

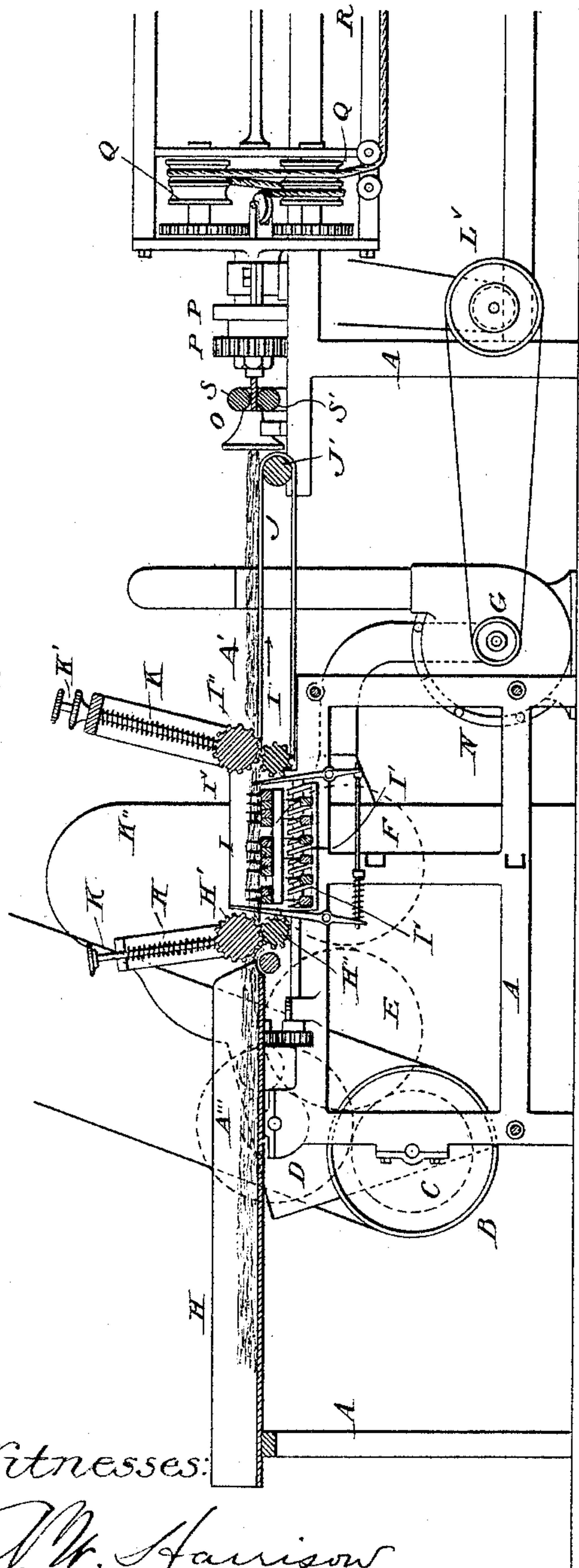
(No Model.)

P. WOLL, Jr.  
MANUFACTURE OF CURLED HAIR.

No. 497,737.

Patented May 16, 1893.

Fig. 1.



Witnesses:

A. W. Harrison  
Alex. Scott

Fig. 2.

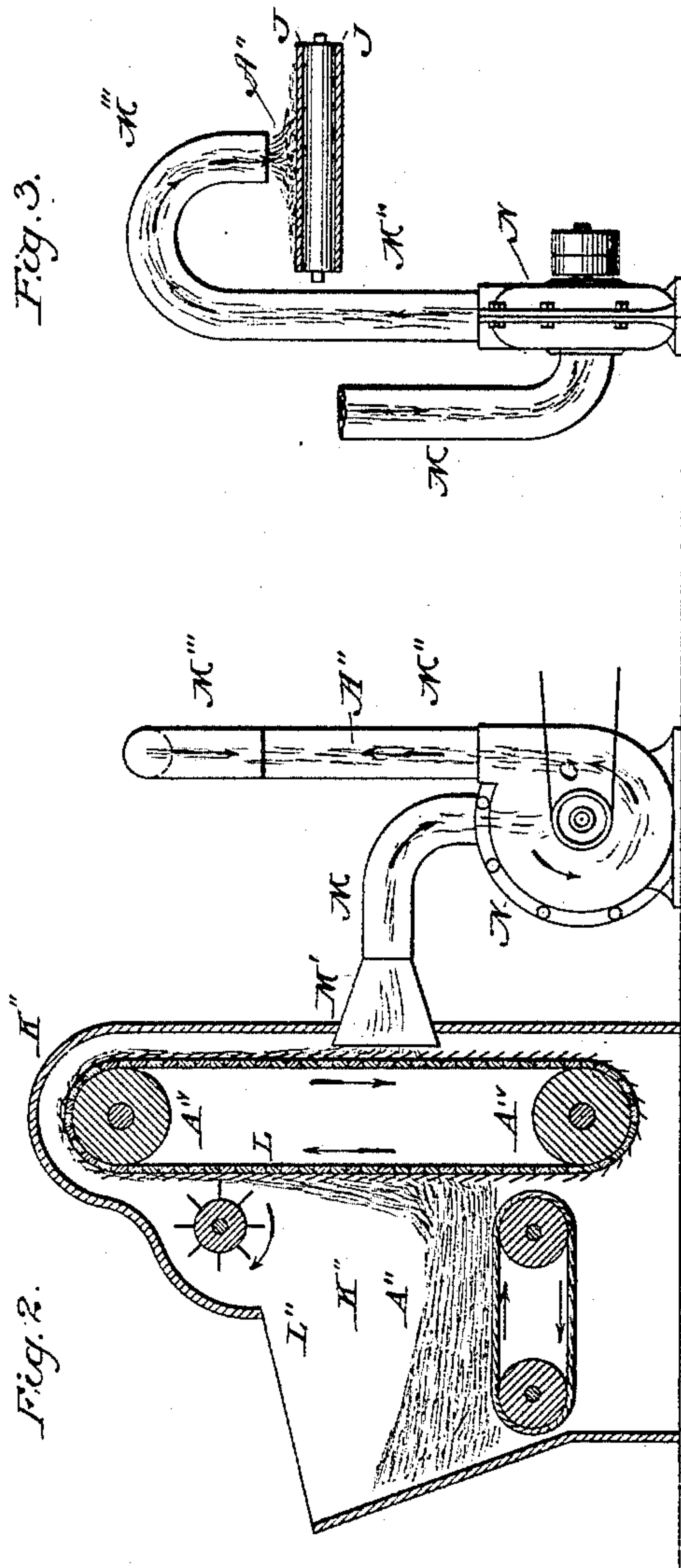
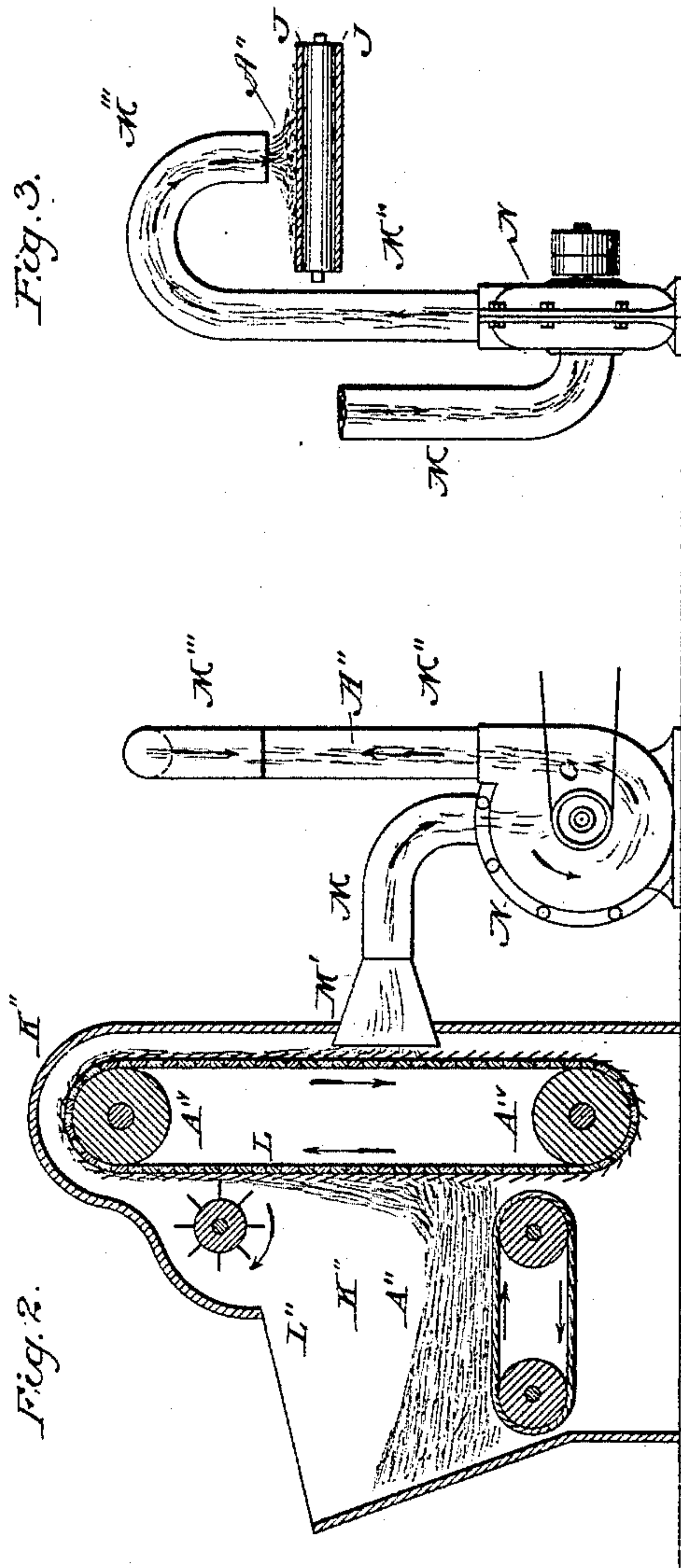


Fig. 3.



Inventor:

Peter Woll Jr.  
by George E. Buckley  
his atty.



# UNITED STATES PATENT OFFICE.

PETER WOLL, JR., OF PHILADELPHIA, PENNSYLVANIA.

## MANUFACTURE OF CURLED HAIR.

SPECIFICATION forming part of Letters Patent No. 497,737, dated May 16, 1893.

Application filed February 27, 1891. Serial No. 383,130. (No specimens.)

*To all whom it may concern:*

Be it known that I, PETER WOLL, Jr., a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Curled Hair, of which the following is a description, reference being had to the annexed drawings, making part hereof.

My invention relates most particularly to the manufacture of what is known as "mixed hair," or hair composed of a mixture of long hair, such as horse hair (from the tail or mane) and short staple, such as hog hair: in short, long and short stapled hair.

The nature of my invention will fully appear from the following description and claims.

In the drawings which shows a machine in which my invention can be practiced:—Figure 1 is a longitudinal elevation of my device, partly in section; Fig. 2, a partial elevation, in part sectional, illustrating the hopper and blower and their parts; Fig. 3, a broken transverse elevation, partly in section; showing the fan or blower and the tube delivering the short hair upon the lap of long hair on the endless apron, which apron carries the lap and the deposit of short hair to the twister.

A, is the frame of the machine.

B, C, D, E, F, L' and G are pulleys and cog-wheels to operate the mechanism. These require no special description here, as they are devices well known to skilled mechanics.

H is a table or platform upon which the long hair A''' (say horse hair) is spread: the latter being thence fed to ordinary feeding rolls (not shown) which are driven by cog-wheels H' H''.

I I' is a combing machine, provided with teeth or combs I' I'. This machine combs and renders nearly parallel the long hairs received from the rolls driven by the wheels H' H''.

I'' I''' are cog-wheels which drive rolls (not shown) which are adapted to receive and draw from the combs the lap formed by the latter and which lap is deposited by the action of said last named rolls upon the endless apron J. The roll directly driven by the cog-wheel I'' carries one part of endless apron J.

J' is a roller carrying another part of apron J.

K K are spiral springs mounted upon rods and adapted, by any desired pressure of said

screws K' K', to bear upon the journals of cog-wheels H' I''.

K'' is a hopper, on one side of the frame, into which is deposited the short hair A'' (hog or cattle hair) intended to be spread upon the lap A'.

A'' A''' are drums for carrying the wire cloth L, which latter is adapted to pick up the hairs A'' from the mass.

L'' is a trimmer roller, armed with teeth or pins to knock off the surplus hair from wire cloth L.

M is a tube provided with a flaring mouth M', which latter opens close to and for the whole width of cloth L.

N is a fan blower which draws from tube M and mouth M' the hair carried over by the endless cloth L.

M'' is a tube, through which the blower N drives the short hair to the curved portion M''' of said pipe or tube N, from which curved delivery mouth piece the short hair is spread upon the lap A'. The short material so dropped is carried with the lap to and into the funnel O, which envelops the short hair within the lap.

P P are cog-wheels.

S S are rolls which bite the roving coming to them and present it to the twisters and curlers.

Q Q are capstans and R R are fliers.

The cog-wheels and central tube, through which latter the lap, now a gasket, passes, twist and curl or spiralize the gasket, and the rolls S S prevent this twist and curl from extending back to the lap. The twisted and curled gasket is taken up by the capstans and delivered to the fliers.

The speeds of the various parts can be regulated, or rather changed by methods well known to all skilled mechanics.

I am well aware of the invention of Leinweber patented May 1, 1866, and I do not claim as my invention the device therein described.

The terms "curling" and "spiralizing," in the art to which this invention relates, are synonymous.

I hereby disclaim all that is shown and known of the prior state of the art but what I claim as new is—

1. The improved method of manufacturing

curled hair which consists in spreading a layer of loose short hairs upon a lap of long hairs, enveloping the loose short hairs by the lap of long hair, then twisting and curling or spiral-  
5 izing the hair, substantially as described.

2. The improved method of manufacturing curled hair, which consists in spreading a layer of loose short hairs upon a lap of long hairs,

then twisting and curling the hairs substantially as described. 10

In witness that the foregoing is my invention I have hereunto set my hand.

PETER WOLL, JR.

Witnesses:

DANIEL SCHLEICH, Jr.,

CHARLES APPLETON.