W. E. BROWN & R. J. SCOVILL.

PAPER MACHINE.

APPLICATION FILED JULY 26, 1909.

964,206. Patented July 12, 1910.

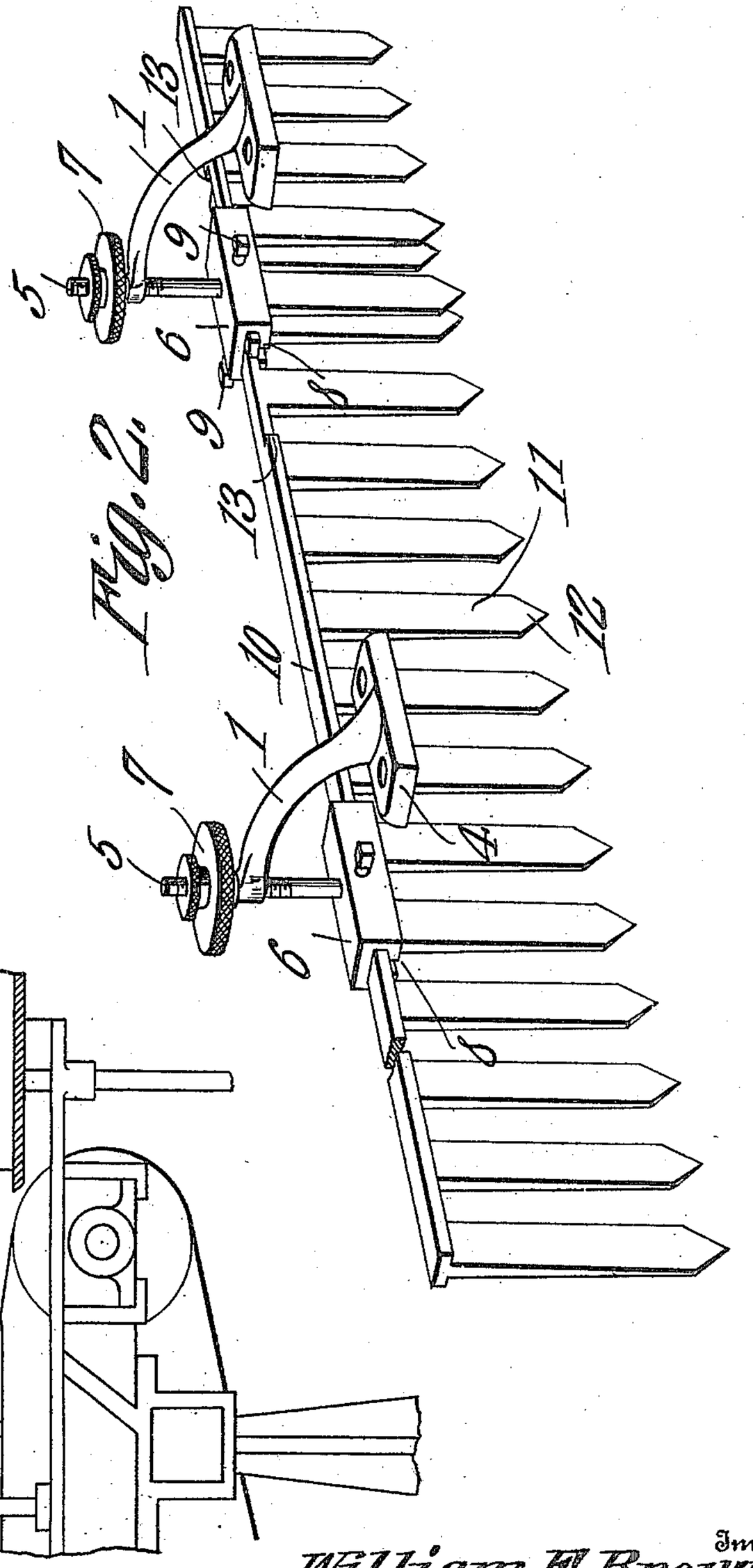

Fig. 2.

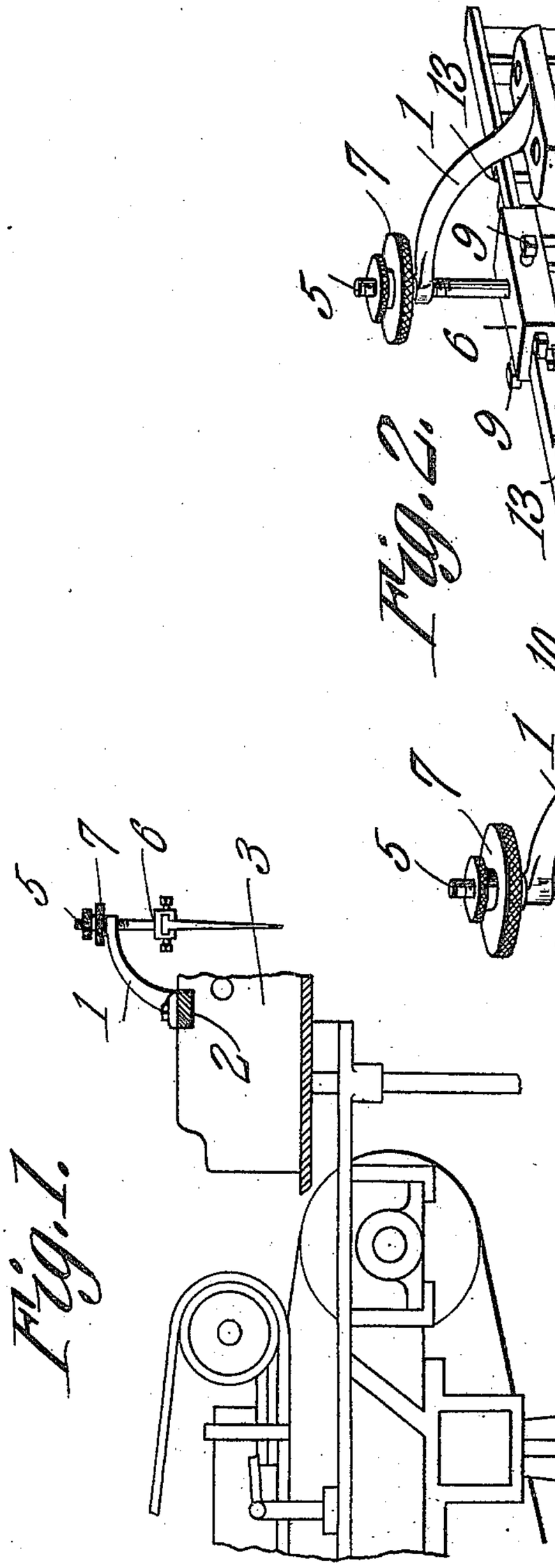

Fig. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

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PAPER-MACHINE.

964,206. Specification of Letters Patent. Patented July 12, 1910.

Application filed July 26, 1909. Serial No. 509,621.

To all whom it may concern:

Be it known that we, WILLIAM E. BROWN and ROYAL J. SCOVILL, citizens of the United States, residing at Glens Falls, in the county of Warren, State of New York, have invented a new and useful Paper-Machine, of which the following is a specification.

This invention is a comb or rack for attachment to the sluice in the flow of a paper making machine, and the object of the invention is to produce a device of simple and efficient construction which will be adjustable to any size of machine, and by the use of which the flow of the stock will be regulated so as to produce a uniform formation of sheet on the wire.

The object of the invention is attained in the use of the device illustrated in the accompanying drawings, and the invention consists in certain novel features of the same as will be hereinafter first fully described and then particularly pointed out in the appended claims.

In the drawings, Figure 1 is a sectional view of so much of a paper making machine as is necessary for a complete understanding of our invention. Fig. 2 is a detail perspective view of the comb or rack detached.

In carrying out our invention, we secure a series of brackets 1 upon a cross bar 2 at the upper edge of the sluice 3 and these brackets are preferably in the form of upwardly curved arms or standards provided at their lower ends with base plates 4 through which suitable fastening bolts may be inserted into the cross bar 2 to secure the brackets in position and provided at their upper extremities with threaded perforations, as will be readily understood.

Mounted in the threaded perforated ends of the brackets 1 are threaded hangers 5 carrying boxes 6 at their lower ends and upon which retaining nuts 7 are mounted above the brackets, said nuts being adapted to be turned home against the brackets so as to adjust the hangers vertically and thereby regulate the depth to which the comb or rack may depend within the flow. The boxes 6 are longitudinally bored and are provided with inturned flanges 8 on their under sides and carry set screws 9 in their sides, as clearly shown. The comb or rack consists of a head or bar 10 adapted to pass through the longitudinal bore of the boxes 6 and be adjustably secured therein by having the set screws 9 turned home against the edges of the bar, the said bar resting upon the flanges 8 of the boxes, as clearly shown in the drawings. From the said head or bar 10 a series of teeth 11 depend, the said teeth having their lower ends tapered, as indicated at 12, and being adapted to separate the fiber or particles of the pulp passing through the flow so as to mix and arrange the fiber of the sheet in order that the finished sheet may possess the maximum strength and uniformity of texture. The rack or comb is disposed transversely in the flow, and in order that it may be adjusted to boxes of various widths it is made in two or more sections having their meeting ends overlapping within the boxes 6, the head or bar 10 of the sections being reduced at the overlapping portion so as to provide the shoulders 13 adapted to be engaged by the ends of the meeting sections and thereby limit the relative movement of the sections.

It will be readily understood that the turning up of the set screws 9 will bind the overlapping ends of the sections firmly together, as well as within the hanger box so that the rack may be quickly brought to the desired length to be accommodated within the box to which it is to be applied.

The operation of the device will, it is thought, be readily understood. The comb or rack is secured in position upon the sluice, as shown and described, and the vibration of the said sluice in the operation of the machine will be imparted directly to the said comb or rack. The movement of the apparatus will cause the teeth of the comb or rack to play in the stock or pulp and thereby break up currents caused by the entrance and flow of the stock into and through the box so that light spots in the stock will be filled up and a uniform quality of sheet produced on the wire. The use of the apparatus also permits long fiber to be employed so that a stronger sheet may be produced than has heretofore been possible. It also permits any variation in the fiber either long or short without serious change and so produces a wider range of safe running.

Having thus described our invention, what we claim is:

1. The combination with the sluice of a paper-making machine, of brackets secured on the sluice, vertically adjustable hangers mounted in the said brackets over the sluice, and an extensible comb or rack ad-

justably secured to the lower end of said hangers.

2. The combination with the sluice of a paper-making machine, of vertically adjustable hangers supported thereon and provided with boxes at their lower ends, and a rack composed of sections having overlapping ends, the said overlapping ends being adjustably secured within the boxes at the lower ends of the hangers.

3. The combination with the sluice of a paper making machine, of a cross bar secured on the sides of the same, brackets secured to and rising from the cross bar, vertically adjustable hangers mounted in the brackets, boxes at the lower ends of the hangers having inturned flanges on their lower sides, and a comb having a head resting on said flanges and adjustably secured in the boxes.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM E. BROWN.
ROYAL J. SCOVILL.

Witnesses:
GEORGE V. BRYANT,
JOHN BAJINET.