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**Datasheet for the decision
of 2 November 2017**

Case Number: T 1672/13 - 3.2.06

Application Number: 03012071.1

Publication Number: 1367156

IPC: D02G1/02, D02G1/16, D02G1/20

Language of the proceedings: EN

Title of invention:
Yarn processing apparatus

Patent Proprietor:
AIKI RIOTECH CORPORATION

Opponent:
SSM Schärer Schweiter Mettler AG

Headword:

Relevant legal provisions:
EPC Art. 84, 100(a), 113(1)
RPBA Art. 12(2), 13(1)

Keyword:
Novelty - main request (no)
Late-filed auxiliary requests - admitted (no)

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Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1672/13 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 2 November 2017

Appellant:

(Patent Proprietor)

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Respondent:

(Opponent)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 15 May 2013
revoking European patent No. 1367156 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman M. Harrison
Members: M. Hannam
W. Ungler

Summary of Facts and Submissions

- I. An appeal was filed by the patent proprietor against the decision of the opposition division revoking European Patent No. 1 367 156 in which it found that the subject-matter of claim 1 according to each of a main, a first and a second auxiliary request failed to meet the requirements of the EPC.
- II. The appellant (patent proprietor) requested that the decision be set aside and the patent be maintained as granted, alternatively that it be maintained according to one of auxiliary requests 1 to 6 filed with the appeal grounds.
- III. The respondent (opponent) requested that the appeal be dismissed.
- IV. The following document, referred to by the parties in their submissions, is relevant to the present decision:

E6 DE-A-36 23 370
- V. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that the subject-matter of claim 1 of the main request appeared not to be novel over E6. It further indicated that the subject-matter of claim 1 of each of the auxiliary requests seemed not to meet the requirement of Article 123(2) EPC.
- VI. With letter of 18 September 2017 the appellant filed further auxiliary requests 7 and 8.

VII. Oral proceedings were held before the Board on 2 November 2017, during which the appellant re-ordered all auxiliary requests on file, withdrew auxiliary requests 1, 2, 4 and 5 and filed a new auxiliary request 9.

The final requests of the appellant were thus that the decision under appeal be set aside and the patent be maintained as granted (main request), auxiliarily that the patent be maintained in amended form on the basis of one of auxiliary requests 7 and 8 filed with letter dated 18 September 2017, or on the basis of one of auxiliary requests 3 and 6 filed with the statement of grounds of appeal, or on the basis of auxiliary request 9 filed during the oral proceedings of 2 November 2017.

The respondent requested that the appeal be dismissed.

VIII. Claim 1 of the main request reads as follows, with feature labelling added as referred to by the parties:

(M1) A yarn processing apparatus, comprising:

(M2) a first yarn feeder for feeding at least a yarn to a main frame;

(M3) a yarn processor for processing the yarn;

(M4) a second yarn feeder for feeding a processed yarn;
and

(M5) a winder for winding a fed yarn,

the yarn processing apparatus characterized in that

M6a) each of the first yarn feeder, the yarn processor, the second yarn feeder, and the winder comprises, spindles; and

(M6b) operators for actuating the spindles independently of each other,

(M6c) wherein the spindles and the operators are

assembled as a unit.

- IX. The wording of claim 1 of each of the maintained auxiliary requests is appended at the end of the present decision.
- X. The appellant's arguments relevant to the present decision may be summarised as follows:

Main request

The subject-matter of claim 1 was new. Features M6a, M6b and M6c were not known from E6. The semicolon after 'spindles' in M6a indicated that the operators were to be interpreted as part of the list of all features comprised in the yarn processing apparatus following 'comprising:' in feature M1. As a consequence, the plurality of spindles in feature M6a did not define a plurality within one module, rather only a plurality when seen across the different modules. This was furthermore clear from the understanding of the disclosure of the patent as a whole which, according to Article 69 EPC, had to be considered when interpreting the claims. Feature M2 was also not known from E6, the first yarn feeder being unable to feed a yarn to a main frame if the feeder itself was already attached to the main frame. Even if this latter argument had been presented for the first time with letter of 18 September 2017, the Board was anyway obliged to show that every feature of claim 1 was known from E6 if a finding of lack of novelty over E6 was to be made.

Auxiliary request 7

The subject-matter of claim 1 *prima facie* met the requirement of Article 123(2) EPC. The amendments made to claim 1 were taken from paragraphs [0025], [0045], [0048] and, from the understanding of the entire

disclosure, were all that was necessary. No literal disclosure of the amended features was required. Only those features added to claim 1 would be seen as essential by the skilled person.

Auxiliary request 8

Claim 1 of this request found basis in figures 1 to 3, 5A and 5B, as well as paragraphs [0037] and [0038] and thus complied with Article 123(2) EPC. The skilled person would also understand that only a single feed roller unit was essential to the invention.

Auxiliary requests 3 and 6

Claim 1 of these respective requests could not be considered non-convergent since no higher ranking auxiliary request had been admitted.

Auxiliary request 9

Claim 1 was clear as it simply provided further detail of features already present in higher ranking requests. It should thus be admitted.

XI. The respondent's arguments may be summarised as follows:

Main request

The subject-matter of claim 1 was not new. Claim 1 was so broad that E6 anticipated all its features. The appellant's arguments regarding feature M2 not being known from E6 was a change of case and should not be admitted.

Auxiliary requests 7 and 8

The subject-matter of claim 1 of each of these requests failed to meet the requirement of Article 123(2) EPC. Features added to the respective claims had been

extracted from embodiments in which they were disclosed in combination with other features not adopted into the claims. The requests should not be admitted.

Auxiliary requests 3 and 6

These requests were not convergent with the previously considered auxiliary requests and so should not be admitted.

Auxiliary request 9

Claim 1 was *prima facie* not clear (Article 84 EPC) and so should not be admitted. It was not evident which of the first feed roller units defined as being comprised in the yarn processing apparatus was being referred to as having an operator.

Reasons for the Decision

Main request

1. Novelty
 - 1.1 The subject-matter of claim 1 lacks novelty over E6 such that the ground for opposition under Article 100(a) EPC prejudices maintenance of the patent according to the main request.
 - 1.2 The Board finds, and there were also no counter-arguments from either party, that features M1, M3, M4 and M5 are known from E6. As regards the appellant's argument that the Board was obliged to reason how every feature of claim 1 was anticipated by E6 in order to find its subject-matter lacking novelty, this is not accepted. Such an assumed obligation is a misunderstanding of the appeal process, which has as

its main object, a review of the impugned decision to the extent that the appellant explicitly indicates it to be incorrect. With the appellant having failed to argue at any time that features M1, M3, M4 and M5 were not known from E6, despite the opposition division having found otherwise, a reasoned decision of the Board's finding of these features to be known from E6 is not required.

1.3 As regards the features M6a, M6b and M6c, these are disclosed in E6 through a combination of 'Bearbeitungsstellen' I and II (operating units I and II). Even though a single one of the two 'Bearbeitungsstellen' can be translated into English as an 'operating unit', the Board does not see the claimed expression 'unit' as being so limited as to encompass just a single one of the 'Bearbeitungsstellen'. Rather, a combination of the two 'Bearbeitungsstellen' I and II of E6 are seen as also falling under the broadly claimed expression 'unit'. E6 thus discloses features M6a, M6b and M6c as follows:

- each of the first yarn feeder (28, in each of the 'Bearbeitungsstellen' I and II), the yarn processor (21, in each of the 'Bearbeitungsstellen' I and II), the second yarn feeder (29 in 'Bearbeitungsstelle' I (operating unit I); 30 in 'Bearbeitungsstelle' II), and the winder (10, in each of the 'Bearbeitungsstellen' I and II) comprises spindles (self-evident to the skilled person from Fig. 1 for the yarn feeders and the winder; see col. 4, lines 16 to 20 for the yarn-processor 21); and

- operators for actuating the spindles (see Fig. 2 and col. 4, lines 43 to 48) independently of each other,

- wherein the spindles and the operators are assembled as a unit (see Fig. 1, the 'unit' is taken as a combination of 'Bearbeitungsstellen' I and II).

1.3.1 As regards the appellant's argument concerning claimed feature M6a disclosing spindles only when seen across the different modules, this is not accepted. For the evaluation of novelty, the claimed subject-matter has to be given its broadest, technically reasonable, interpretation. In the present claim 1, even taking into account the semicolon and comma punctuation arguments of the appellant, this claim breadth includes not only the appellant's interpretation of the claim, but also that whereby each and every one of the spindles in the yarn feeders, yarn processor and winder comprise their own operators in order to actuate the spindles independently of each other. As indicated above, such a valid interpretation of claim 1 is anticipated by the two 'Bearbeitungsstellen' I and II being comprised in the yarn processing apparatus of E6.

1.3.2 Even if it were accepted that Article 69 EPC is applicable to the consideration of novelty of the subject-matter of a claim (which it is not), the appellant's contention that using the description to interpret the claims according to Article 69 EPC would exclude the respondent's claim interpretation, is not persuasive. Whilst the preferred embodiment in the description indeed does reflect the interpretation put on claim 1 by the appellant, there is no unambiguous suggestion therein that the respondent's interpretation is in some way excluded or incorrect to thus limit the claim's scope to that suggested by the appellant. As also argued by the respondent, paragraph [0007] of the patent underlines this broad interpretation of claim 1 with the paragraph's wording paraphrasing claim 1 and

clearly encompassing the Board's and respondent's interpretation that each and every one of the spindles in the yarn feeders, yarn processor and winder comprise their own operators.

1.3.3 It is also noted that the term 'unit' in feature M6c is very general and does not support the restricted interpretation put on it by the appellant. A 'unit', in its broadest sense, can perhaps be considered as some form of stand-alone entity; there is no reason why the 'Bearbeitungsstellen' I and II of E6 cannot also be considered as just such a stand-alone entity or unit, these being recognisable from Fig. 1 as a combination of two separate processing positions. The more restricted interpretation sought by the appellant of a single 'Bearbeitungsstelle' representing the entire yarn processing machine is not accepted, particularly with reference to col. 6, lines 37 to 40 in which the arrangement of Fig. 1 with multiple such processing stations is indicated merely to be an example of one possible set-up of the yarn processing machine.

1.3.4 The Board thus finds that features M6a, M6b and M6c are known from E6.

1.4 The change of case relating to the appellant's contention that feature M2 was not known from E6 was not admitted into the proceedings under Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA).

1.4.1 The allegation of the appellant regarding feature M2 was raised in its letter of 18 September 2017 for the first time and thus presents an amendment to its complete case (Article 12(2) RPBA). Any amendment to a party's case may be admitted at the discretion of the

Board (Article 13(1) RPBA). As is established procedure before the Boards, the change of case would be admitted if it were to *prima facie* change the outcome in regards to the objection to novelty i.e. if feature M2 were to be seen at least as *prima facie* novel over E6.

1.4.2 It is noted that the expression 'main frame' in feature M2 is very broad presenting no concrete boundaries for the frame's extent other than it providing a physically supportive function. E6 discloses the main frame of its yarn processing apparatus in col. 3, lines 28 to 31, in which transverse and longitudinal trusses (2, 3) are indicated to make up the machine frame which, in conjunction with Figs. 1 and 2, shows this to be at least part of the main frame of the apparatus. The first yarn feeder 28 of E6 can thus be seen in Fig. 1 to feed the yarn to the main frame.

1.4.3 The appellant's argument that the first yarn feeder could not feed a yarn to a main frame if the feeder itself were already attached to the main frame is not persuasive. With the expression 'main frame' being very unspecific, at least with respect to its exact nature and extent, the Board sees no reason, at least on a *prima facie* basis, for the yarn feeder to not be seen as feeding the yarn to the main frame despite itself being attached to the main frame.

1.4.4 The Board thus exercised its discretion not to admit the appellant's change of case regarding feature M2 into the proceedings (Article 13(1) RPBA).

1.5 In summary, therefore, the Board finds the subject-matter of claim 1 to lack novelty over E6 (Article 54 EPC). The ground for opposition under Article 100(a) EPC thus prejudices maintenance of the patent as

granted (i.e. the appellant's main request).

- 1.6 In its grounds of appeal the appellant alleged it had been deprived of its right to be heard before the opposition division (Article 113(1) EPC) due to an unexpected interpretation of E6. In its communication referenced in point V above, the Board indicated that pages 6 and 7 of the notice of opposition appeared to present precisely the interpretation of E6 on which the novelty objection of the opposition division was based and that the appellant had thus not been deprived of its right to be heard. With no further arguments submitted during oral proceedings on this issue, the Board hereby confirms its preliminary opinion that, with regard to the novelty objection based on E6, the appellant had its right to be heard respected before the opposition division (Article 113(1) EPC).

Auxiliary requests

2. During oral proceedings before the Board, the appellant elected to change the hierarchy of all the auxiliary requests 1 to 8 on file. This was a change of case by the appellant relative to its complete case filed with the grounds of appeal (Article 12(2) RPBA). The admittance of an amendment to a party's case is subject to the discretion of the Board (Article 13(1) RPBA), such discretion being exercised *inter alia* in view of the need for procedural economy. As is established case law of the Boards of Appeal, such procedural economy implies that amended requests which constitute a change of case should at least be *prima facie* allowable in order to be admitted.

In the successive auxiliary requests hereafter, these are dealt with in the order of their hierarchy. The

numbering of the auxiliary requests is, however, maintained as that valid for each auxiliary request at the start of the oral proceedings.

Auxiliary request 7

3. Admittance (Article 13(1) RPBA)

3.1 Claim 1 of this request is based upon claim 1 of the main request with a number of features taken from the description. The basis provided by the appellant for the features added regarding, for example, the operators and spindles of the yarn processor, is paragraph [0048] of the A1-publication (equivalent to the application as filed). However, this passage of the description is a specific embodiment in which the yarn processor comprises motor driven false twisting spindles disposed in a particular manner on a subframe. These features of the claimed yarn processor are disclosed with it in both a functional and structural combination with the consequence that cherry-picking of selected features, such as solely the spindles of the yarn processor and their operators, from this combined disclosure is not *prima facie* compliant with the requirement of Article 123(2) EPC.

3.2 The Board can agree with the appellant that no literal disclosure of the amended features added to claim 1 is required. However, the appellant's reliance on what it termed 'the essential features for the claimed invention', and that only these needed to be included in the claim, is not accepted. As identified in G2/10 when referring to the 'gold' standard for meeting the requirement of Article 123(2) EPC (see Reasons 4.3), an amendment can only be made within the limits of what a skilled person would derive directly and unambiguously,

using common general knowledge, and seen objectively and relative to the date of filing, from the whole of these documents as filed. In the present case, the sole basis for the amendments made regarding the yarn processor is paragraph [0048], and this discloses the features added to claim 1 in combination with many more structurally related features than have been included in claim 1. There is no unambiguous indication to the skilled person in the application as a whole that just the selected features are all that would be needed, and no other features included in the claim compensate for the omission of the features structurally related to those adopted into the claim.

- 3.3 It thus follows that *prima facie* the requirement of Article 123(2) EPC is not met by the subject-matter of claim 1. The Board thus exercised its discretion not to admit auxiliary request 7 into the proceedings (Article 13(1) RPBA).

Auxiliary request 8

4. Admittance (Article 13(1) RPBA)
- 4.1 Claim 1 of this request includes the feature 'the first yarn feeder comprising a feed roller unit'. Figures 1 to 3, 5A and 5B, and paragraphs [0037] and [0038], relied upon by the appellant as the basis for this feature adopted into the claim, disclose four feed roller units 11A, 11B, 11C and 11D such that there is no unambiguous basis for just one single feed roller unit being comprised in the yarn feeder.
- 4.2 The appellant's contention that the skilled person would understand that only a single feed roller unit was essential to the invention is not accepted. Of

importance when considering compliance with Article 123(2) EPC is that the claimed subject-matter is directly and unambiguously derivable from the original application documents (see the reference to G2/10 in point 3.2 above). With no passage of the description having been identified by the appellant where a single feed roller unit is disclosed, and none being evident to the Board, the subject-matter of claim 1 *prima facie* fails to meet the requirement of Article 123(2) EPC.

- 4.3 The Board thus exercised its discretion under Article 13(1) RPBA not to admit auxiliary request 8 into the proceedings.

Auxiliary requests 3 and 6

5. Admittance (Article 13(1) RPBA)

- 5.1 As provided for in Article 13(1) RPBA, the admittance of a request involving a change of case is subject to the discretion of the Board, such discretion being exercised *inter alia* in view of the need for procedural economy. Established case law of the Boards of Appeal views a convergent development of claims from one auxiliary request to the next as at least one requirement of procedural economy.

- 5.2 Claim 1 of the previously considered auxiliary request 8 includes a feature directed to respective operators actuating spindles of the respective first yarn feeder, the yarn processor, the second yarn feeder and the winder independently of spindles of another of the first yarn feeder, the yarn processor, the second yarn feeder and the winder. Such a feature with these specific limitations is not to be found in claim 1 of either of auxiliary requests 3 and 6. As a consequence

these auxiliary requests lack convergence with the higher ranking auxiliary request 8. The procedural complexity associated with a non-convergent set of requests would require the respondent and the Board to now consider requests of a broader scope, at least in certain aspects, to those previously considered, which presents a new, complex situation in which the necessary considerations made in respect of the foregoing, higher ranking auxiliary request would in fact be in vain. Such a 'divergence of direction' in a set of requests, as in the present case, is thus seen as detrimental to procedural economy.

5.3 As regards the appellant's argument that non-convergence could not be considered by the Board to be a factor which would prevent admittance, since no previous auxiliary request had been admitted, is not accepted. Even though the higher ranking auxiliary requests 7 and 8 had not been admitted, they were requests of the appellant which were duly considered by the Board before the conclusion not to admit them was reached. By way of these higher ranking requests having been considered, the direction of the whole set of auxiliary requests of the appellant was established and divergence from this direction thus resulted in auxiliary requests 3 and 6 being non-convergent with their foregoing higher ranking requests.

5.4 The Board therefore exercised its discretion not to admit auxiliary requests 3 and 6 (Article 13(1) RPBA).

Auxiliary request 9

6. Admittance (Article 13(1) RPBA)

- 6.1 Having been filed for the first time during oral proceedings, the admittance of this request was also at the discretion of the Board under Article 13(1) RPBA, the *prima facie* allowability of the request being of importance.
- 6.2 Claim 1 is directed to a yarn processing apparatus comprising *inter alia* first feed roller units. The claim further defines 'the operator of the first feed-roller unit', yet it is unclear which one of the plurality of first feed roller units defined in the claim as being comprised in the yarn processing apparatus is being referred to. The further features included in claim 1 fail to clarify this.
- 6.3 The appellant's contention that the claim was simply providing further details of features already present in claim 1 of higher ranking requests does not address this lack of clarity. Even if it were possible to understand from the description which of the plurality of first feed roller units had an operator, Article 84 EPC requires the claim itself to be clear which, at least *prima facie*, was not the case here.
- 6.4 The Board thus exercised its discretion under Article 13(1) RPBA not to admit auxiliary request 9 into the proceedings.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



M. H. A. Patin

M. Harrison

AUXILIARY REQUEST 7

1. A yarn processing apparatus, comprising:

a first yarn feeder for feeding at least a yarn to a main frame;

a yarn processor for processing the yarn;

a second yarn feeder for feeding a processed yarn; and

a winder for winding a fed yarn,

the yarn processing apparatus is characterized in that

each of the first yarn feeder, the yarn processor, the second yarn feeder, and the winder comprises, spindles; and the yarn processing apparatus is characterized by operators, each of the respective operator of the operators is for actuating the spindles of the respective first yarn feeder, the yarn processor, the second yarn feeder, and the winder independently of spindles of another of the respective first yarn feeder, the yarn processor, the second yarn feeder, and the winder,

wherein respective spindles and the operators of different ones of the respective first yarn feeder, the yarn processor, the second yarn feeder, and the winder are assembled as a unit.

AUXILIARY REQUEST 8

1. A yarn processing apparatus, comprising:

a first yarn feeder for feeding at least a yarn to a main frame, the first yarn feeder comprising a feed-roller unit (11A, 11B, 11C, 11D), which comprises a feed-roller frame (55), a driving motor (65) serving as operator and a plurality of feed rollers (63) serving as spindles, which are rotatably supported on the feed-roller frame (55) and commonly driven by the driving motor (65);

a yarn processor for processing the yarn, the yarn processor comprising a spindle unit (19) having a spindle unit frame (127), a spindle driving motor (139) serving as operator and a plurality of false-twisting spindles (131) disposed on the spindle unit frame (127) and commonly driven by the spindle driving motor (139);

a second yarn feeder for feeding a processed yarn, the second yarn feeder comprising a second feed-roller unit (21), the second feed-roller unit (21) comprising a feed-roller frame (55), a driving motor (65) serving as operator and a plurality of feed rollers (63) serving as spindles, which are rotatably supported on the frame (55) and commonly driven by the driving motor (65);

a winder for winding a fed yarn, the winder having a winding machine unit (35) for winding yarns (Y) processed by the yarn processor; and

each of the first yarn feeder, the yarn processor, the second yarn feeder, and the winder comprises,

spindles; and the yarn processing apparatus is characterized by operators, each of the respective operator of the operators is for actuating the spindles of the respective first yarn feeder, the yarn processor, the second yarn feeder, and the winder independently of spindles of another of the respective first yarn feeder, the yarn processor, the second yarn feeder, and the winder,

wherein respective spindles and the operators of different ones of the respective first yarn feeder, the yarn processor, the second yarn feeder, and the winder are assembled as a unit .

AUXILIARY REQUEST 3

1. A yarn processing apparatus, comprising:

a first yarn feeder for feeding at least a yarn to a main frame, the first yarn feeder comprising a plurality of feed-roller units (11A, 11B, 11C, 11D), each feed-roller unit (11A, 11B, 11C, 11D) comprising a feed-roller frame (55), a driving motor (65) and a plurality of feed rollers (63) rotatably supported on the feed-roller frame (55) and commonly driven by the driving motor (65);

a yarn processor for processing the yarn, the yarn processor comprising a spindle unit (19) having a spindle unit frame (127), a spindle driving motor (139) and a plurality of false-twisting spindles (131) disposed on the spindle unit frame (127) and commonly driven by the spindle driving motor (139);

a second yarn feeder for feeding a processed yarn, the second yarn feeder comprising a second feed-roller unit (21), the second feed-roller unit (21) comprising a feed-roller frame (55), a driving motor (65) and a plurality of feed rollers (63) rotatably supported on the frame (55) and commonly driven by the driving motor (65);

a winder for winding a fed yarn, the winder having a winding machine unit (35) for winding yarns (Y) processed by the yarn processor; and

the main frame (3) having a plurality of pre-specified positions; and

a bracket (9B) extending horizontally from the main frame (3),

wherein the feed-roller frames (55) of the first yarn feeder are removably disposed on the bracket (9B) at predetermined intervals, and

the spindle unit frame (127) of the yarn processor and the feed-roller frame (55) of the second yarn feeder are removably installable to any of the pre-specified positions of the frame (3),

wherein each of the first yarn feeder, the yarn processor, the second yarn feeder and the winder comprises

spindles; and

operators for actuating the spindles independently of each other,

wherein the spindles and the operators are assembled as a unit,

wherein the spindle unit (19) of the yarn processor is removably installed on the frame (3) and replaceable by a processing box unit (45) comprising a processing unit frame (145L, 145R) and a plurality of processing boxes (153) disposed on the processing unit frame (145L, 145R).

AUXILIARY REQUEST 6

1. A yarn processing apparatus, comprising:

a first yarn feeder for feeding at least a yarn to a main frame, the first yarn feeder comprising a plurality of feed-roller units (11A, 11B, 11C, 11D), each feed-roller unit (11A, 11B, 11C, 11D) comprising a feed-roller frame (55), a driving motor (65) and a plurality of feed rollers (63) rotatably supported on the feed-roller frame (55) and commonly driven by the driving motor (65);

a yarn processor for processing the yarn, the yarn processor comprising a spindle unit (19) having a spindle unit frame (127), a spindle driving motor (139) and a plurality of false-twisting spindles (131) disposed on the spindle unit frame (127) and commonly driven by the spindle driving motor (139);

a second yarn feeder for feeding a processed yarn, the second yarn feeder comprising a second feed-roller unit (21), the second feed-roller unit (21) comprising a feed-roller frame (55), a driving motor (65) and a plurality of feed rollers (63) rotatably supported on the frame (55) and commonly driven by the driving motor (65);

a winder for winding a fed yarn, the winder having a winding machine unit (35) for winding yarns (Y) processed by the yarn processor; and

the main frame (3) having a plurality of pre-specified positions; and

a bracket (9B) extending horizontally from the main frame (3),

wherein the feed-roller frames (55) of the first yarn feeder are removably disposed on the bracket (9B) at predetermined intervals, and

the spindle unit frame (127) of the yarn processor and the feed-roller frame (55) of the second yarn feeder are removably installable to any of the pre-specified positions of the frame (3),

wherein each of the first yarn feeder, the yarn processor, the second yarn feeder and the winder comprises

spindles; and

operators for actuating the spindles independently of each other,

wherein the spindles and the operators are assembled as a unit.

AUXILIARY REQUEST 9

1. A yarn processing apparatus, comprising:

a first yarn feeder for feeding at least a yarn to a main frame, the first yarn feeder comprising first feed-roller units (11A, 11B, 11C, 11D), each first feed-roller units (11A, 11B, 11C, 11D) of the first feed-roller units (11A, 11B, 11C, 11D) comprises a first feed-roller frame (55), a first feed roller shaft (61) which is rotatably supported on the first feed-roller frame (55), a first feed roller driving motor (65) serving as operator and a plurality of first feed rollers (63) serving as spindles, which are fixed at the first feed roller shaft (61) and commonly driven by the first feed roller driving motor (65), which is coupled to the first feed roller shaft (61);

a yarn processor for processing the yarn, the yarn processor comprising a spindle unit (19) having a spindle unit frame (127), a spindle driving motor (139) serving as operator and a plurality of false-twisting spindles (131) disposed on the spindle unit frame (127) and commonly driven by the spindle driving motor (139), wherein the spindle driving motor (139) is coupled to the plurality of false-twisting spindles (131) via a driving pulley (137) such that the false-twisting spindles (131) are commonly driven by the spindle driving motor (139);

a second yarn feeder for feeding a processed yarn, the second yarn feeder comprising second feed-roller units (21), each second feed-roller units (21) comprises a second feed-roller frame (55), a second feed roller shaft (61), which is rotatably supported on the second feed-roller frame (55), a second feed roller driving motor (65) serving as operator and a plurality of second feed rollers (63) serving as spindles, which are fixed at the second feed roller shaft (61) and commonly driven by the second feed roller driving motor (65) which is coupled to the second feed roller shaft (61) ;

a winder for winding a fed yarn, the winder having a winding machine unit (35) for winding yarns (Y) processed by the yarn processor, the winding machine unit (35) includes a winding machine unit frame (99), a winding shaft (111), which is rotatably supported on the winding machine unit frame (99), a winding drum driving motor (119) serving as operator, and a plurality of winding drums (115) serving as spindles, which are fixed at the winding shaft (111) and commonly driven by the winding drum driving motor (119) which is coupled to the winding shaft (111);

wherein each of the first yarn feeder, the yarn processor, the second yarn feeder, and the winder comprises spindles,

wherein the operator of the first feed-roller unit is for actuating the spindles of the first feed-roller unit,

wherein the operator of the spindle unit (19) is for actuating the spindles of the spindle unit (19),

wherein the operator of the second feed-roller unit is for actuating the spindles of the second feed-roller unit,

wherein the operator of the winding machine unit (35) is for actuating the spindles of the winding machine unit (35),

wherein the first feed-roller units (11A, 11B, 11C, 11D), the spindle unit (19), the second feed-roller units (21), and the winding machine unit (35) define components which are units, wherein the operator of each respective unit is adapted such that the operators of different units are actuated independently from each other.

respective spindles and the operators of different ones of the respective first yarn feeder, the yarn processor, the second yarn feeder, and the winder are assembled as a unit .