

(No Model)

J. M. BROWN & N. G. BOGGS.
CORNICE AND EAVES TROUGH BRAKE MACHINE.

No. 583,729.

Patented June 1, 1897.

Fig. I.

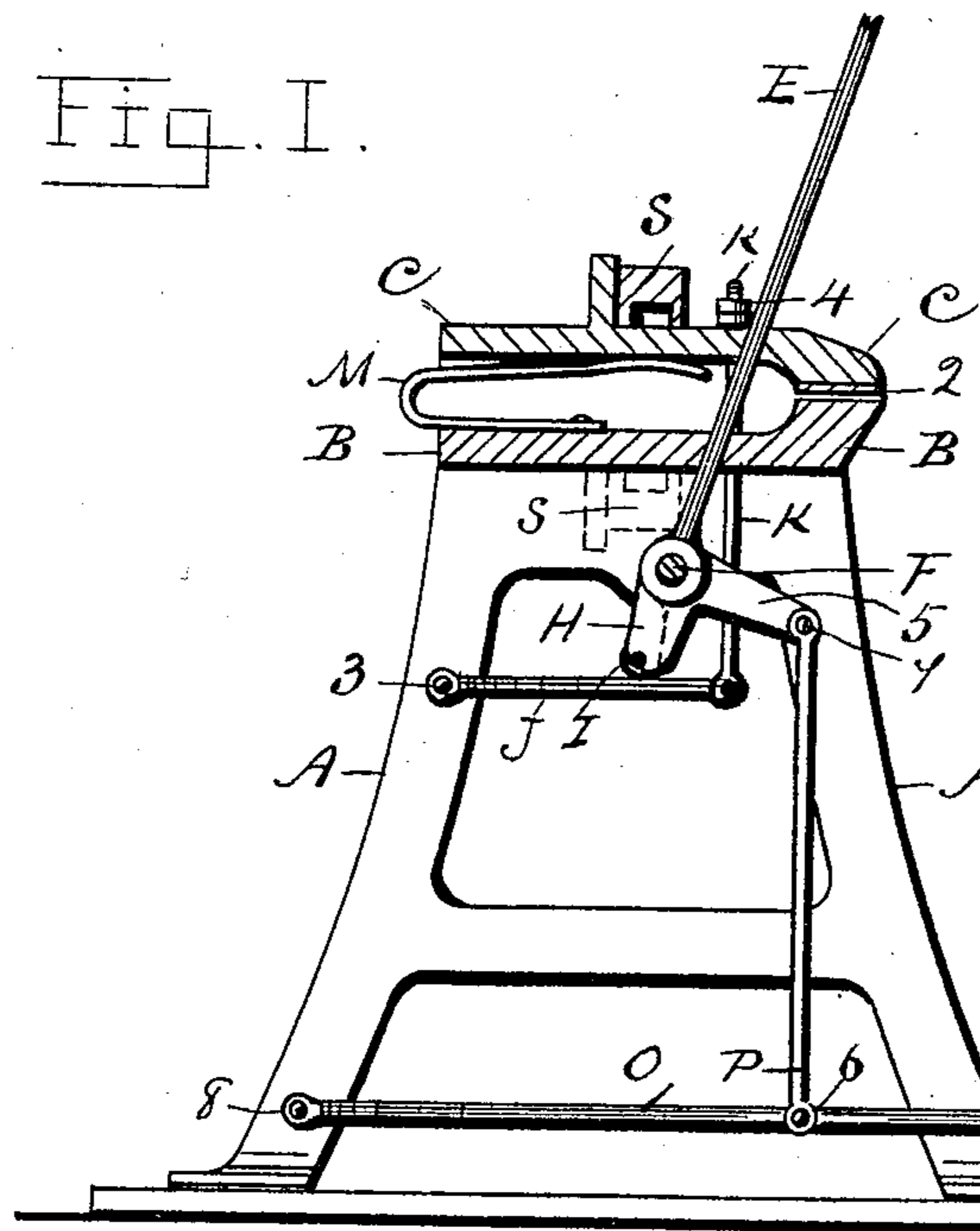
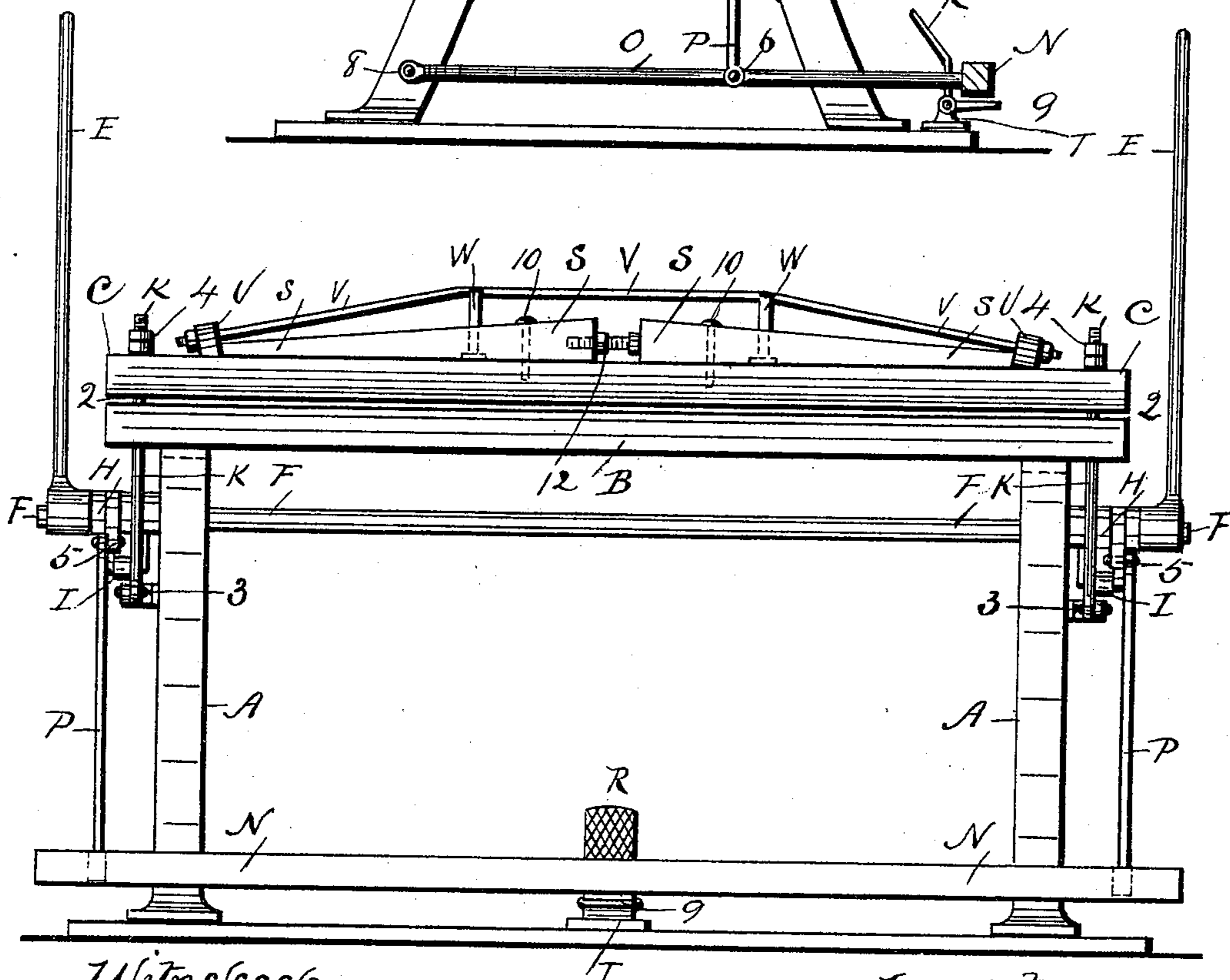
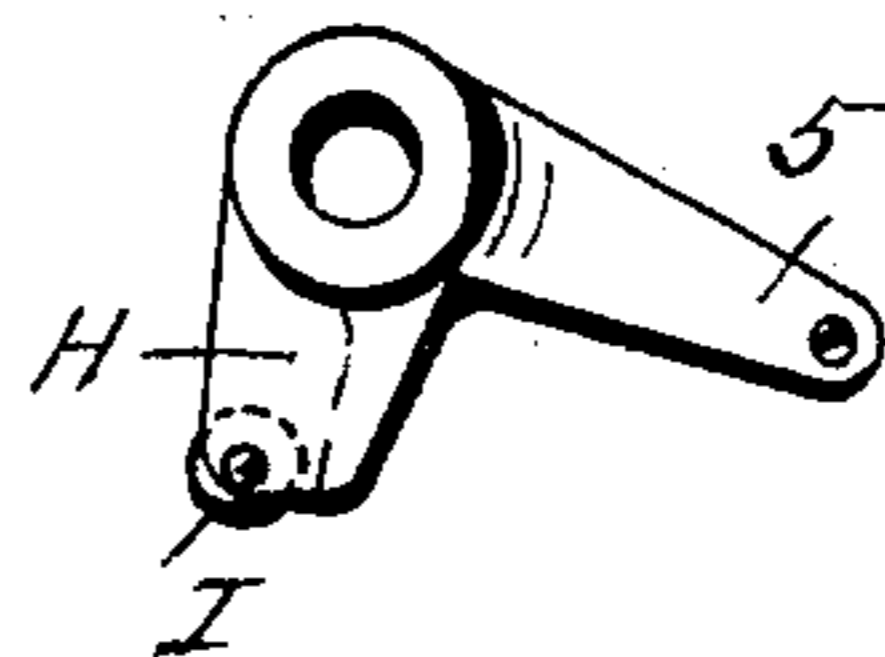


Fig. III.



Witnesses.
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Fig. II.

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UNITED STATES PATENT OFFICE.

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CORNICE AND EAVES-TROUGH BRAKE MACHINE.

SPECIFICATION forming part of Letters Patent No. 583,729, dated June 1, 1897.

Application filed December 14, 1896. Serial No. 615,602. (No model.)

To all whom it may concern:

Be it known that we, JOHN M. BROWN and NATHAN G. BOGGS, citizens of Canada, residing at Hamilton, in the county of Wentworth, in the Province of Ontario, Dominion of Canada, have invented a new and useful Improvement in Cornice and Eaves-Trough Brake Machines, of which the following is a specification.

Our invention relates to improvements in cornice and eaves-trough brake machines in which the same is used principally for bending and curving tin, galvanized iron, and sheet metal for cornice purposes.

The principal and most important elements in this invention consist of the device for operating the upper leaf of the machine, the device for securing and retaining the leaves of a cornice-brake machine in line or parallel position to each other, and the device to release the upper leaf from its assumed pressure upon the work in a moment.

The objects of our improvements are, first, to provide accessible and competent means to operate the upper leaf of the machine in a very efficient manner; second, to secure and retain in the leaves of a cornice-brake machine perfect lines in parallel rigidity in their various and relative positions, and, third, to afford facilities for the proper and perfect operation of the upper leaf and more especially the releasing of the same from its work by means of the operator's foot engaging with mechanism. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an end elevation of a cornice and eaves-trough brake machine, showing our applied improvements. Fig. 2 is a front elevation of the same. Fig. 3 is an enlarged detail or detached roller-cam.

Similar letters and figures refer to similar parts throughout the several views.

In the drawings the two end frames of the machine are indicated by the letter A, the lower rigid leaf, which is supported by said frames, by B, and the upper and adjustable leaf by C. The drawings show the jaws 2 of the upper and lower leaves as in closed and locked position on the work, and in order to open these jaws to a convenient distance apart either one of the end lever-handles E

is pushed to the rear. These lever-handles E are secured, one at each end, to the longitudinal through-rod F, which is journaled in the frame of the machine, and in proximity to these lever-handles, as shown, are the roller-cams H, secured to the said through-rod F.

In order to define our improvements more clearly, we may here state that the upper-leaf operating mechanism (shown at both ends of the machine) are identical in the construction and operation thereof. Therefore we will confine the description principally to one end of the machine.

The lever-handle E is intended to be at the rear of a vertical plane through the shaft or spindle F before the jaws are closed on the work.

The roller-cam H referred to is chambered out to form a cavity to admit a small roller I, which is pivoted to the intact sides of the cam H and has perfect freedom to roll when engaging with the upper part of the lever J, which is considerably narrower than the length of the roller. Therefore the said sides of the cam easily pass the sides of the lever J, which is pivoted to the rear part of frame at 3, and connected to the forward part of this lever J is a rod-bolt K, which passes through suitable openings in the two leaves and is made secure to the upper one by means of check-nut 4. A powerful spring or springs M is introduced between the two leaves in order that the upper leaf may have a tendency to open the jaws 2 when released by an end lever-handle or by means of the front horizontal foot-rail N. This foot-rail is connected to the forward arm 5 of the roller-cam by means of transverse rod O and the connecting-rod P. Said connecting-rod is pivoted to the transverse rod at 6 and to the arm of the cam at 7, and the said transverse rod is pivoted to the lower rear part of frame at 8. In order to open the jaws of the leaves, either the levers E are thrown to the rear of the machine or the front foot-rail N is raised by means of the centrally-located foot elbow-lever R, the upper part of which inclines inwardly to suit the foot, which, when pressed upon, raises the lower bent part 9 of the bent lever, which engages with the under side of the foot-rail and raises the same. Therefore by the aforesaid connections of the foot-rail

to the roller-cam the upper leaf is operated upon and the jaws opened or closed by means of the spring and foot-rail as well as the levers. This bent or elbow foot-lever is pivoted
5 to the rigid bearing T, which is secured to a base-board or floor.

It will be observed that when the jaws of the leaves are closed upon the work the roller of the cam is to the rear of the pivotal center
10 of the cam. This is a very important feature in the construction, for the reason that the leaves are closed and locked upon the work until released by the operator.

S are the tension-bars, their outer ends
15 abutting against the rigid lugs U, and are secured to the leaf by screws 10. These tension-bars are very important in the matter of retaining the leaf to which they are applied in a perfect line. This is accomplished by
20 counteracting the tendency of the tension-rod V upon the leaf. The tension-rod tends to press the leaf slightly convex, and the tension-bars, when screwed slightly apart by
25 means of the screw 12, tend to press the leaf slightly concave, therefore giving strength and rigidity to the leaf. This application of tension-bars is to be applied to one or more leaves of a brake-machine, as the case re-
quires.

30 The lugs U are located in a more forward position on the leaf than the standards W of the tension-rod. Therefore the tension-bars are on a line with lugs U and frontward of the middle and high part of the tension-rod.

35 This general arrangement of mechanism of the machine is very effective in operating the upper leaf, as is also the front foot-rail. The above tension-bars, it will be observed, are heavier at their inner ends than their outer
40 ends. This gives them more strength and stability to perform their function.

What we claim as our invention, and desire to secure by Letters Patent, is—

45 1. In a cornice-brake machine, the combination of a horizontal through-rod journaled in the ends of a frame, and provided with a secured roller-cam located near to each end of the machine, a lever pivoted to the rear of the frame to engage with the roller in the cam,
50 a rod-bolt pivoted to the front end of said lever and secured to the upper leaf of the machine by a check-nut, and operated by lever-handles secured to each end of the horizontal

journaled rod, to operate the upper leaf, substantially as described. 55

2. The combination in a cornice-brake machine, of end-located cams secured to a through-rod journaled in the ends of the machine, the upper leaf connected to said cam by means of a rod-bolt and lever, said lever
60 pivoted to the rear of the frame and engaging with the roller in the cam to operate said leaf by the lever-handles connected to the ends of said through-bar, substantially as described.

3. In a cornice-brake machine a front foot-
65 rail connected to and in combination with the roller-cam, on the through-rod, a transverse rod pivoted to the rear of the frame and supporting the foot-rail, a rod to connect a front arm on said roller-cam, and the said trans-
70 verse rod, substantially as described.

4. In a cornice-brake machine the roller-cam having a front arm connected to the front horizontal rail by means of the pivoted trans-
75 verse rod of said rail and rod connected to said cam-arm and said transverse rod, in combination, substantially as described.

5. In a cornice-brake machine, the roller-cam on the through journaled rod, connected to the front rail by means of cam-arm 5, rod
80 P, connected to said arm and to transverse rod O, pivoted at the rear with the front end secured to said front rail in combination with a foot elbow-lever to engage with and release the foot-rail, substantially as described. 85

6. In a cornice-brake machine, the tension-bars S, their outer ends abutting against the rigid lugs U, of leaf, and their middle and higher ends apart and secured to the leaf of machine, said bars being capable of being
90 forced slightly apart by means of the centrally-located end pressure-screw 12, substantially as described.

7. In a cornice-brake machine, tension-bars having inner ends apart secured to the leaf
95 of machine and capable of end extension by means of a centrally-located screw 12, acting against each inner end, the outer ends abutting the outer end lugs of the leaf forming a part of same, substantially as described.

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Witnesses:

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