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

PAPER MACHINE.

APPLICATION FILED MAY 2, 1910.

985,376.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

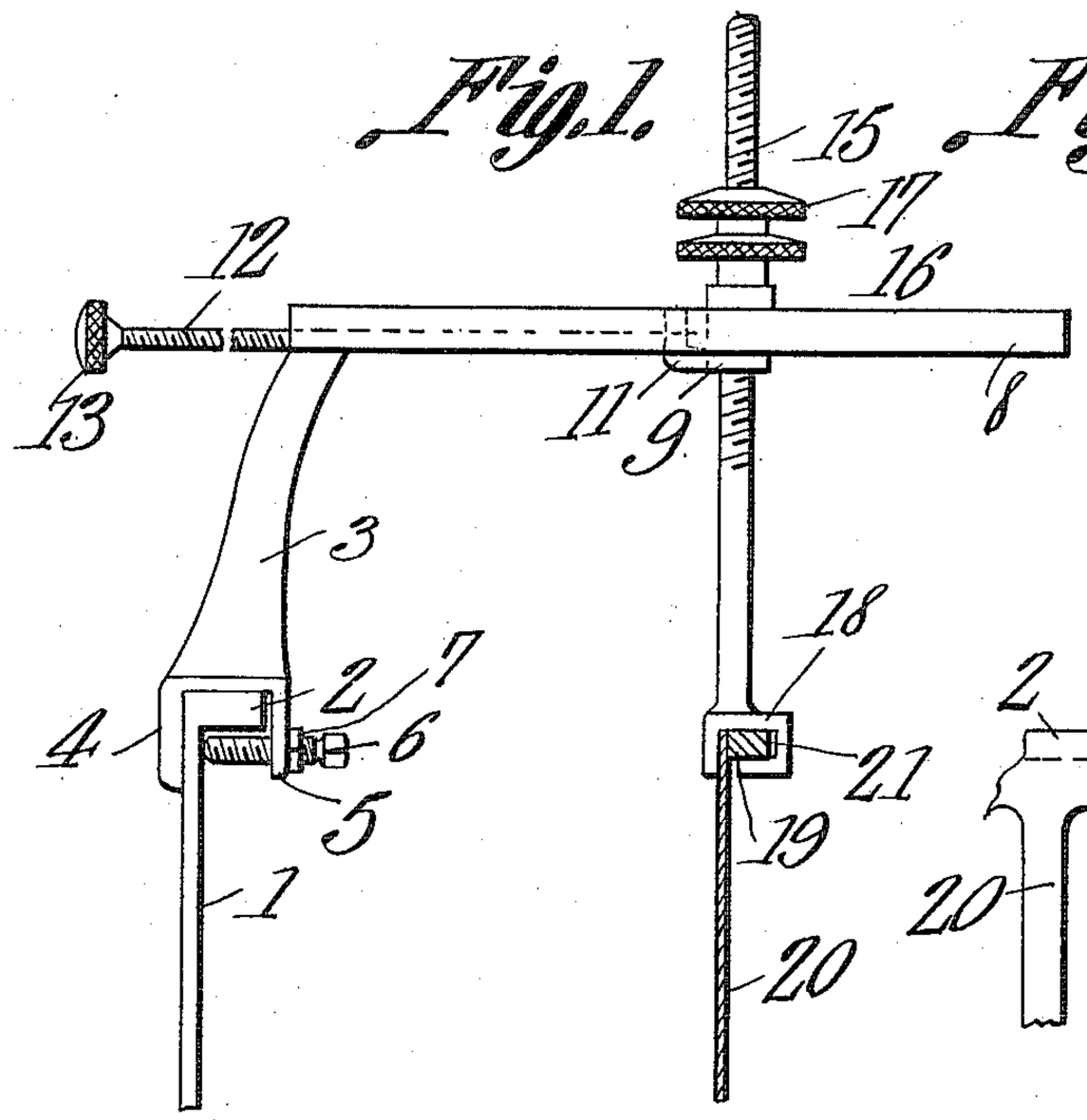


Fig. 2.

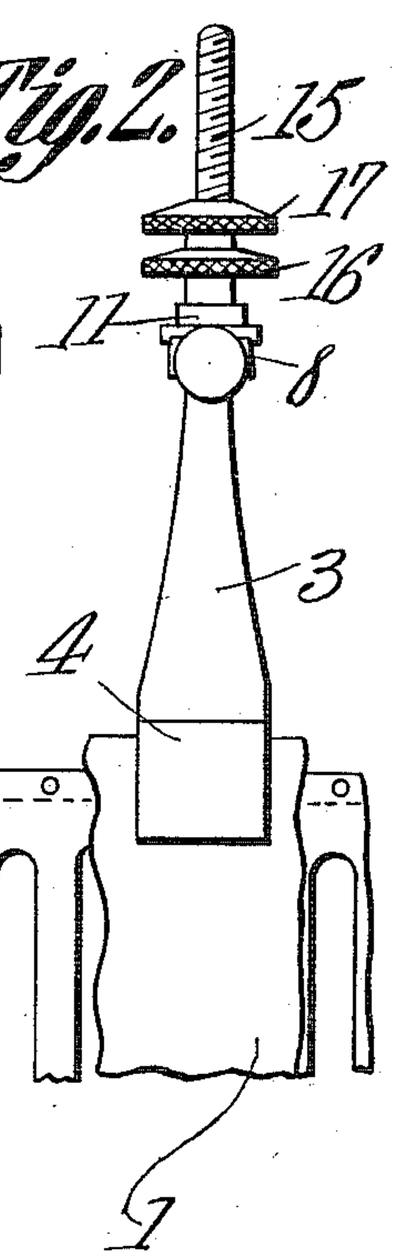


Fig. 6.

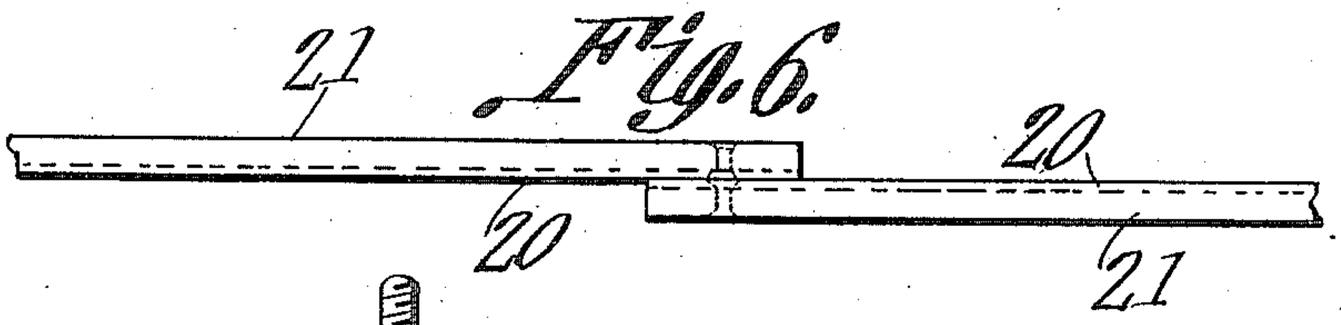
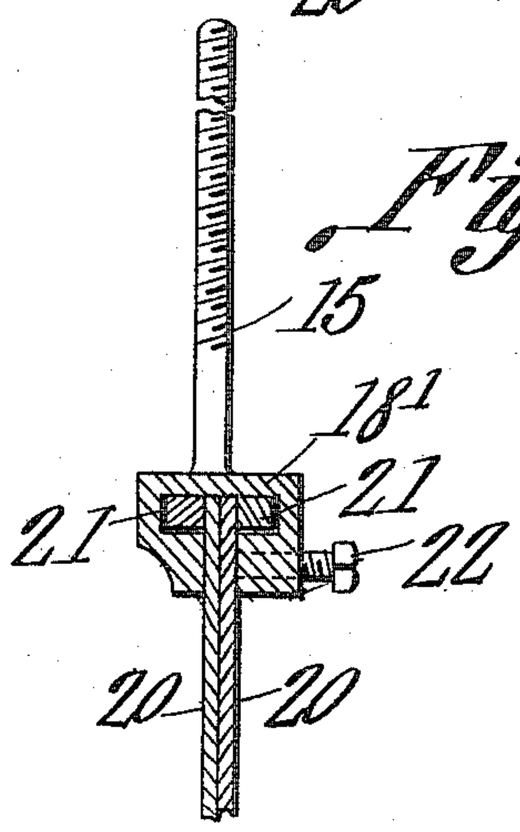


Fig. 5.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

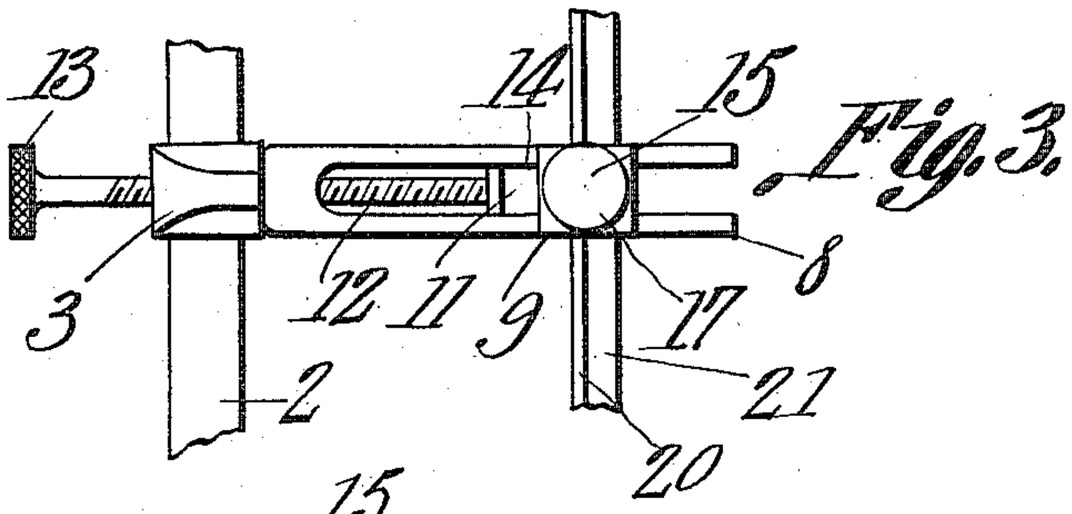


Fig. 8.

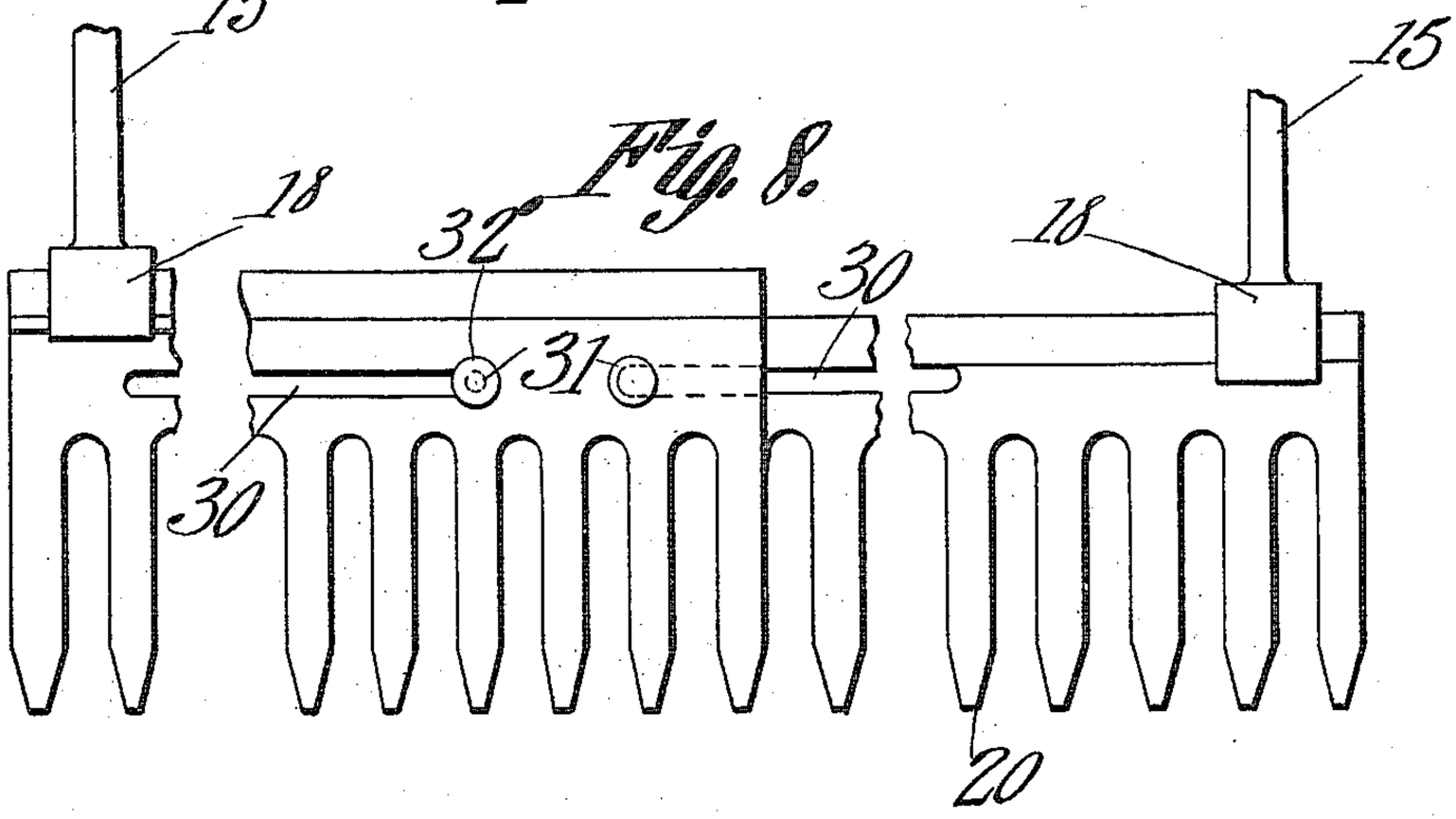


Fig. 7.

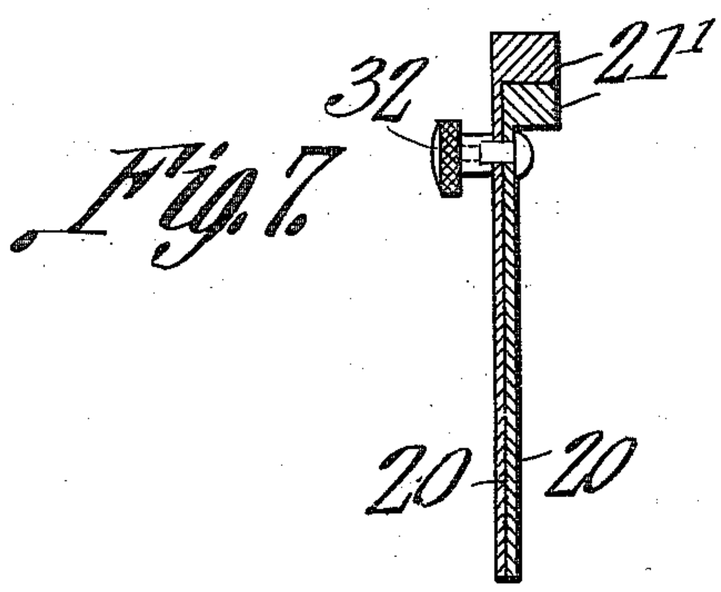
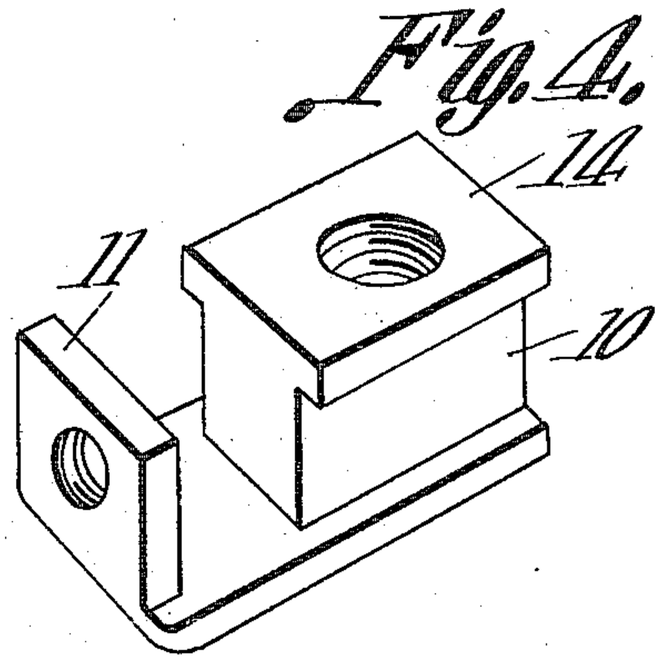


Fig. 4.



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UNITED STATES PATENT OFFICE.

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PAPER-MACHINE.

985,376. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed May 2, 1910. Serial No. 558,832.

To all whom it may concern:

Be it known that we, ROYAL J. SCOVILL and WILLIAM E. BROWN, 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 relates generally to paper machines and particularly to an adjustable sheet formation rack which is to be mounted in the sluice or flow of the paper machine.

The present invention is in the nature of an improvement on the subject matter of our application for improvements in paper machine racks, Serial No. 509,621, filed July 26, 1909, and allowed January 13, 1910.

One of the objects of the present invention is to provide means for readily adjusting the blades of the rack away from or toward the blades of the sluice.

A further object of the invention is to provide means for securing either a vertical or lateral adjustment of the rack members.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the claims without departing from the spirit of the invention.

In the accompanying drawings forming part of this specification:—Figure 1 is a side elevation of the sluice, the rack, and the brackets for adjustably connecting the rack with the sluice. Fig. 2 is a view in elevation taken at a right angle to Fig. 1. Fig. 3 is a plan view of the construction shown in Figs. 1 and 2. Fig. 4 is a detail view of the follower block used between the parallel arms of the brackets shown in Figs. 1, 2 and 3. Fig. 5 is a detail view of the adjustable box in which the sections of the rack are adjustable. Fig. 6 is a plan view of the form of rack used in Fig. 5. Fig. 7 is a view similar to Fig. 5 illustrating a modified construction of rack mounted in the adjustable box. Fig. 8 is a view taken at a right angle to Fig. 7, showing the construction of rack which is used therein.

Like reference numerals indicate corresponding parts on the different figures of the drawing.

The improvements of the present invention are particularly intended for use in connection with a paper machine of the Fourdrinier type.

The reference numeral 1 indicates the sluice which extends transversely across the flow of the paper machine. The sluice 1 may be of any suitable form and construction. Connected with the upper end 2 of the sluice 1 is a bracket 3 having a pair of depending arms 4 and 5. The arm 4, preferably is longer than the arm 5 to engage the rear surface of the blades 1. Extending through the arms 5 is a set screw 6 which is intended to engage under the overhanging portion 2 at the upper end of the sluice. The screw 6 can be locked in position to hold the brackets 3 on the sluice, by means such as the check-nut 7. The bracket 3, as shown best in Fig. 3, is provided at its upper end with two parallel extensions or arms 8—8 between which is slidably mounted a follower block 9 shown best in Fig. 4 of the drawings. The follower block 9 is formed in its sides with grooves 10 which embrace the extensions 8 so as to cause the follower to be slidable thereon. The follower 9 is also provided with an arm 11 through which extends a threaded rod 12 which is threaded through the upper end of the bracket 3 and is provided with a knurled head 13. The threaded rod 12 is provided between the arm 11 and the follower 9 with a head 14 which causes the rod 12 to have a swiveled connection with the follower 9. By rotating the threaded rod 12 by means of the head 13, the follower 9 can be adjusted longitudinally between the extensions or arms 8 so as to regulate the space between the rack, hereinafter described, and the sluice.

Extending vertically through the follower 9 is a threaded rod 15. The threaded hanger

15 extends loosely through the follower 9 and is capable of vertical adjustment therein by means of the buttons 16 and 17 which are threaded on the rod 15 and bear against the upper portion of the follower 9. The button 17 is used to lock the button 16 in any position to which it has been adjusted upon the rod 15. Connected with the lower end of the threaded hanger 15 is a box 18. The box 18 is formed with a transverse passage with which communicates a slot 19. Extending through the slot 19 is one of two members 20 which constitute the rack, said members being adjustable longitudinally with respect to each other. Each of the rack members 20 is provided at its upper end with an overhang 21 located within the box 18 so as to prevent the rack from dropping downward out of the box.

The overhanging portions 21 at the upper ends of the racks 20, as shown in Figs. 5 and 6, may be disposed on opposite sides of the rack members 20. For the purpose of holding the overlapping ends of the rack members 20 in the position to which they have been adjusted, a set screw 22 is provided in the block 18′ in Fig. 5 to engage the rack members 20 below the overhanging portions 21 thereof. It is to be understood, that the rack members 20 only overlap each other adjacent the centers of the flow. For this reason the box 18′ of the hanger 15 in Fig. 5 is constructed so as to receive the overlapping middle portion of the rack members, and the box 18 shown in Fig. 1 is intended to engage one of the rack members 20 adjacent the outer end thereof.

If it be desired to dispense with the double hanger 18′ shown in Fig. 5 for supporting the overlapped middle portion of the rack members 20, the rack members are formed as shown in Figs. 7 and 8. That is to say one of the members 20 is formed with an overhanging portion 21′ which is mounted on a higher plane than the overhanging portions 21′ of the other rack member 20. Moreover each of the rack members is provided with a longitudinal slot 30 and a bolt 31 provided with a button 32. The bolt 31 of each of the rack members 20 projects through the slot 30 of the other rack member and has the button 32 mounted thereon, so that when the two buttons 32 are tightened up the two rack members are locked together to prevent any further longitudinal adjustment of said rack members upon each other. By reason of the fact that the two overhanging portions 21′ of the two rack members fit against each other, it will be obvious that a strong rigid structure is produced and that the action of said structure is to prevent any sagging of the rack members adjacent the center of the sluice.

By using the construction shown in Figs. 7 and 8 the necessity of employing hangers adjacent the center of the sluice is avoided.

It will be obvious that the construction shown herein permits the rack to be longitudinally adjusted so as to fit sluices of different widths and that the rack members can not only be adjusted vertically to regulate the distance which they shall project into the stock, but they can also be adjusted longitudinally away from or toward the sluice.

The improvements of the present invention are strong, simple, durable and inexpensive in construction as well as thoroughly practical and efficient in use. Moreover they can be readily applied to paper machines which are already in use.

It is to be understood that our rack can be made with any number of teeth from one up, and that the teeth may be of any desired shape and form.

What is claimed as new is:—

1. In a device of the character specified, a sluice, brackets connected with the sluice, and a rack supported by said brackets.

2. In a device of the character specified, a sluice, supporting means connected with said sluice, and rack means carried by said supporting means.

3. In a device of the character specified, a sluice, brackets connected with said sluice, followers adjustable horizontally on said brackets, and rack means adjustable vertically on said followers.

4. In a device of the character specified, a sluice, a rack formed in two sections adjustable relatively to each other, and means connecting said rack sections with said sluice.

5. In a device of the character specified, a sluice, a rack formed in two adjustable sections, and adjustable means connecting said rack sections with said sluice.

6. In a device of the character specified, a rack comprising a pair of overlapping sections, each of said sections having an overhanging portion.

7. In a device of the character specified, a rack formed in a plurality of sections overlapping each other, each of said sections having an overhanging portion, a sluice, and means adjustably connecting said rack with said sluice.

8. In a device of the character specified, the combination with a sluice having an overhanging portion, a plurality of brackets fitting over said overhanging portion and having set screws projecting beneath the same, each of said brackets having a pair of parallel extensions, a follower slidable between said extensions, a threaded rod extended through each of said brackets and having a swiveled connection with the fol-

lower between the extensions of said brackets, a threaded rod extending loosely through each follower and having means for suspending the same therein, a box on the lower end of each threaded rod, and rack sections adjustable in said boxes and having overlapping ends.

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

ROYAL J. SCOVILL.
WILLIAM E. BROWN.

Witnesses:
GEORGE F. BRYANT,
FRED C. JACKSON.