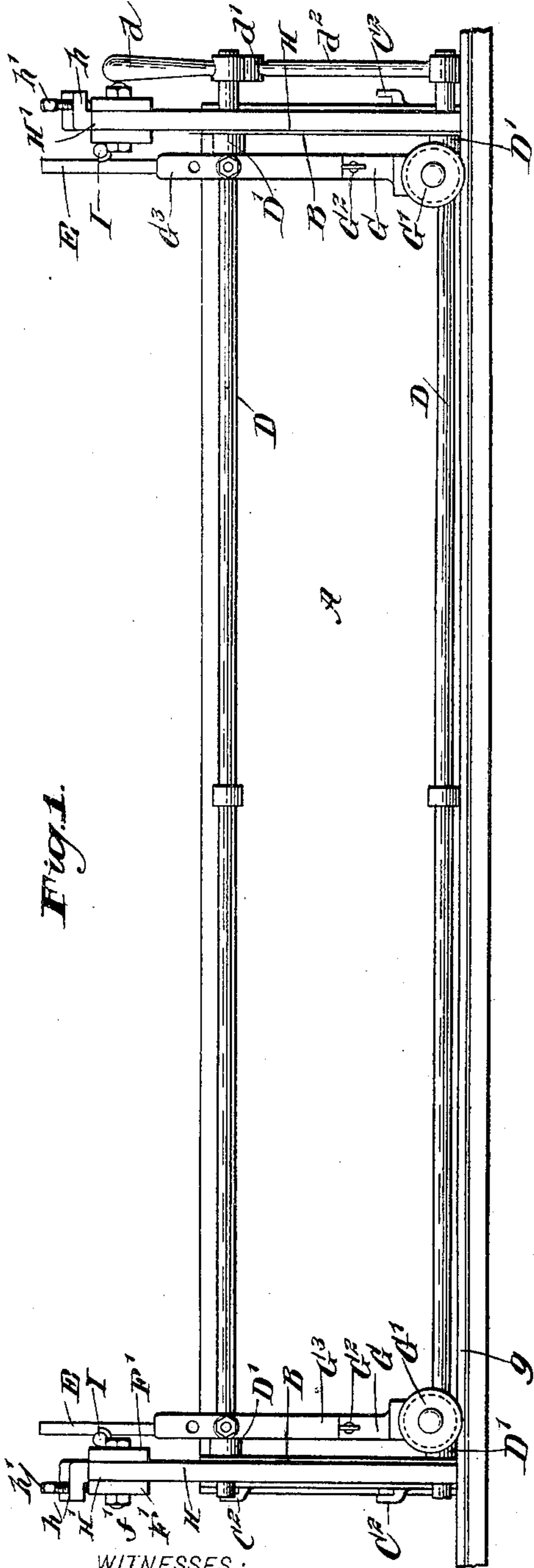


Fig. 1.

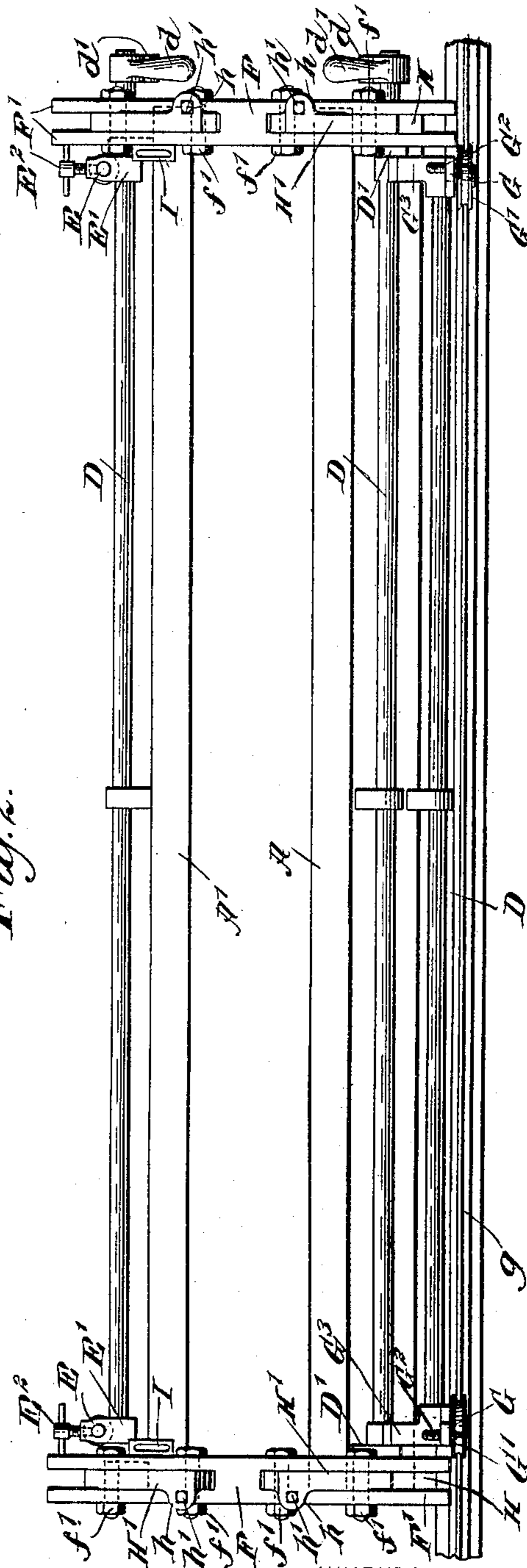


Fig. 2.

WITNESSES:
Chas. W. King.
H. L. Reynolds.

INVENTOR
C. H. Watson
BY *Mumford & Co.*
ATTORNEYS

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2 Sheets—Sheet 2.

Fig. 3.

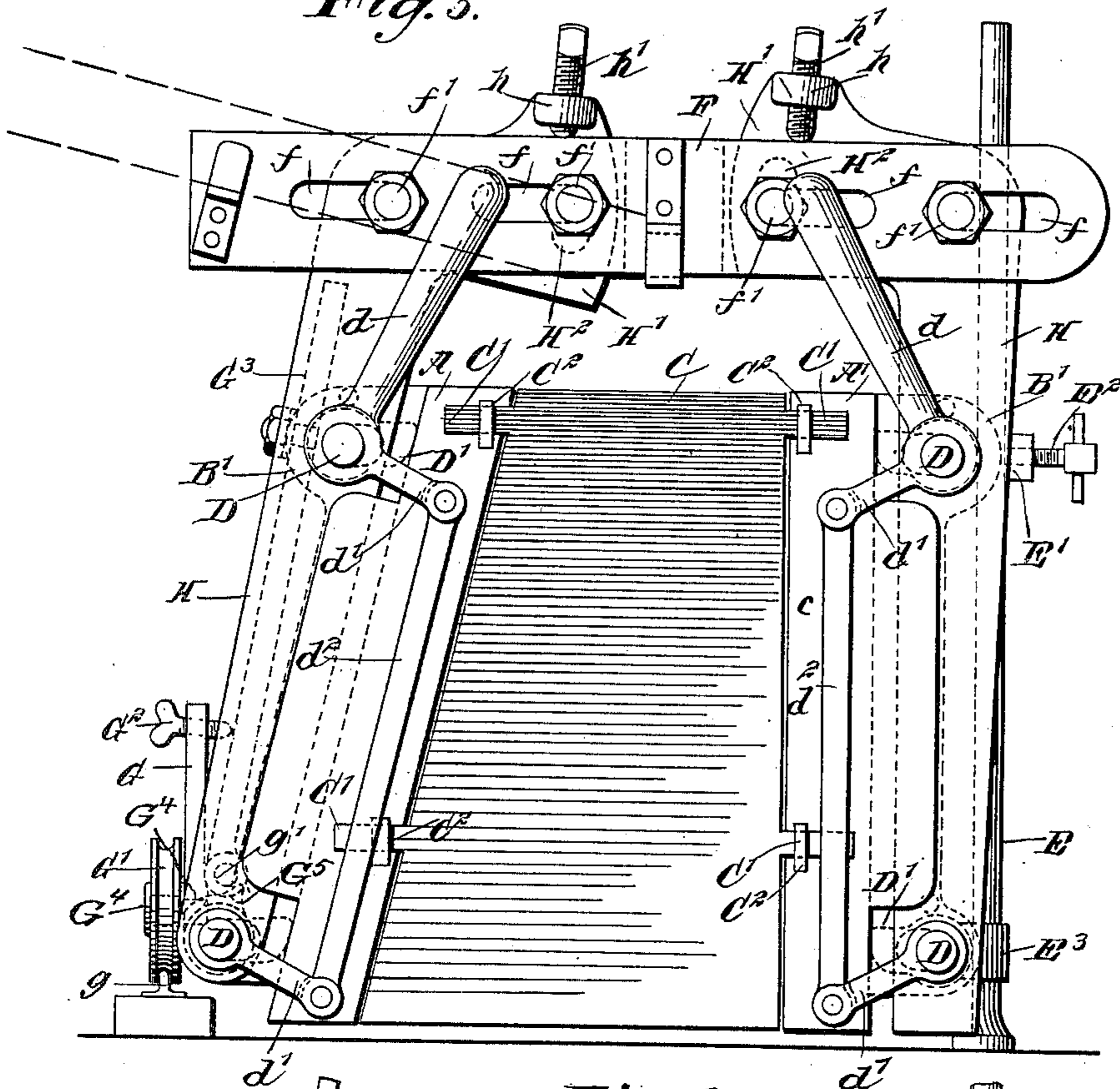
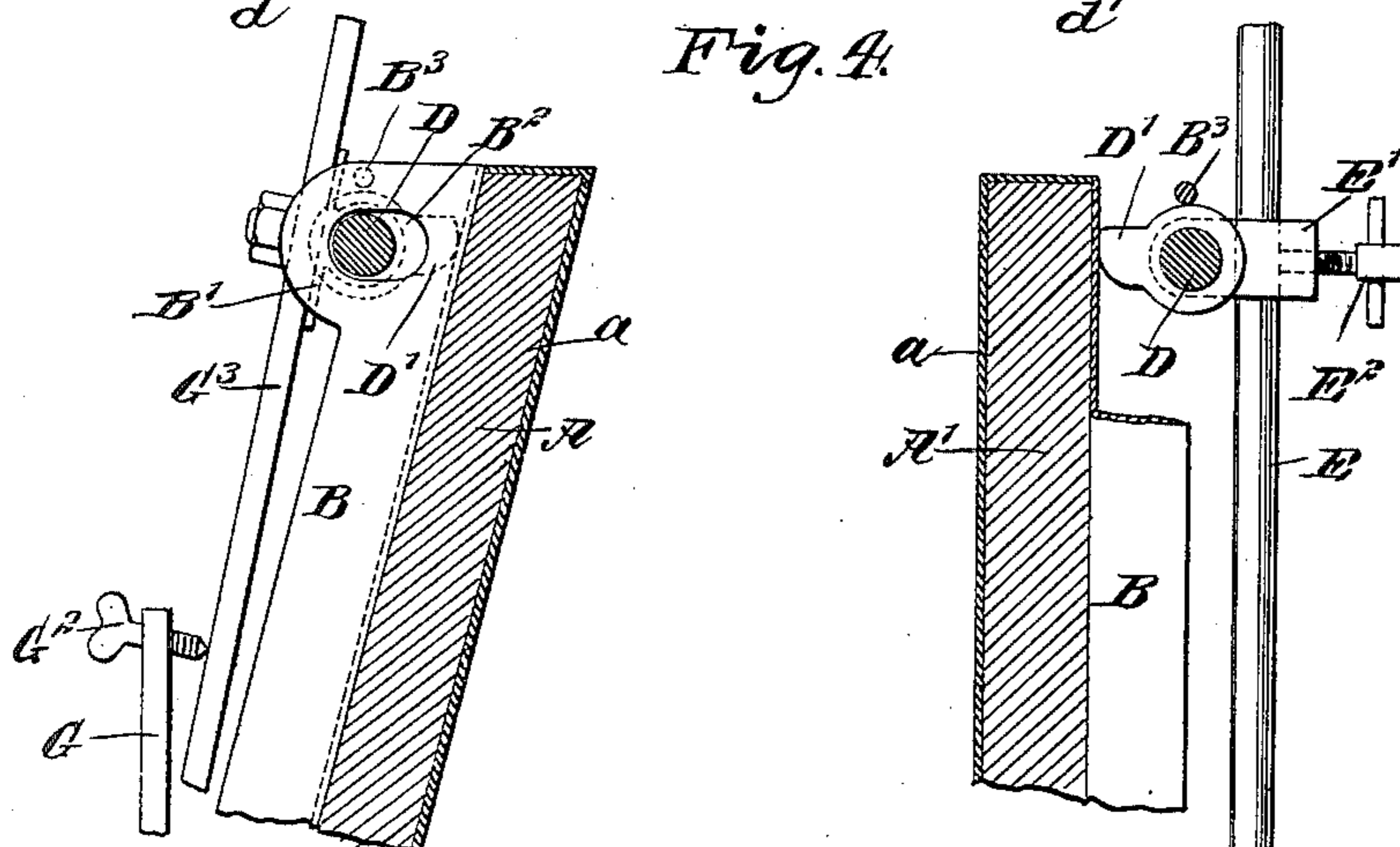


Fig. 4.



WITNESSES:

Chas. D. King,
H. L. Reynolds

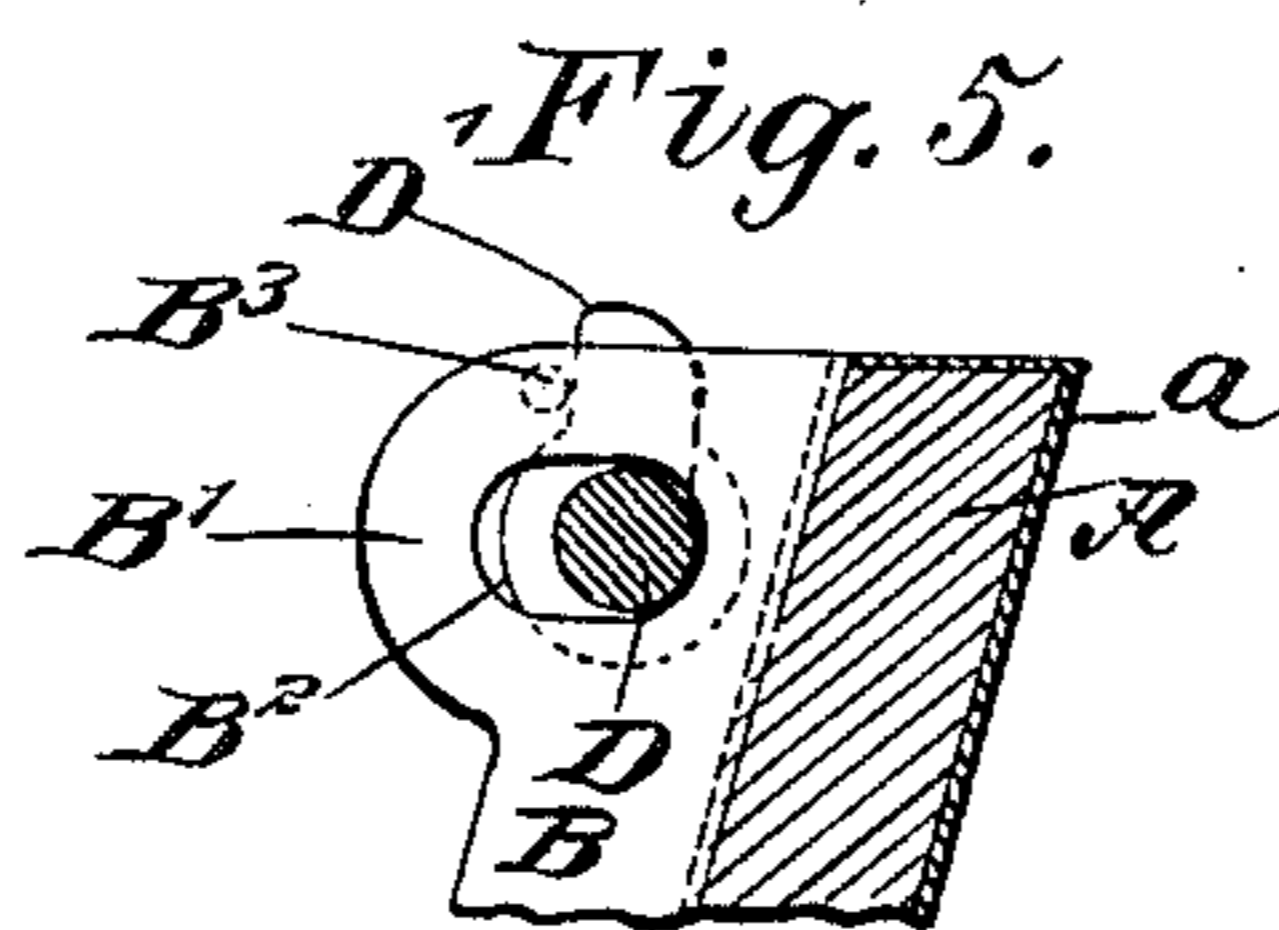


Fig. 5.

INVENTOR
C. H. Watson
BY *Mumford & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

CHRISTOPHER HUGH WATSON, OF RIVERSIDE, CALIFORNIA.

CEMENT-CURB MOLD.

SPECIFICATION forming part of Letters Patent No. 657,802, dated September 11, 1900.

Application filed July 20, 1899. Serial No. 724,493. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER HUGH WATSON, of Riverside, in the county of Riverside and State of California, have invented
5 a new and Improved Cement-Curb Mold, of which the following is a full, clear, and exact description.

My invention relates to an improvement in devices for forming cement or concrete curbs,
10 and comprises the novel features which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.
15

Figure 1 is a side elevation of my device. Fig. 2 is a plan view of the same. Fig. 3 is an end elevation. Fig. 4 is a cross-sectional elevation taken just within one end. Fig. 5 is
20 a detail section showing a portion of the device illustrated in Fig. 4 in a different position.

In forming cement or concrete curbs it is customary to form a mold of the exact size
25 of the curb desired and then to tamp this with the concrete or cement mixture and leave the mold in place until the mixture has hardened sufficiently to retain its shape. Then the mold is removed and taken to another point in the curb, where it is again used. These cement curbs are usually formed in place, and it is therefore desirable to have a device which may be readily moved from one position to another and also one which may
30 be readily adjustable for use with curbs which vary somewhat in character.

In my invention the sides of the curb are formed by two retaining-plates A and A', one of the plates lying at the back of the curb
40 and the other in front of the curb, the two being of such size and so placed with reference to each other that the space between them is of exactly the size and shape of the desired curb. Upon the outer faces of the plates A and A' are placed vertical ribs B,
45 which at their upper and lower ends are provided with lugs B', said lugs being also provided with horizontal slots B². These lugs lie just back of the upper and lower edges of the plates A. Through the slots B² in these
50 lugs pass shafts D, which are journaled within yokes which pass over the upper side of

the curb and mold and which constitute the framework by which the retaining-plates A and A' are held in place. These yokes are
55 formed of three principal members, a top section which extends across the top of the mold and two side sections or arms which extend downwardly therefrom and outside of the retaining-plates A and A'. The side sections
60 H have shafts D journaled therein. The upper or top section F is herein shown as being slotted at each end, forming two bars F', between which lie the upper ends of the side sections H. The side sections or arms H have
65 horizontal extensions H' at their upper end lying within the slot between the two parts F' of the top section. The top section F is provided with longitudinally-extending slots, which are adapted to receive clamping-bolts
70 f'. The side sections or arms H have each a pivot-hole located near the angle thereof and receiving one of the clamping-bolts f'. The inner end of the horizontal portion H' of each arm has a segment-slot H², which receives the
75 other one of the clamping-bolts f', by which the arm H is secured to the top section F. By adjusting the outermost of the clamping-bolts f' within the slot f the distance apart of the side sections or arms H may be varied,
80 so as to form curbs varying materially in width. By swinging the side sections or arms H upon the outermost clamping-bolt f', which may be done by reason of the segment-slot H², the slope or batter of the side surfaces of
85 the curb may be varied at will.

To more securely hold the top piece and the arms H in their adjustable position, the upper sections H' of the arms are provided with side extending lugs h, through which
90 pass set-screws h', which bear upon the upper surface of the top section F. When the parts of the yoke have been adjusted in position, the set-screws are then caused to bear firmly upon the upper side of the bar F, thus
95 holding the parts securely in position. By means of this construction the sides of the curb may both be made vertical or one or both side surfaces be given a slope, as desired. This slope may be on the outer or inner surface of the curb. In the adjustment
100 herein shown one surface only of the curb is sloping.

The shafts D, of which two are provided

for each side plate A and A', are journaled in the arms H. The plates A and A' are movably supported thereon by reason of the slots B² in the lugs B', which are carried by said plates. This permits a sliding movement of the plates toward and from the curb, so that when the curb is finished the mold may be readily freed therefrom by moving the plates outward. This is accomplished by the following means: The shafts D have cams D' secured thereto and adapted to engage the outer surface of the plates A and A'. These shafts also have crank-arms d' secured thereto, the crank-arms upon one side of the mold being connected with each other by a link d², so that when one shaft is turned the other is similarly turned. The upper of the shafts D is also provided with a handle d, by means of which it may be turned so as to advance or withdraw the plate controlled thereby. Projecting from one surface of the lug B' is a pin B³, which is adapted to be engaged by one side of the cam D', so as to withdraw the plate A or A'. The ends of the plates A and A' are provided with hooks or staples C², which are adapted to be engaged by arms C' upon the plate C, the body of said plate being of a size and shape corresponding with the cross-section of the curb being formed. This plate is used to close one end of the mold, so that it may be tamped entirely full of the material of which the curb is being made. This plate may be secured in place at either end of the mold and may be readily removed by lifting it out of the hooks C². Upon one side of the mold are secured bars G³, preferably by having them engage the upper shafts D. At the lower end each of these bars G³ has an eye, by means of which it is pivotally connected, as at g', with the upwardly-extending member G⁵ of an arm G, fulcrumed on one of the lower shafts D, and these arms G are provided at their upper ends with set-screws G², so that they may be adjusted in position relative to the bars G³. Upon approximately-horizontal members G⁴ of the arms G are journaled wheels G', which are adapted to engage a short movable section g of a track. This section of track is moved forward as the work progresses, and this side of the mold is supported thereby. The opposite side of the mold is supported by adjustable rods E, which are vertically guided in ears or lugs E' and E³, which are mounted upon the upper and lower shafts D. By forcing these rods downward this side of the mold is leveled. The bars are held in place after adjustment by means of a set-screw E², which passes through the upper of these ears E'.

For convenience in adjusting the level of this device I have herein shown it as provided with levels I, located one at each end and carried by the top bar F of the yokes. I herein show this device as being provided with only two yokes. It is, however, evident that the device may be made of any length

desired and will be provided with as many of the yokes as necessary to hold the side plates firmly against the pressure of the tamped material.

The mold, as originally described, may be used for forming the entire curb or the curb may be discontinued before it has reached its full height, leaving a small capping or surface layer to be placed and consisting of a different material. When this is desired, another device, which may be much lighter and of simpler construction, is used for this purpose.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the framework or yokes, with retaining-plates mounted thereon to slide toward and from each other, and cams journaled upon the yokes and engaging the retaining-plates to operate the same.

2. The combination of the framework or yokes, with retaining-plates mounted thereon to slide toward and from each other, and operating devices secured to the yokes and engaging the retaining-plates to move them relatively to the yokes.

3. The combination of the framework or yokes with retaining-plates movable transversely thereto, mechanism for moving the retaining-plates from each other, transversely-extending guides secured to the retaining-plates, and an end plate removably supported in said guides.

4. The combination of retaining-plates with yokes, each composed of two arms and a top bar, each arm being independently adjustable upon the said bar to vary the angle of the retaining-plates.

5. The combination of retaining-plates with yokes, each composed of two arms and a top bar, each arm being independently adjustable upon the said bar to vary the angle of the retaining-plates, sliding connections between the yokes and retaining-plates permitting said plates to move toward and from each other, and means for actuating the said plates.

6. The combination of the framework or yokes, shafts journaled therein, retaining-plates having slotted lugs or ears embracing and sliding upon the shafts toward and from each other, cams mounted upon the shafts and engaging the plates to advance or withdraw them, and means connecting those cams which engage the same retaining-plate to operate them together.

7. The combination of adjustable yokes, shafts journaled therein, retaining-plates having slotted lugs or ears embracing and sliding upon the shafts toward and from each other, cams mounted upon the shafts and engaging the plates to advance or withdraw them, and means connecting the cams which engage the same retaining-plates to operate them together.

8. The combination of yokes, retaining-plates carried upon said yokes, shafts jour-

naled upon and connecting the yokes, cams upon said shafts engaging the retaining-plates to advance and withdraw them, means for turning said shafts, and lugs carried by the retaining-plates and slotted to embrace and slide upon said shafts.

9. The combination of yokes, retaining-plates carried upon said yokes, shafts journaled upon and connecting the yokes, cams upon said shafts engaging the retaining-plates to advance and withdraw them, crank-arms upon the shafts, links connecting said crank-arms, a handle secured to one of the shafts, and arms or lugs carried by the retaining-plates and slotted to embrace and slide upon said shafts.

10. In a mold, the combination of yokes, retaining-plates carried thereby, wheels mounted upon one side of the mold and adjustable supporting-posts upon the opposite side thereof.

11. In a mold, the combination of retaining-plates, yokes connected therewith and adjustable to vary the angle of the retaining-plates, arms pivoted upon the mold, wheels journaled on said arms, and means for changing the angular position of the wheels relatively to the yokes.

12. A yoke for molds, comprising a top bar and two depending arms pivoted thereto and

engaging the sides of the mold, and means for adjusting and clamping the depending arms to the top bar at different angular positions.

13. A yoke for molds comprising a top bar and two depending arms pivoted thereto and engaging the sides of the mold, and set-screws between the top bar and the depending arms whereby they may be adjusted and held in different positions.

14. A yoke for curb-molds, comprising a top bar having longitudinally-extending slots, depending arms pivotally secured to the top bar by bolts passing through said slots, said arms also having side lugs extending parallel with the top bar and containing segment-slots and clamping-bolts passing through said segment-slots in the arms and slots in the top bar.

15. A yoke for curb-molds, comprising a top bar having longitudinally-extending slots, depending arms pivotally secured to the top bar by bolts passing through said slots, said arms having side lugs extending alongside of the top bar, set-screws passing through said lugs and engaging the top bar to adjust their relative positions, and means for clamping the two together when adjusted.

CHRISTOPHER HUGH WATSON.

Witnesses:

JOHN G. NORTH,
RICHARD L. NORTH.