April 29, 1947. F. B. CURTENIUS 2,419,631

PRODUCTION SCHEDULE APPARATUS

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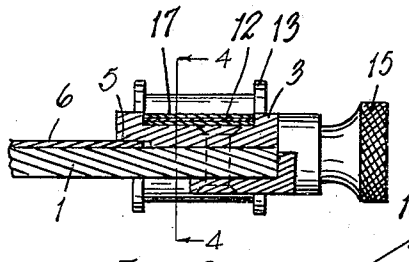


FIG. 3

FIG. 1

FIG. 5

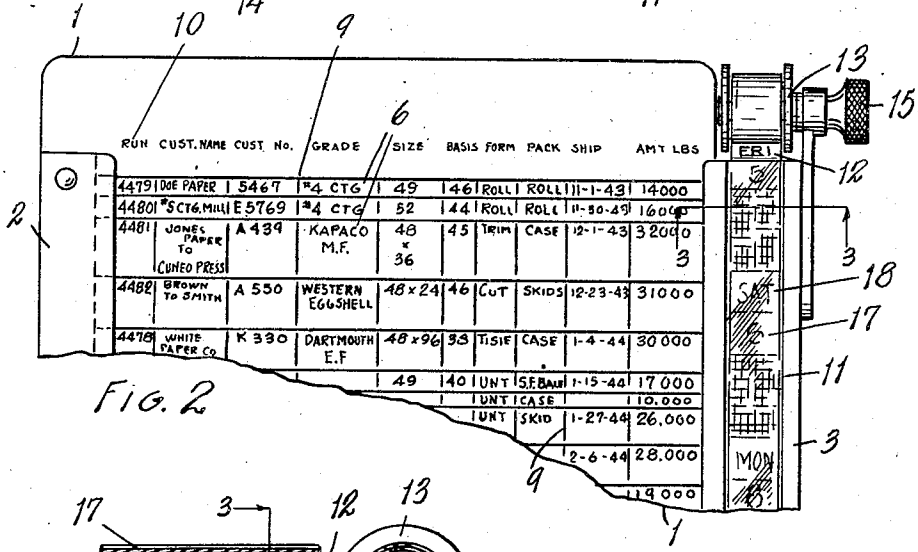


FIG. 2

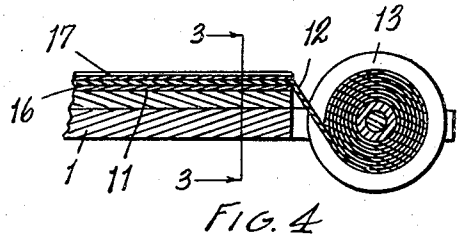


FIG. 4

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PRODUCTION SCHEDULE APPARATUS

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8 Claims. (Cl. 35—24)

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This invention relates to improvements in production schedule apparatus.

The main objects of this invention are:

First, to provide a production schedule apparatus by means of which production and sales may be effectively checked and more effectively synchronized than has commonly been possible.

Second, to provide a production schedule apparatus which quickly provides or furnishes information on unfilled orders which have been lined up for production.

Third, to provide an apparatus of the class described which is particularly adaptable for use where there is a back log of unfilled orders to be produced and enabling the handling of such orders in the most desirable sequence in conformity with both sales and production policies.

Fourth, to provide an apparatus having these advantages which is simple to use and has wide range of adaptability.

Objects pertaining to details and economies of the invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure which embodies the features of the invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a fragmentary perspective view of an apparatus embodying the features of the invention, certain parts being shown in conventional form.

Fig. 2 is a fragmentary plan view of the holder unit with record or information cards representing different orders to be compared arranged therein.

Fig. 3 is an enlarged fragmentary view partially in section on line 3—3 of Fig. 4 showing details of the calendar tape and its supporting and adjusting mechanism.

Fig. 4 is a fragmentary view in section on line 4—4 of Fig. 3.

Fig. 5 is a perspective view of a modified form of calendar tape.

The embodiment of my invention described herein is an adaptation for use in a paper mill. It should be understood, however, at the outset that the invention has a wide range of use and may be adapted to various lines of machine manufacture, particularly where the machines are rated or capable of being rated or scheduled on the time production basis, such for example as production measured by pounds per period or pieces per period.

In the accompanying drawing the plate-like card or strip holder 1 is provided with side pieces

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2 and 3 cut at 4 and 5 to provide inwardly facing opposed groove-like recesses adapted to receive the ends of the record strips or cards 6, these cards being removably, slidably and interchangeably engaged with the holder. The cards 6 are of varying width, the width representing the production as hours production of the machine for which the apparatus is used which, in the embodiment illustrated as stated, is a paper making machine.

In this embodiment there are thirteen sets of cards 6 and to conveniently keep the same in properly sorted relation and convenient to use I provide a cabinet 7 having thirteen compartments or pigeonholes 8 graduated in width to correspond to the width of the cards and to receive cards of corresponding width in stacked relation as shown in Fig. 1.

The cards 6 are vertically ruled in columns 9, the rulings of the several cards arranged in the holder being alined as clearly disclosed in the drawing for purposes of convenient checking and inspection. Corresponding information is entered on each card. For example, the top card shown in Fig. 4 has the number 4474 in the first column indicating the machine run number. The second column indicates the name of the customer, Doe Paper. In the third column the customer's order number 5467 appears, and in the fourth column the grade specification, #4 Ctg., this being the designation of the particular mill. The fifth column indicates the size, 49, and the sixth column the basis weight of the sheet, 46. The seventh column indicates the form in which the paper is to be shipped or prepared, that is, in roll as distinguished from sheet form. The eighth column indicates the manner of packaging as "roll," the ninth column the date of shipment, 11–1, 1943, and the quantity or amount is indicated in the tenth column.

The cards are made up for the particular job or order and the width of the card selected corresponds to the machine time required for filling the order, it being assumed that the machine is run at capacity, which is the practice with paper making machines and many other machines.

The holder 1 is provided at the top with a series of legends 10 corresponding to and indicating the information that is to be placed on the cards. As stated, these cards are slidably, interchangeably and removably supported so that when an order is completed the card may be removed or the cards may be shifted about in the event that is desired to advance an order or delay

it, or if for factory reasons it is desired to run it on the machine on a particular date.

The side piece 3 of the embodiment illustrated is provided with a longitudinal channel 11 adapted to receive the calendar strip 12 which is preferably supported by spools 13 and 14 disposed at the ends of the channel and provided with finger pieces 15 for individual manipulation, that is, this calendar tape or strip may be shifted in either direction. The bottom of the channel is provided with a strip of material 16 to facilitate sliding of the calendar tape with a transparent facing or window strip 17. This calendar tape is divided into spaces 18 corresponding in length to the width of the cards, indicating a 24-hour machine production. Of course, any other unit of time might be employed. This would be varied according to the daily running time or operating time of the particular machine. Paper making machines are commonly run 24 hours a day. The time with most other types of machines varies according to the per day working time in the factory.

The calendar strip preferably bears the days of the week and numerals indicating the day of the month as shown in Fig. 2. In the embodiment shown in Fig. 5 the calendar strip 19 is provided with spaces 20 in which information may be entered to further correlate the particular jobs or orders with the day on which they are to be run.

The cabinet illustrated is provided with a face board 21 having a series of indicia 23 associated with the compartments and indicating approximately the machine production with the hours run indicated in the second series of figures 22. The whole series of cards within the holder may be adjusted longitudinally of the holder together to bring them into approximate alinement with the proper portion of the calendar strip, or the calendar strip may be adjusted to effect such alinement. The apparatus is highly flexible as the result of the removable, interchangeable and slidable association of the cards with the holder and as the result of there being sets of cards of varying width to represent production quantities.

A production schedule apparatus embodying my invention is also highly flexible in that it may be manipulated to meet conditions as they arise, both production and sales conditions, and the sales and production departments can quickly determine just what orders are unfilled or a schedule for a week's production or longer period, if the device is designed for a longer period.

I have illustrated and described the invention in a practical embodiment thereof. I have not attempted to illustrate other adaptations which I contemplate as it is believed this disclosure will enable those skilled in the art to embody the invention as may be desired.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. An apparatus of the class described comprising a plate-like holder having opposed parallel inwardly facing grooves adapted to receive the ends of record cards and removably, interchangeably and slidably support the cards in edge to edge relation, a plurality of sets of record cards of graduated width representing machine hour production, the sets of cards being ruled to provide registering columns when selected cards are arranged in the holder, the columns being adapted to receive machine run, customer identifying and order specifications, quantity and shipping specifications and date indicia, the holder having at the top thereof indicia designating the information indicia to be entered in the corresponding columns of the cards and alined therewith, a calendar disposed at the side of the holder and having 24-hour day spaces of a length corresponding approximately to the combined width of cards representing 24 machine hours production.

2. An apparatus of the class described comprising a plate-like holder having opposed parallel inwardly facing grooves adapted to receive the ends of record cards and removably, interchangeably and slidably support the cards in edge to edge relation, a plurality of sets of record cards of graduated width representing machine hour production, the sets of cards being ruled to provide registering columns when selected cards are arranged in the holder, the columns being adapted to receive machine run, customer identifying and order specifications, quantity and shipping specifications and date indicia, the holder having at the top thereof indicia designating the information indicia to be entered in the corresponding columns of the cards and alined therewith, a channel at one side edge of said holder adapted to receive and slidably support a calendar tape, a calendar tape disposed in said channel and having 24-hour day spaces of a length corresponding approximately to the combined width of cards representing 24 machine hours production, and supporting rollers for said calendar tape arranged at the ends of the channel and provided with individual finger pieces whereby the calendar tape may be adjusted in either direction to register spaces thereof with cards arranged in said holder.

3. An apparatus of the class described comprising a holder adapted to receive and removably, interchangeably and slidably support a plurality of cards in edge to edge relation, a plurality of sets of record cards of graduated width representing machine time production, the sets of cards being ruled to provide registering columns when selected cards are arranged in the holder, the columns being adapted to receive machine run, customer identifying and order specifications, quantity and shipping specifications and date indicia, and a calendar tape slidably mounted at one side of the holder and having 24 hour day spaces of a length corresponding approximately to the combined width of cards representing 24 machine hours production, said tape being adjustable to register spaces thereof with selected cards arranged in the holder.

4. An apparatus of the class decribed comprising a holder adapted to receive and removably, interchangeably and slidably support a plurality of cards in edge to edge relation, a plurality of sets of record cards of graduated width representing machine time production and adapted to receive machine run, customer identifying and order specifications, quantity and shipping specifications and date indicia, and a calendar element having dated time spaces of a length corresponding to one or more cards, said element being adjustable to register dated spaces thereof with selected cards arranged in the holder.

5. An apparatus of the class described comprising a plate-like holder having opposed parallel inwardly facing grooves adapted to receive the ends of record cards and removably, interchangeably and slidably support the cards in edge to edge relation, a plurality of sets of record cards

of graduated width representing machine hours production, the cards being adapted to receive machine run and order information, the holder having at the top thereof indicia designating the information indicia to be entered on the cards and the positioning thereof on the cards, and a calendar disposed at one side of the card holder and adjacent thereto and having time spaces of a length corresponding approximately to the width of a card or cards representing machine hours production.

6. An apparatus of the class described comprising a plate-like holder having opposed parallel inwardly facing grooves adapted to receive the ends of record cards and removably, interchangeably and slidably support the cards in edge to edge relation, a plurality of sets of record cards of graduated width representing machine hours production, the cards being adapted to receive machine run and order information, and a calendar disposed at one side of the card holder and adjacent thereto and having time spaces of a length corresponding approximately to the width of a card or cards representing machine hours production.

7. An apparatus of the class described comprising a holder adapted to receive and removably and interchangeably support a plurality of cards in edge to edge relation, a plurality of cards of graduated width representing machine time production, the cards being adapted to receive order information including quantity, and calendar

indicia disposed at one side of the holder and adjacent one end of the cards arranged therein and having time spaces representing machine hour production as represented by said cards.

8. An apparatus of the class described comprising a holder adapted to receive a plurality of cards, a plurality of record cards of graduated width representing machine production and adapted to receive order information and identification, and a calendar having time spaces associated with said holder.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,522,328	Rogers	Jan. 6, 1925
2,166,853	Ammann	July 18, 1939
2,168,793	Dobbin	Aug. 8, 1939
2,243,209	Hutchison	May 27, 1941
859,052	Dozier	July 2, 1907
1,364,030	Brazeau	Dec. 28, 1920
1,185,538	Rand	May 30, 1916

FOREIGN PATENTS

Number	Country	Date
624,737	French	1927
683,120	German	1939