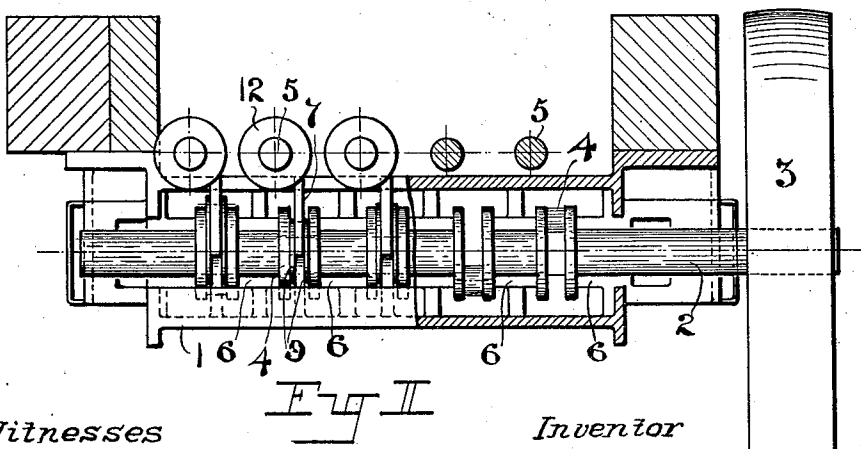
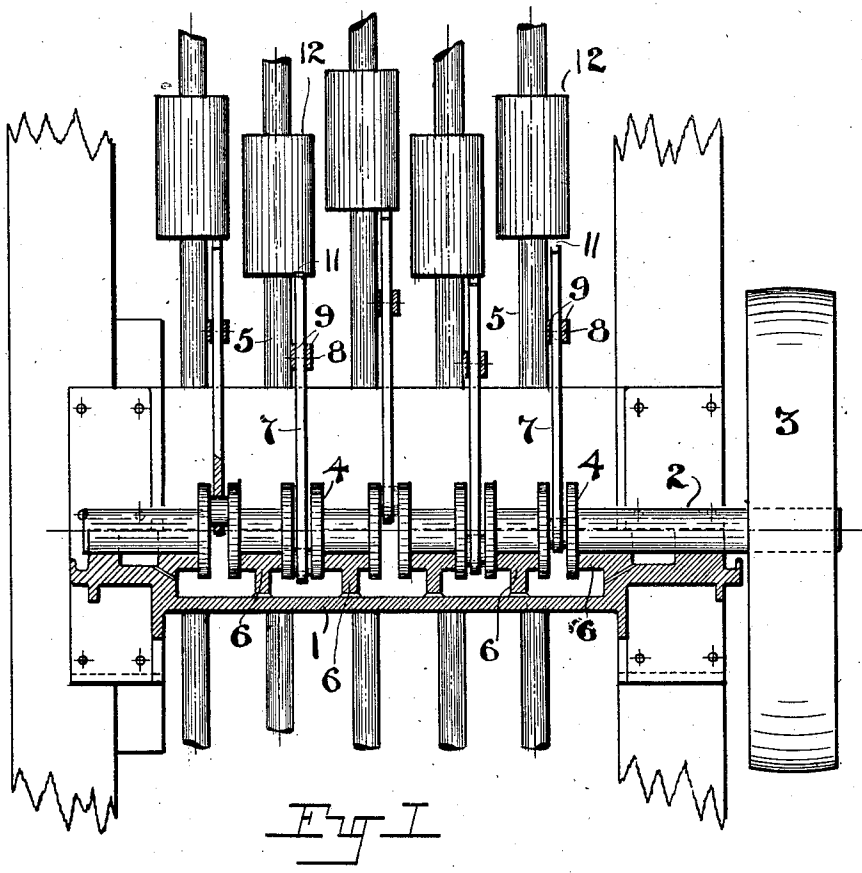


H. C. BEHR.
 STAMP ACTUATING MEANS.
 APPLICATION FILED JAN. 8, 1909.

1,012,187.

Patented Dec. 19, 1911.
 3 SHEETS-SHEET 1.



Witnesses
E. A. Singer
Ira J. Morgenthau

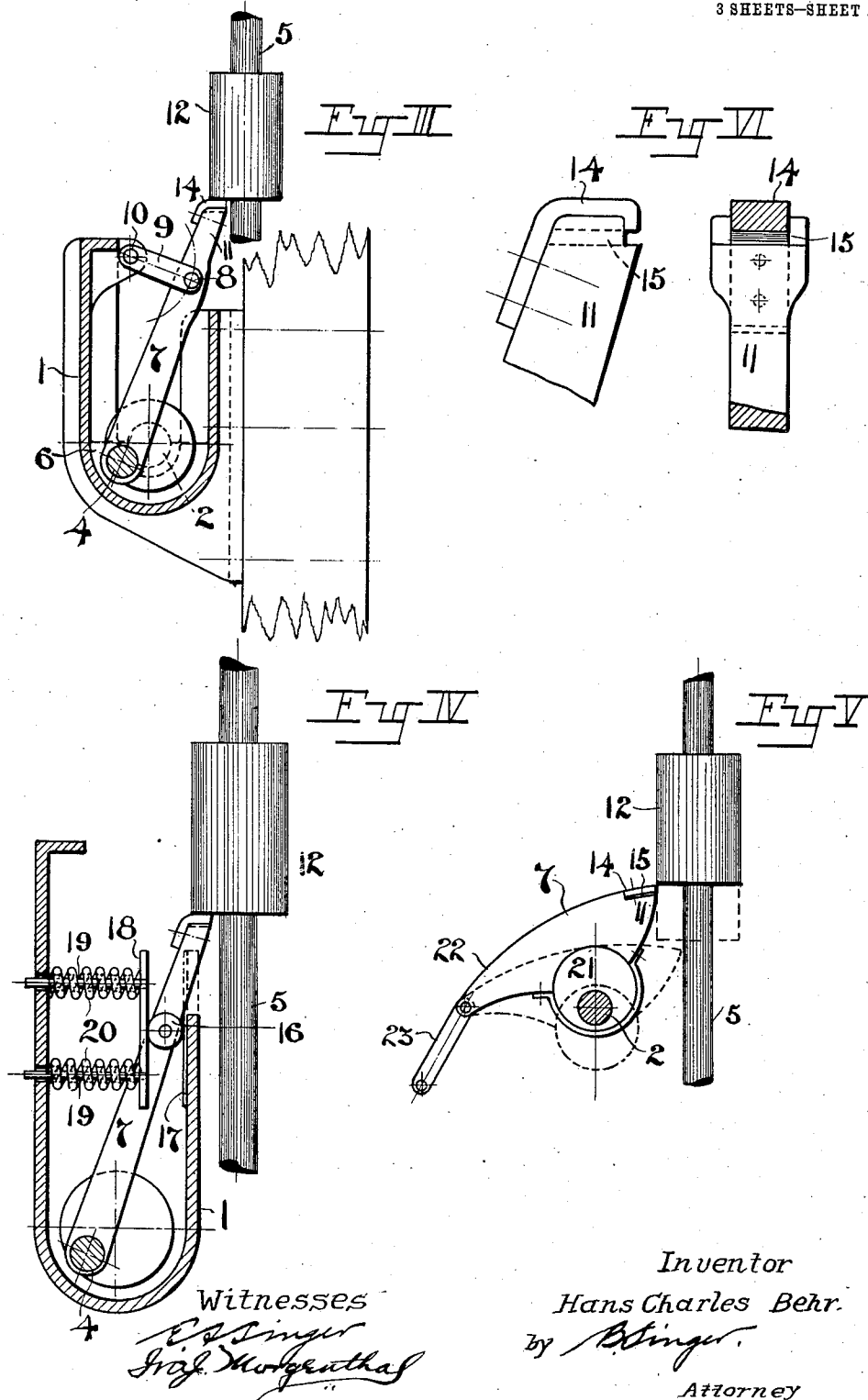
Inventor
Hans Charles Behr
 by *E. A. Singer*
 Attorney

H. C. BEHR.
STAMP ACTUATING MEANS.
APPLICATION FILED JAN. 8, 1909.

1,012,187.

Patented Dec. 19, 1911.

3 SHEETS—SHEET 2.

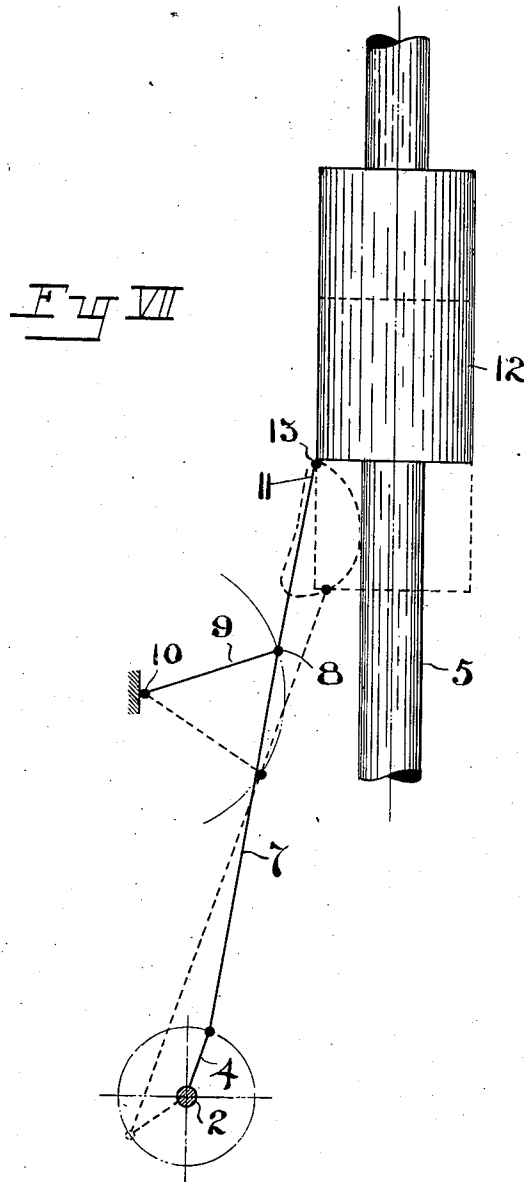


H. C. BEHR.
STAMP ACTUATING MEANS.
APPLICATION FILED JAN. 8, 1909.

1,012,187.

Patented Dec. 19, 1911.

3 SHEETS-SHEET 3.



Witnesses
V. Singer.
Ita J. Morgenthau

Inventor
Hans Charles Behr
by *V. Singer.*
Attorney

UNITED STATES PATENT OFFICE.

HANS CHARLES BEHR, OF JOHANNESBURG, TRANSVAAL.

STAMP-ACTUATING MEANS.

1,012,187.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed January 8, 1909. Serial No. 471,356.

To all whom it may concern:

Be it known that I, HANS CHARLES BEHR, consulting mechanical engineer, a citizen of the United States of America, and residing at Consolidated Goldfields Building, Johannesburg, Transvaal, have invented certain new and useful Improvements in Stamp-Actuating Means, of which the following is a specification.

The present invention relates to devices for actuating ore stamps; the purpose being the provision of means for lifting and releasing the stamps, which is better adapted than the usual cam mechanism, to the actuation of heavy or high velocity stamps.

Mechanism according to this invention, includes a lifter, one point of which is moved in a circular or approximately circular path, and a second point of which is guided in a predetermined linear path which is usually rectilinear or arcuate, with the result that a third point of the lifter is caused to describe a closed circuit in a vertical plane, so as to rise in engagement with a tappet or the like upon the stamp stem and after releasing or parting with the same to return clear thereof.

A stamp battery fitted with the invention, is shown in the accompanying drawing, Figure I being a front elevation with parts in section; Fig. II a plan also partly sectional of the device shown in Fig. I; Fig. III a transverse section; Figs. IV and V similar sections of modified constructions; Fig. VI an enlarged detail view of the end of the lifter; and Fig. VII a diagrammatic representation of the movements of the lifter shown in Figs. I, II and III.

Referring more particularly to Figs. I to III, 1 represents a trough-like supporting frame in which the moving parts are inclosed and which may contain fluid lubricant. Through the lower part of the trough runs a crank shaft 2 or its equivalent driven by an external pulley 3. There are as many cranks 4 as stamps 5; and the shaft 2 is supported on each side of every crank by bearings 6. Coupled to each crank is a more or less vertically disposed lifter 7, a median point 8 of which is guided in an arcuate path by means of a link 9 pivoted at its end 10 to fixed parts.

Upon referring to Fig. VII, it will be seen that as the crank 4 is rotated clock-wise, the free end 11 of the lifter moves in under the tappet 12, lifts the same with a gradual

acceleration of speed and without shock, at the same time slightly rotating it; and after moving laterally and releasing it at point 13, returns clear of the tappet to repeat the movement. It will be readily understood that by varying the proportions and disposition of the parts, the path described by the contacting end of the lifter may be readily varied to suit special requirements. Thus the lateral movement may be altered to increase or decrease the amount of rotation of the stamp; or the effective travel may be shortened but effected at a higher velocity so that the stamp travels on by momentum beyond the lifter. The free end 11 of the lifter may, as shown in Fig. VI, be provided with a renewable wearing shoe 14, and a resilient pad 15 for minimizing shock. It will be noted that the lateral movement of the lifter relative to the tappet being much less than that of a cam, there is comparatively little tendency to shear off and destroy the shoe and pad.

The arrangement shown in Fig. IV, is similar to that described except that the lifter 7 is guided by means of a roller 16 mounted upon it and running upon a guide-way 17 formed upon the inside of the trough 1. The forces acting are such that, normally, said roller is always kept in contact with the guide-way; but to prevent accidental displacement of the lifter, an auxiliary back guide 18 may be fitted. Such back guide may be movably supported on pins 19 and held in place by springs 20, so that in the event of the tappet slipping upon the stem and obstructing the path of the lifter on its return travel, the lifter will thrust out the back guide and so avoid breakage.

In the modified arrangement shown in Fig. V, the lifter 7 is disposed more or less horizontally and the rotative movement is applied, by means of an eccentric cam 21, about its central point; while the requisite more or less elliptical movement is given to the lifting point 11, by constraining the rearward extension 22 of the lifter in an arcuate path, as by means of a pivoted link 23.

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

1. In combination with a stamp, of a tappet therefor, a lifter having a portion for engagement with the tappet, means connected with one portion of the lifter for continu-

ously moving the same up and down and imparting thereto a lateral movement during such up and down movement, and means guiding a median point of the lifter in a linear path for causing the engaging portion to advance beneath and be withdrawn from the tappet during such up and down movement.

2. In combination with a stamp, of a tappet therefor, a lifter having a portion engaging the tappet to lift the same, rotary means for continuously imparting an up and down movement and also a lateral movement to the lifter, and means guiding the lifter for advancing the engaging portion into and withdrawing it from lifting engagement with the tappet.

3. In combination, a stamp, a tappet thereon, a lifter adapted to engage the underside of the tappet to lift the stamp, means for moving one point of said lifter in a circular path in the plane of the lift of the stamp, and means for guiding a second point of the lifter in a linear path, said second point being distant from the tappet engaging portion, said lifter, rotating means and guiding means being arranged wholly upon one side of the stamp.

In testimony whereof I affix my signature in presence of two witnesses.

HANS CHARLES BEHR.

Witnesses:

HENRY HIRST OLDROYD,
WESLEY E. JOHN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
