F. M. CHAPMAN.

MACHINE FOR FORMING PULP BOARD.

APPLICATION FILED MAR. 26, 1908.

910,358

Patented Jan. 19, 1909.

Fig. 1

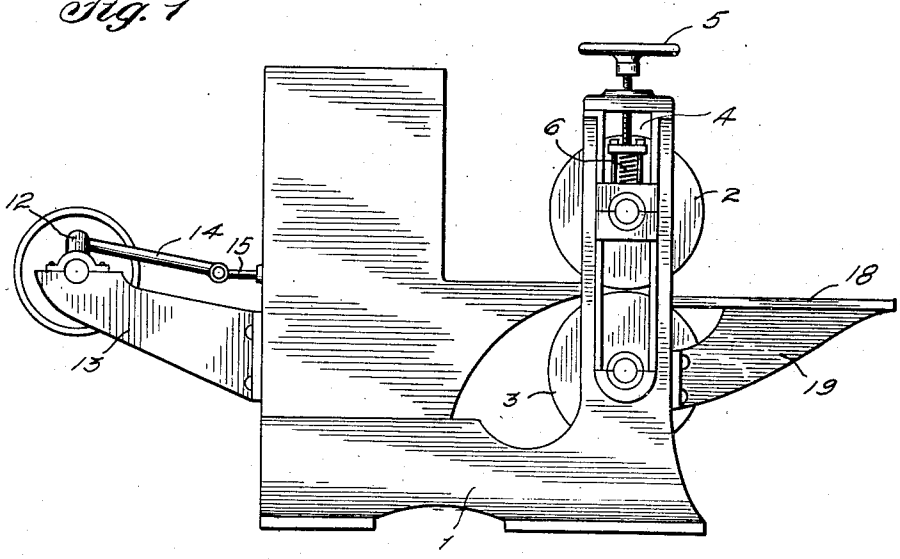
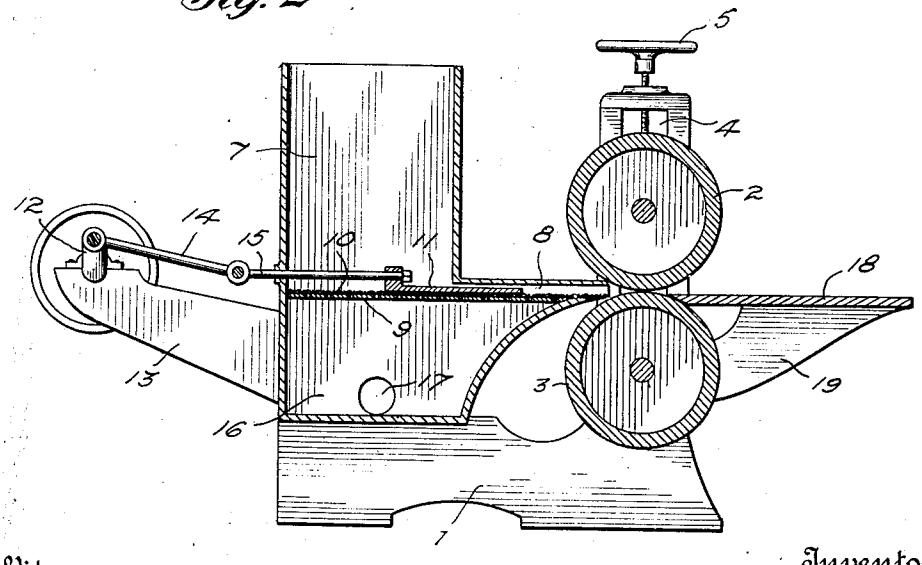


Fig. 2



Witnesses

R. E. Claflin

W. H. Snell.

Inventor

Frank M. Chapman

By Edson Bros

Attorneys

UNITED STATES PATENT OFFICE.

FRANK M. CHAPMAN, OF FORT EDWARD, NEW YORK, ASSIGNOR OF ONE-HALF TO ROBERT McWHORTER, OF FORT EDWARD, NEW YORK.

MACHINE FOR FORMING PULP-BOARD.

No. 910,358. Specification of Letters Patent. Patented Jan. 19, 1909.

Application filed March 26, 1908. Serial No. 423,421.

To all whom it may concern:

Be it known that I, FRANK M. CHAPMAN, a citizen of the United States, residing at Fort Edward, in the county of Washington and State of New York, have invented certain new and useful Improvements in Machines for Forming Pulp-Board; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to machines for forming pulp board used in the art of paper making.

It has for its object to provide an improved construction of wet machine or pulp board forming machine in which no cylindrical mold is employed in the vat.

Other objects of my invention will become apparent from the following description.

The invention consists broadly in providing a reciprocating plunger mounted in the vat and adapted to feed the pulp to the press rollers.

The invention also consists in the features of construction and combinations of parts hereinafter explained and specified in the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention: Figure 1 is a side elevation of a machine constructed in accordance with my invention, and Fig. 2 is a vertical longitudinal section thereof.

In carrying out my invention, I provide a suitable stand or support 1 on one end of which are mounted the upper and lower press rollers 2 and 3, respectively. The bearings for the upper press roller are adjustably mounted in the usual manner in vertical slots 4 in the stand. The pressure of said upper press roller upon the lower press roller is regulated by the hand wheel 5 and spring 6.

The vat 7 is arranged at the rear end of the support with its bottom arranged slightly below the level of the top of the lower press roller. A passage 8 extends horizontally from the bottom of the vat to a point adjacent to the press rollers. The bottom of the vat is a perforated plate 9 over which wire cloth 10 is secured. This perforated plate and wire cloth also extend through the passage 8. The plunger 11 rests upon the bottom of the vat, that is, upon said wire cloth and, when reciprocated, enters the passage 8 and feeds the pulp between the press rollers. The reciprocation of the plunger may be effected in any suitable manner, such as that shown which consists of a crank shaft 12 supported on brackets 13 and to the crank of which is connected the link or arm 14 also connected to the plunger rod 15.

A receptacle or trough 16 is arranged below the vat and the passage leading therefrom to the press rollers, for the purpose of catching the water which drains through the perforated bottom of said vat and passage. This water may be carried off by means of pipe connection with the opening 17.

The table 18 is supported on brackets 19 at the front of the machine and about on a level with the bottom of the vat. In operation, the pulp being placed in the vat in liquid form, part of the water therefrom will be drained off through the perforated bottom of said vat before it is fed to the press rollers. The reciprocation of the plunger, together with its weight serves to always keep the perforated bottom or the screen clear and presses some of the water from the pulp. The principal function of said plunger is to scrape the pulp off of the wire covering the perforated bottom plate and feed said pulp through the passage 8 and between the press rollers. The pulp may be wound on these press rollers or forced in one continuous sheet to the table 18.

It will be readily understood by those skilled in the art to which this invention relates that my machine is extremely simple in construction and much cheaper to manufacture than those now employed for the same work.

It will be noted that I have combined in my machine a screen with means not only to feed the pulp to the press rollers, but also to force said pulp between or through said rollers.

While I have shown and described herein the preferred embodiment of my invention, I do not limit myself to the exact construction and arrangement of parts as changes may be made without departing from the spirit or sacrificing the advantages of my invention.

I claim:

1. In a machine of the character described, the combination, with press rollers and a vat,

of a screen at the bottom of said vat, and a plunger adapted to be reciprocated on said screen to feed the pulp to said rollers.

2. In a machine of the character described, the combination, with press rollers and a vat, of a screen at the bottom of said vat, a plunger adapted to be reciprocated on said screen to feed the pulp to said rollers, and means to catch the water passed through said screen.

3. In a machine of the character described, the combination, with press rollers and a vat having a passage leading to said rollers, of a plunger arranged in said vat and adapted to feed the pulp to said rollers

4. In a machine of the character described, the combination, with press rollers and a vat having a passage at its bottom leading to said rollers, of a plunger adapted to reciprocate on said bottom and in said passage for feeding the pulp to said rollers.

5. In a machine of the character described, the combination, with press rollers and a vat having a passage at its bottom leading to said rollers, a screen at the bottom of said vat, and a plunger adapted to be reciprocated on said screen and in said passage for feeding the pulp to said rollers.

6. In a machine of the character described, the combination, with press rollers and a vat having a passage at its bottom leading to said rollers, a screen at the bottom of said vat and extending through said passage, and a plunger adapted to be reciprocated on said screen for feeding the pulp to said rollers.

7. In a machine of the character described, the combination, with press rollers and a vat having a passage at its bottom leading to said rollers, a screen at the bottom of said vat and extending through said passage, a plunger adapted to be reciprocated on said screen for feeding the pulp to said rollers, and a receptacle extending entirely under the screen for the purpose specified.

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

FRANK M. CHAPMAN.

Witnesses:
RODNEY VAN WORMER,
FRANK H. CRONKHITE.