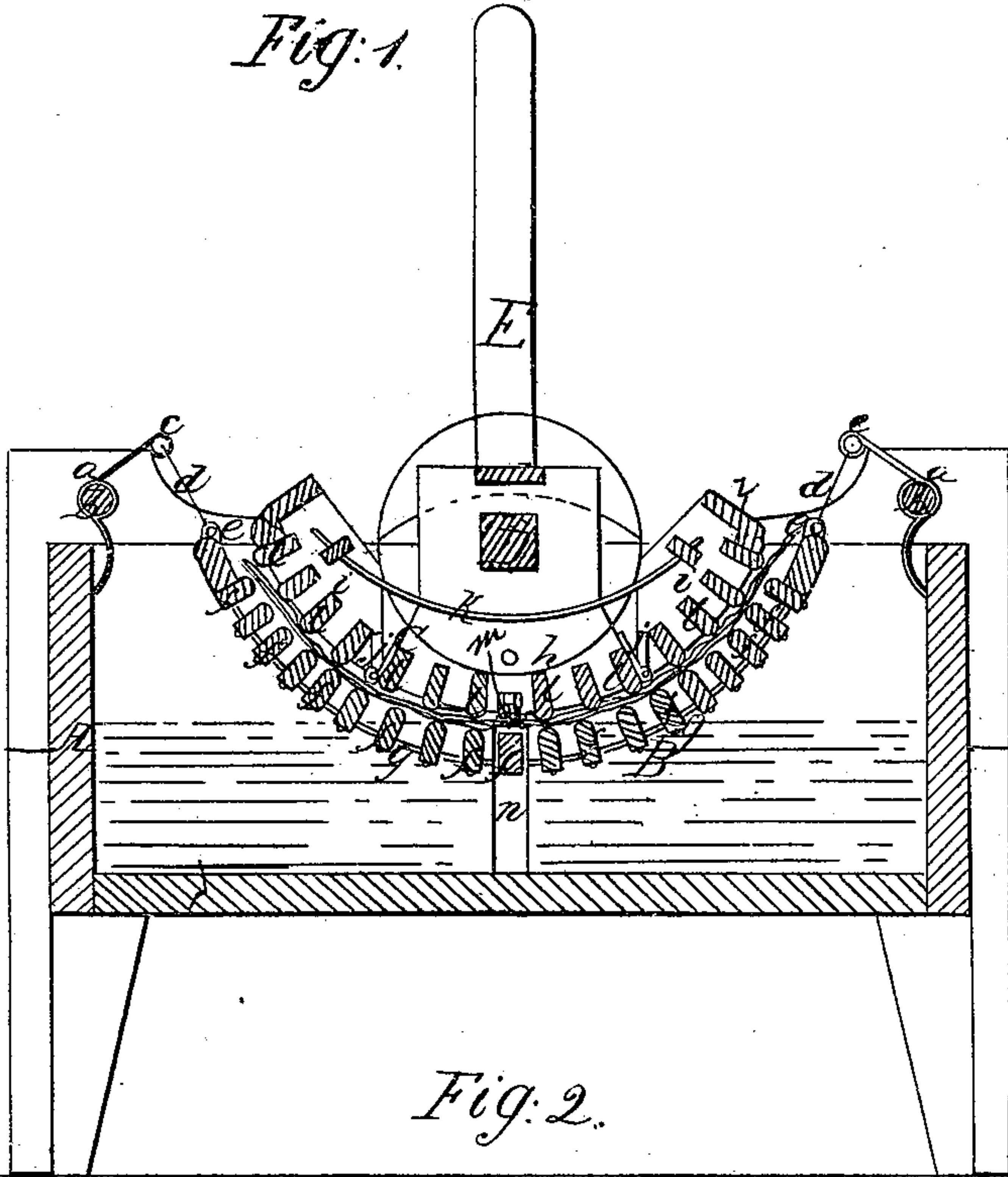


*Washing Machine.*

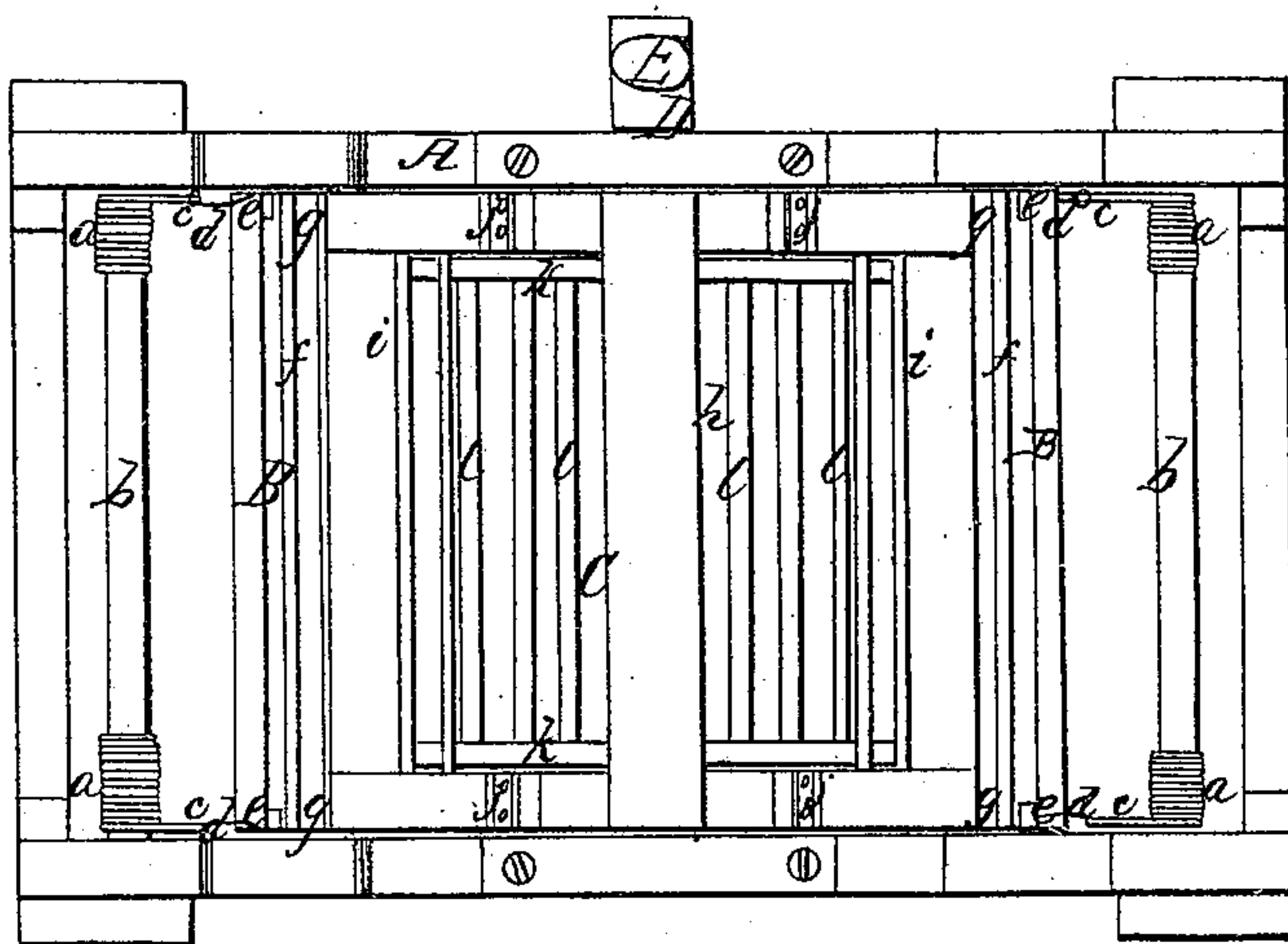
*N<sup>o</sup> 25,887.*

*Patented Oct. 25, 1859.*

Fig: 1.



*Fig. 2.*



Witnesses;

W. E. Colbert  
Mr. L. Mitchell 116

Inventor;  
R. C. Cyphers



# UNITED STATES PATENT OFFICE.

R. C. CYPHERS, OF MILLEDGEVILLE, GEORGIA.

## WASHING-MACHINE.

Specification of Letters Patent No. 25,887, dated October 25, 1859.

*To all whom it may concern:*

Be it known that I, R. C. CYPHERS, of Milledgeville, in the county of Baldwin and State of Georgia, have invented a new and  
5 Improved Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in  
10 which—

Figure 1 represents a longitudinal vertical section of this invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference in both views  
15 indicate corresponding parts.

This invention consists in arranging in combination with a jointed spring rubber having stationary slats, and being attached to a vibrating shaft a suspended concave  
20 with slats pivoted to elastic bands, so that each of these slats has an independent rocking motion, and that by the action of the elastic bands in combination with the springs from which the concave is suspended, the  
25 whole surface of the concave is converted into effective rubbing surface, as will be hereinafter more fully explained.

This invention consists also in the employment of a flexible band or rope for the  
30 purpose of securing the cloth to the rubber, so that the same can be washed at one operation without turning or changing; and it consists further in arranging the central slat of the concave in such a manner that the  
35 same in combination with the grooves in the sides of the tub forms a guide for the concave in its up and down motion.

To enable those skilled in the art to make and use my invention I will proceed to describe its construction and operation.  
40

Arranged in a square box or in a tub, A, is the concave, B. It is suspended from spiral springs, *a*, that are wound on rods, *b*. One end of each of these springs forms a  
45 loop, *c*, which connects by means of cords or chains, *d*, with eyes, *e*, that are secured to the ends of the outer slats of the concave. The other ends of said springs bear against the sides of the tub, A, and they serve to ad-  
50 just the tension of the springs.

The concave is formed of a series of slats, *f*, the ends of which are pivoted to flat and elastic strips, *g*, of sheet metal in such a manner that each slat has its own independ-

ent elastic force, and that the concave is 55 made to exert a continuous and uniform pressure on the clothes independent of the spiral springs from which the concave is suspended. The case is different when the slats of the concave are united by some flexible 60 material such as cloth, leather, etc., for, after a few minutes washing, the hot water so relaxes said material as to make it necessary to tighten up or "re-gear" the machine many times during the operation. Further- 65 more with a concave having its slats connected by some flexible material, when the clothes pass between it and the rubber, the force is very irregular. In the center of the concave the combined force of all the 70 spiral springs, *a*, is brought into action; but this force diminishes in the proportion as the cloth removes from the center toward the ends of the concave, when only two of the springs exert an effective force on the 75 same. And, at the same time, when the strips, *g*, are flexible, the slats are allowed to turn down flat, as the cloth passes over them, and much of the effect of the concave is lost. With my concaves, on the other 80 hand, the slats can turn down only a little ways and they will then recede by the action of the elastic strips, *g*, whereby their effect in cleaning the cloth is greatly enhanced.

In order to make the action of my ma- 85 chine perfectly uniform I have combined with the elastic concave, B, a jointed spring rubber, C. This rubber consists of three parts. The main or central portion, *h*, is rigidly attached to the rock-shaft, D, to 90 which a vibrating motion is imparted by means of the handle, E. Attached to each side of the central portion, *h*, by means of hinges, *j*, is a wing, *i*, and flat springs, *k*, are so arranged that they have a tendency to 95 straighten out the wings, *i*. The slats, *l*, of the rubber are stationary, and if said rubber is placed into the concave it will be noticed that the springs, *k*, of the rubber begin to exert their force just where the 100 springs, *a*, of the concave being to lose their power, so that every inch of the concave is converted into effective rubbing surface.

The clothes are fastened to my spring rub- 105 ber by means of a rope, *m*. The flexibility of the rope admits a greater latitude of motion, so that no part of the cloth can be out



of the reach of friction. Where a stiff rod of wood or metal is used the clothes are pressed down so tightly that immediately under the rod the clothes cannot be washed, 5 so that it becomes necessary to change or turn the clothes several times in order to get them clean, whereas by using a flexible rope in combination with my jointed spring rubber and elastic concave one operation is sufficient to clean the cloth. 10

In order to insure a steady motion of the concave and to prevent its swaying to and fro I have extended the central slat,  $f'$ , beyond the rest, so that it forms guides, which 15 extend into grooves,  $n$ , in the sides of the tub, A.

This machine is unsurpassed as regards the rapidity of the work: there is no tearing off of buttons: no unnecessary strain on the 20 fiber of the cloth, and it is adapted for coarse and fine work with equal facility.

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

1. The arrangement of the elastic suspended concave, B, with slats,  $f$ , pivoted to 25 elastic strips,  $g$ , in combination with the jointed spring rubber, C, substantially as and for the purpose described.

2. In combination with the jointed spring rubber, C, I claim the employment of a flexible band or rope,  $m$ , for the purpose of 30 securing the clothes to the rubber substantially as specified.

3. The arrangement of the central slat,  $f'$ , in combination with the elastic suspended 35 concave, B, and grooves,  $n$ , substantially as and for the purpose set forth.

R. C. CYPHERS.

Witnesses:

W. C. COLBERT,  
W. L. MITCHELL.