Our invention relates to paper machines and a method of handling the trim from the paper machine wire.

Heretofore in the art the method of handling the trim from the paper machine wire has been to squirt the trim from the wire to the couch pit by the arrangement of a squirt, shower and doctor on the first return wire roll. Thence from the couch pit it has been common practice to pump the stock resulting from the trim being mixed with the shower water over a savelii which in turn discharges its stock to the machine chest and its water to the white water system.

An objection to the old art under the old method has been the changing of the character of the stock caused by the addition of trim stock to the system, thereby causing a more difficult handling on the wire due to a variation in freeness and hydration which results in a sheet of paper varying in density and shrinkage characteristics. This results in difficult handling in use, especially on offset presses.

The advantages of our system of handling the trim and our method of operation of the machine are as follows: The trim stock is diluted with white water for return to the system, thereby avoiding a change in color or shade.

Furthermore, the trim stock when handled according to our method, returns to the system without additional and unnecessary processing by the Jordan machine.

The trim stock according to our method is returned to the system with practically the same freeness and hydration as the original stock, resulting in a uniform control of sheet formation, drainage, pressing and drying; the finished sheet is therefore uniform in density, pop, tear and shrinkage characteristics and in freedom from curling.

A further advantage of our method and apparatus is that the expense of installation is small and the amount of power consumed is minor.

And furthermore, there are no difficulties in the control of the weights due to this arrangement.

Referring to the drawing, Figure 1 is a transverse section through the machine looking at the end of the paper and wire, on the line 1—1 of Figure 2.

Figure 2 is a section on the line 2—2 of Figure 1. Figure 3 is a section on the line 3—3 looking in the direction of the arrows, of Figure 2.

Referring to the drawing in detail, 1 is a wire pit and a couch pit. Within the couch pit are mounted spaced hoppers 3 supplied with white water through the pipes 4.

Over the couch pit passes the wire, beneath the spaced deckle squirt nozzles 6, supported by the roll 5, and thence over the couch roll 7 and on its return over the doctor roll 8 beneath the shower 9.

The paper sheet is designated 10, which has severed from its margins by the squirt nozzles 6 the trim 11 which is carried around on the wire beneath the couch roll and over the roll 8. It is loosened from the wire by the shower 9 and scraped therefrom by the doctor 11a. It thence passes downwardly as at 12 into the hopper 3 where it is mixed with the white water supplied by the pipe 4 and thence passes down through the pipe 13 with a centrifugal pump 14 and thence through the pipe 15 to the paper machine.

If desired, the inner walls of the hoppers 3 may be adjustable.

It will be understood that I desire to comprehend within my invention all the modifications necessary to adapt it to varying conditions and uses.

The point of discharge from the pump may be to the paper machine fan pump, the suction riper head box or any point in the system after the Jordan engines. The squirt nozzles are adjustable as to the width of the trim sheet.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a method of manufacturing paper, severing a marginal strip from a paper sheet while on the wire, conveying the severed strip as a trim an additional distance with the wire, removing the trim from the wire, mixing it with white water and returning the mixture to the system after the Jordan engines.

2. In a method of paper making, severing a marginal strip from a paper sheet while on the wire, removing the main sheet from the wire, conveying the severed strip as a trim an additional distance with the wire, removing it from the wire, mixing with white water and returning the mixture to the system after the Jordan engines.

3. In a method of manufacturing paper, severing a marginal strip from the paper sheet while on the wire, conveying the main sheet away from the wire, conveying the severed strip with the wire, spraying the wire and the back of the severed strip to remove it from the wire, and mixing the strip with white water and returning the mixture to the system after the Jordan engines.

4. In a method of manufacturing paper, sever...
2. & the trian stit a trim strip from a sheet while on the wire by a stream of water, separating the main sheet and the trim strip, removing the trim strip by a second spray of water, delivering the trim strip to a mixing chamber, mixing white water therewith, and returning the mixture into the system after the Jordan engines.

3. In combination, a means to remove a trim strip from the wire, means over the lower return of the wire above the trim strip comprising a spray for loosening the strip from the wire, a hopper for receiving the trim strip, and means of conveying white water to said hopper.

4. In combination, a wire, means to remove a trim strip from the wire, means over the wire above the trim strip comprising a spray for loosening the strip from the wire, a hopper for receiving the trim strip, means of conveying white water to said hopper, and means for removing the mixture from the hopper and delivering it into the system after the Jordan engines for further use in the making of paper.

5. In combination, a wire, means for providing a deckle spur for severing a trim strip, means for loosening the trim strip from the wire comprising a water spray, means for guiding the strip into a hopper, and means for supplying water to said hopper.

6. In combination, a wire, means for providing a deckle spur for severing a trim strip, means for loosening the trim strip from the wire comprising a water spray, means for guiding the strip into a hopper, means for supplying water to said hopper, and suction means for removing the mixture of the trim strip and the white water for delivery into another part of the system for making paper.

7. In combination, a pair of spaced hoppers, a couch pit surrounding said hoppers, means of removing trim strips from a wire above the hoppers, means of introducing white water into the hoppers with the trim strips, and means of removing the combined white water and trim strips from the hoppers and delivering the mixture into the system after the Jordan engines for the making of paper.

8. In combination, a foraminous belt, rolls for supporting said belt, a superimposed water spray for severing strips of paper carried on the belt, means of guiding at least one of said strips around one of the supporting rolls with the belt, a water spray for removing the strip so guided from beneath the belt.

9. In combination, a foraminous belt, rolls for supporting said belt, a superimposed water spray for severing strips of paper carried on the belt, means of guiding at least one of said strips around one of the supporting rolls with the belt, a water spray for removing the strip so guided from beneath the belt, means for receiving the strip so removed and mixing it with white water, and means of delivering white water thereto.

10. In combination, a foraminous belt, rolls for supporting said belt, a superimposed water spray for severing strips of paper carried on the belt, means of guiding at least one of said strips around one of the supporting rolls with the belt, a water spray for removing the strip so guided from beneath the belt, means for receiving the strip so removed and mixing it with white water, means of delivering white water thereto, and means of removing by suction such mixture and delivering it to a remote point in the paper making system after the Jordan engines.

11. In combination, a foraminous belt, rolls for supporting said belt, a superimposed water spray for severing strips of paper carried on the belt, means of guiding at least one of said strips around one of the supporting rolls with the belt, a water spray for removing the strip so guided from beneath the belt, means for receiving the strip so removed and mixing it with white water, and means of delivering white water thereto.

12. In combination, a foraminous belt, rolls for supporting said belt, a superimposed water spray for severing strips of paper carried on the belt, means of guiding at least one of said strips around one of the supporting rolls with the belt, a water spray for removing the strip so guided from beneath the belt, means for receiving the strip so removed and mixing it with white water, means of delivering white water thereto, and means of removing by suction such mixture and delivering it to a remote point in the paper making system after the Jordan engines, and a couch pit surrounding said hopper.

13. In combination, a foraminous belt, rolls for supporting said belt, a superimposed water spray for severing strips of paper carried on the belt, means of guiding at least one of said strips around one of the supporting rolls with the belt, a water spray for removing the strip so guided from beneath the belt, means for receiving the strip so removed and mixing it with white water, means of delivering white water thereto, and means of removing by suction such mixture and delivering it to a remote point in the paper making system after the Jordan engines.

14. In combination, a foraminous belt, a dec- kle spur, a guide roll, a couch roll, a trim roll, a shower, a hopper, means of delivering water to the hopper, and means of removing by suction the mixture of trim strip and water from the hopper.